

**Carters**  
Asbestos Management

- Asbestos Reviews
- Asbestos Management.
- Asbestos Consultancy.
- Asbestos Maintenance.
- Asbestos Training.
- Asbestos Safety Products.

## ASBESTOS REGISTER

**REGISTER NO.:** AS2250-44

**FOR THE PROPERTY AT:** Council Depot, Old Fertiliser Works,  
Industrial Shedding  
Chatfield Terrace,  
Wallaroo, SA

**CLIENT:** District Council of the Copper Coast

**REGISTER CONTROLLER:** Mr Andy West

**CONSULTANT:** Lee Jenkins

**DATE INSPECTED:** 09/05/2013



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## 1. INTRODUCTION

Carter Corporation Pty Ltd (Carter Corporation) was requested to conduct a review of the asbestos register to determine the condition of asbestos containing materials (ACMs) previously identified within the asbestos register at the site/address referred to and contained within this document.

The review is a visual inspection of previously identified asbestos materials listed in the original register and is not a full inspection of the building. All previous conditions, limitations and recommendations apply.

In accordance with the Regulations, ACMs which have been visually identified (i.e. not sampled or not referenced to a specific sample) should be presumed to contain asbestos, unless sampled to prove otherwise.

It is strongly recommended that this report be reviewed prior to any change of use, occupancy or other activity which may affect the accessibility of any ACMs within the areas surveyed. Such reviews should only be conducted by a competent person.

Further investigations may be required prior to any planned refurbishment or alterations which affect the fabric of the building.

This report may not be reproduced other than in full, except with the prior written approval of the report author.

This report should be read in its entirety.

This report is limited to asbestos containing materials only and their associated risks. Reference may be made within this document to other materials such as but not limited to Synthetic Mineral Fibre (SMF); lead paints etc but no assessment of these have been made.

The objective of the survey was to, as far as reasonably practicable, locate, identify and access and where possible, photograph and quantify all accessible ACM present within the scope of the survey and to present the information collected in a way which allows the duty holder to manage the risks arising from those materials.

## 2 SCOPE of WORK

To undertake the inspection as required, the following scope of work was undertaken;

- A desktop survey and discussion with site personnel was made to determine the history, previous use, existing asbestos register and previous removals of ACM.
- A site specific risk assessment prior to the survey was undertaken.
- Inspection of the site was carried out.
- Potential ACM their location, type, quantity, condition and stability were documented.
- An assessment of the materials potential to release fibres and recommendations to minimise or manage the risk was noted.
- Photographs were taken (where required) to aid the item identification and condition.
- Signage requirements were noted.
- Samples (where agreed) taken and submitted to a NATA laboratory for analysis to qualify asbestos fibre content.
- Drawings (where supplied) marked up to aid the asbestos location identification.

### 3 LIMITATIONS

Whilst the surveyors make every reasonable effort, Carter Corporation cannot guarantee that all ACMs have been identified and survey results are definitive. Some ACMs could be present in the building that may only be discovered when the building is demolished or is subject to major refurbishment.

Building owners are not required to dismantle parts of the building or plant to locate asbestos; the regulation is aimed at identifying any significant risk to persons. If it is the intention to demolish or alter such areas, and concealed/unknown asbestos is uncovered / detected, revised safe work practices are to be implemented.

In general, it may be impossible to locate all asbestos during the conduct of a visual inspection. Physical constraints upon an inspection include, but are not limited to, restrictions on access to lift shafts / motor rooms, air conditioning ductworks, During an inspection, there is a need to avoid damage to client's property (e.g. through sample taking) and to minimise disruption (e.g. dismantling equipment), and inconvenience.

The inspection was carried out in areas where access was available. Unless otherwise indicated floor coverings were not taken up to enable inspection of floor surfaces. Equipment in use was not disturbed or opened for the purpose of inspection. Air-conditioning systems, heater banks and associated ductwork has not been inspected.

In some instances asbestos may be located in inaccessible areas such as wall cavities, beneath floor slabs, or as an integral part of machinery, plant or equipment (pumps, pipe work, boilers, heater banks, ductwork and the like). Buried fibro asbestos pipes or pits may also be discovered upon excavation.

Confirmation of lagged pipe work within wall cavities and chased into walls is not possible with a visual inspection. Asbestos that was previously removed from an area may have fallen down cavities due to inadequate removal procedures and clean-up. This should be taken into consideration when any demolition or upgrade work is being done as it is possible that asbestos containing material may be present in these areas.

Unless noted otherwise, samples were not taken of those products which have previously been known to contain asbestos, e.g., "Zelemite" electrical switchboard panels and "Millboard" insulation to wiring (items installed in live electrical situations).

Notes: Any references in this report to materials other than asbestos are not to be taken as necessarily accurate, since identification of such materials is not included within the scope of this report. References to "Colorbond", "PVC", "Rockwool", "Gyprock", etc are intended to be an approximate indication only of the type of material present based on cursory observation. The purpose of including references to such materials is primarily to assist the author in compiling the report and secondly to provide a more descriptive report.

Measurements and quantities mentioned in this report are approximate only.

This report is not to be used as a contractual document.

No guarantees can be entered into regarding the accuracy or completeness of this report.

The information contained herein is accurate at the time of printing only. Subsequent updates become the responsibility of the register controller.

A reference in this register to the regulations, a Code of Practice, a Guidance Note or Guideline will be taken as a reference to that document as in force at that time.

A reference in this register to the owner of a building will be taken to include a reference to any person appointed by the owner to manage the building on his or her behalf.

#### 4 METHODOLOGY

All accessible areas were thoroughly inspected in order to determine the presence of ACM and findings pertaining to type, condition and extent of the ACM recorded.

To assess the potential health risk posed by the ACM various information and criteria are recorded. The assist in the interpretation of the Asbestos Register the following detailed explanation is provided.

◆ **LOCATION – DESCRIPTION;** provides identifier (letter for external and number for internal). The identifier is also shown on any drawing provided with the Register. The description states the room number (if assigned), room name, location of the item and material description.

◆ **EXTENT;** an approximate extent (not be used for pricing or demolition costing).

◆ **ACCESSIBILITY;**

Accessible – the material/item can be easily accessed without any aids or key access.

Limited access – the material/item can be accessed but requires access via ladder, key access, lifting carpet, etc.

Inaccessible – the material/item cannot be accessed without damage or demolition i.e. metal encapsulated insulation, material within cavity, sealed door core etc.

◆ **ASBESTOS ASSESSMENT;** asbestos type (from laboratory analysis) or presumed asbestos content.

◆ **CONDITION;** provides a description of the material at the time of the survey. It comprises of three components-

Poor – the material is damaged or severely deteriorated.

Moderate – the material is generally sound condition but has some signs of deterioration.

Good – The material is sound with no signs of deterioration

Sealed – the material has a painted or other material sealing the raw product

Unsealed – the material is raw or has exposed areas of asbestos product

Non-friable/bonded – the asbestos fibres are in a stable matrix and cannot be crushed by hand application

Friable – the asbestos product can be crushed or broken down by hand pressure or is dust/debris

◆ **SAMPLE NO – VISUAL TEST;** provides the unique sample reference number or informs of a visual identification.

Items listed within the Register as “visual” have not been sampled to confirm an asbestos content. These items have been identified as materials which historically have or can contain asbestos. The presumption made is through various criteria such as but not limited to type of material, age of building, similar products, and the experience of the surveyor. All materials which have been listed as visually identified within this register must be treated as asbestos unless proven otherwise by sample analysis. It is recommended that all materials are sampled in order to qualify.

◆ **SIGNAGE STATUS;** signage is either visible or not visible.

◆ **SURVEY FINDINGS and HAZARD MANAGEMENT RECOMMENDATIONS;** has specific notes pertaining to the item with recommendations if required. Within this section there is also information relating to Risk Priority. The information gained from the survey or inspection is used to provide a priority rating and is to be used as part of the Asbestos Management Plan. Refer to Section 7 ‘Risk Score Calculator’ for the risk score matrix used within the Register. The matrix is based upon AS4360.

## 5 EXAMPLES OF ASBESTOS CONTAINING MATERIALS

(This is not an exhaustive list)

Backing to service riser doors	Mortar in wall and floor penetrations (fire stop)
Bitumen based membrane coverings/flashings	Oven door seals
Boiler insulation	Packers under floor joists (for levelling transportables, etc)
Brake linings	Pipe work gaskets
Cable trays	Putty and tapes in expansion joints, construction mastics
Chalkboards	Refractory bricks
Cooling towers	Residual contamination on ceiling tiles and grids
Door linings	Roof cladding
Down pipes and gutters	Roofing shingles
Duct work flexible fabric connections	Sealants to duct work and other air-conditioning plant and equipment
Eaves/Verandah linings	Sheathing/insulation to wiring
Electrical cable insulation/sheathing	Sheeting to wet areas
Electrical meter backing boards	Taping compounds (thermal)
Exhaust insulation and gaskets	Textured paints/coatings
Expansion joints and gaskets in boilers	Thermal paper products
Facades	Vermiculite insulation/decorative plaster finishes
Fencing	Vinyl floor (lino) backing material
Fibre cement pipes and flues	Vinyl floor tiles
Fire blankets	Wall and floor penetrations
Fire doors - internal core	Wall cavities
Firewall partitions	Wall linings/cladding
Fuse holder insulation	
Heater bank/re-heat units insulation within duct work of air conditioning	
Hot water service heat shields	
Insulation linings for spark/fire resistance	
Kitchen plant and equipment	
Laboratory gloves	
Laboratory hoods, bench tops, and equipment	
Lift motor brakes	
Limpet insulation to structural beams & columns	
Lost form work	
Louvres in windows	

## 6 DEFINITIONS

Accredited laboratory	A testing laboratory accredited by the National Association of Testing Authorities, Australia (NATA) or a similar accreditation authority, or otherwise granted recognition by NATA, either solely or in conjunction with one or more other persons.
Accessible	In a physical location where building occupants or users might readily access material without use of assistance e.g. asbestos based material used as wall cladding on or outside of equipment in a laboratory etc.
Air monitoring	Airborne asbestos fibre sampling to assist in assessing exposures and the effectiveness of control measures. Air monitoring includes exposure monitoring, control monitoring and clearance monitoring. Note: Air monitoring should be undertaken in accordance with the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [NOHSC:3003 (2005)].
Airborne asbestos fibres	Any fibres of asbestos small enough to be made airborne. For the purposes of air monitoring airborne fibres, only respirable asbestos fibres are counted.
Asbestos	The fibrous form of mineral silicates that belong to the serpentine or amphibole groups of rock forming minerals, including Actinolite, Amosite (brown asbestos), Anthophyllite, Crocidolite (blue asbestos), Chrysotile (white asbestos) and Tremolite, or any combination of two or more of these.
Asbestos Abatement	Procedures to control fibre release from asbestos containing materials in a building or to remove it entirely. These may involve removal, encapsulation, repair, enclosure, encasement, and operations and maintenance programs.
Asbestos register	The document containing the results/recommendations following a building audit for asbestos materials, commenting on their location, condition and establishment of safe working policies.
Asbestos removal work	Work involving the removal of a) insulation material that consists of or contains asbestos, or other friable asbestos-containing material; or b) an asbestos-cement (fibro) product, or other non-friable asbestos-containing material.
Asbestos work	Any work where, in the course of that work, exposure to asbestos (or any material that consists of or contains asbestos) may occur.
Asbestos Containing Material (ACM)	Means any material, object, product or debris that contains asbestos.
Asbestos removalist	A competent person who performs asbestos removal work. An asbestos removal licence is required for removal of friable ACM and may also be required for non friable ACM removals, check with relevant OHS authorities for requirements.
Asbestos waste	All removed ACM and disposable items used during the asbestos work, such as plastic sheeting used to cover surfaces in the asbestos work area, disposable coveralls, disposable respirators, rags used for cleaning.
Asbestos work area	An immediate area in which work on ACM is taking place. The boundaries of the asbestos work area must be determined by a risk assessment.
Avoid physical and mechanical damage	As far as practicable, limit activities (cutting, drilling, grinding, sanding, breaking, etc) on or adjacent to material such that sufficient damage to release respirable fibres is avoided.
Breathing zone	A hemisphere extending in front of a persons face, with a radius of 300mm from the midpoint of an imaginary line between the ears.

Competent person	A person possessing adequate qualifications, such as suitable training and sufficient knowledge, experience and skill, for the safe performance of the specific work.
Dust and debris	Visible particles, fragments or chunks of material, large and heavy enough to have settled in the work area, that is likely to have originated from ACM.
Friable (Asbestos)	Asbestos containing material which, when dry, is or may become crumbled, pulverised or reduced to powder by hand pressure.
Hazard	Any matter, thing, process or practice that may cause death, injury, illness or disease.
Inaccessible areas	Areas which are difficult to access, such as wall cavities and the interiors of plant and equipment.
Limited Access	Requiring some assistance or equipment to allow access e.g. requiring a ladder or lifting of ceiling tiles or keys to normally locked cupboard, room etc.
Monitor Condition	Carry out regular general observation of condition of material to note any changes.
NES	National exposure standard
N.O.H.S.C.	The National Occupational Health and Safety Commission (Government Body).
Organic fibre	Fibres such as but not limited to cellulose, wool, cotton
Person with control	In relation to premises, a person who has control of premises used as a workplace. The person with control may be: <ul style="list-style-type: none"> <li>a The owner of the premises</li> <li>b A person who has, under any contract or lease, an obligation to maintain or repair the premises</li> <li>c A person who is occupying the premises</li> <li>d A person who is able to make decisions about work undertaken at the premises, or An employer at the premises</li> </ul>
Personal Protective Equipment	Equipment and clothing that is used or worn by an individual person to protect themselves against, or minimise their exposure to, workplace risks.
Register Controller	A building owner or designated representative who is responsible for the asbestos register and implementation of a hazard management plan.
Risk	The likelihood of a hazard causing harm to a person. In this instance risk relates to illness or disease arising from exposure to Airborne Asbestos Fibres.
SMF	Synthetic Mineral Fibre
Stable	Condition good, posing minimum risk to health.
Unstable	Condition poor, posing significant risk to health.
Work	Any activity, physical or mental, carried out in the course of a business, industry, commerce, an occupation or a profession.
Worker	A person who does work, whether or not for reward or recognition.
Workplace	Any place where a person works.



## 7 RISK SCORE CALCULATOR

### Consequence or Impact

Rating	Descriptor	Example Detail Description
1	Insignificant	No illness will result as asbestos is stable, therefore there is little likelihood of inhaling fibres above normal ambient levels.
2-3	Minor	Local fibre release only and in amounts and fibre size that are unlikely to cause latent asbestos related illness
4-6	Moderate	Asbestos may be unstable and could release fibres in the amount and size that may cause latent asbestos related illness
7-8	Major	Asbestos is unstable and will release fibres in the amount and size that will cause latent asbestos related illness
9	Catastrophic	Asbestos is highly friable and unstable, fibres will be released in size range and amount that are highly likely to cause latent asbestos related illness

### Likelihood of Exposure

Rating	Descriptor	Description
9	Almost Certain	Is expected to occur in most circumstances – i.e. people regularly in the vicinity.
7-8	Likely	Will probably occur in most circumstances.
4-6	Possible	Might occur at some time.
2-3	Unlikely	Could possibly occur at some time but is unlikely.
1	Rare	May occur only in exceptional circumstances.

### Risk Calculator

		Consequence or Impact				
		9	7-8	4-6	2-3	1
Likelihood	9	Extreme	Extreme	Extreme	High	High
	7-8	Extreme	Extreme	High	High	Medium
	4-6	Extreme	Extreme	High	Medium	Low
	2-3	Extreme	High	Medium	Low	Low
	1	High	High	Medium	Low	Low

### Risk

### Priority with recommended action

**Extreme** **P1** – Restrict access and isolate material immediately. Plan for removal as soon as practicable (less than 1 month). The identified material presents an immediate occupational/environmental risk in its present condition.

**High** **P2** – Limit access as an interim measure and identify for planned removal (less than 3 months). The identified material presents a potential occupational/environmental risk in its present condition.

**Medium** **P3** – Identify for removal where maintenance or refurbishment may cause disturbance of the material. Treat material (make safe, seal) to prevent potential fibre release as an interim measure.

**Low** **P4** – Leave in situ and reassess condition on at least an annual basis as required by current OHS&W Regulations. Consider removal when maintenance or refurbishment may cause disturbance of the material. The identified material presents a low occupational/environmental risk in its present condition unless acted upon

**8 REFERENCE**

<b>ACT</b>	<b>Workplace Health and Safety Act 2011</b>
<b>NSW</b>	<b>Workplace Health and Safety Act 2011 Workplace Health and Safety Regulation 2011</b>
<b>NT</b>	<b>Workplace Health and Safety (National Uniform Legislation) Act 2011</b>
<b>QLD</b>	<b>Workplace Health and Safety Act 2011 Workplace Health and Safety Regulation 2011</b>
<b>SA</b>	<b>Workplace Health and Safety Act 2012 Workplace Health and Safety Regulation 2012</b>
<b>TAS</b>	<b>Workplace Health and Safety Act 2012 Workplace Health and Safety Regulation 2012</b>
<b>VIC</b>	<b>Occupational Health and Safety Act 2004 Occupational Health and Safety Regulations 2007 Div 5</b>
<b>WA</b>	<b>Occupational Safety and Health Act 1984</b>

**Codes of Practice**      **How to Manage and Control Asbestos in the Workplace  
How to Safely Remove Asbestos**

**Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [NOHSC: 3003 (2005)]**

**STATE AND TERRITORY WORK HEALTH AND SAFETY AUTHORITIES;**

<b>ACT</b>	<b>Website:</b> <a href="http://www.worksafety.act.gov.au">www.worksafety.act.gov.au</a> <b>Email:</b> <a href="mailto:worksafety@act.gov.au">worksafety@act.gov.au</a> <b>Telephone:</b> (02) 6205 0333
<b>NSW</b>	<b>Website:</b> <a href="http://www.workcover.nsw.gov.au">www.workcover.nsw.gov.au</a> <b>Telephone:</b> 13 10 50
<b>NT</b>	<b>Website:</b> <a href="http://www.worksafe.nt.gov.au">www.worksafe.nt.gov.au</a> <b>Email:</b> <a href="mailto:ntworksafe@nt.gov.au">ntworksafe@nt.gov.au</a> <b>Telephone:</b> 1800 019 115
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<b>SA</b>	<b>Website:</b> <a href="http://www.safework.sa.gov.au">www.safework.sa.gov.au</a> <b>Telephone:</b> 1300 365 255
<b>TAS</b>	<b>Website:</b> <a href="http://www.workcover.tas.gov.au">www.workcover.tas.gov.au</a> <b>Email:</b> <a href="mailto:wstinfo@justice.tas.gov.au">wstinfo@justice.tas.gov.au</a> <b>Telephone:</b> 1300 366 322 (inside Tasmania) or (03) 6233 7657 (outside Tasmania)
<b>VIC</b>	<b>Website:</b> <a href="http://www.workcover.vic.gov.au">www.workcover.vic.gov.au</a> <b>Email:</b> <a href="mailto:info@worksafe.vic.gov.au">info@worksafe.vic.gov.au</a> <b>Telephone:</b> 1800 136 089 or (03) 9641 1444
<b>WA</b>	<b>Website:</b> <a href="http://www.worksafe.wa.gov.au">www.worksafe.wa.gov.au</a> <b>Telephone:</b> 1300 307 877 <b>Part of the WA Department of Commerce</b>



REGISTER: AS 2250-44

DATE: 09/05/2013

ADDRESS: Chatfield Terrace, Wallaroo SA

NEXT REVIEW RECOMMENDED: 05/2014

## Appendix A – ASBESTOS REGISTER



REGISTER: AS 2250-44

DATE: 09/05/2013

ADDRESS: Chatfield Terrace, Wallaroo SA

NEXT REVIEW RECOMMENDED: 05/2014

### 2013 Review Notes

A copy of the most recent register review was located in the office.

The Review indicated that the products identified throughout the site present a low risk of exposure to airborne fibres to personnel, due to the stability and / or location of the asbestos containing materials (ACM's), provided that the materials are not disturbed or 'worked upon' (i.e. cut, sawn, drilled, sanded etc.).

**2012 Audit** This audit was based upon conducting a re-inspection of the items listed within the 2011 register, located in the office.

**2011 Audit** This audit was based upon conducting a re-inspection of the items listed within the 2010 register, located in the office.

### ORIGINAL REGISTER INSPECTION NOTES -

#### **Brief Building Description:**

Externally - Masonry brick/block construction / steel & timber framed construction, sheet-metal / cement sheet infill wall cladding / facades, profiled sheet metal roof cladding / corrugated iron/ corrugated cement sheet / timber/ aluminium windows / doors.

Internally - Timber floor/ concrete slab floor, solid and cement sheet partition walls, plasterboard flush walls / ceiling linings & 600x 600mm plaster moulded acoustic tiles.

Wet areas consisted terrazzo partition construction, and flooring, plasterboard and timber veneer ceiling linings.

**Ceiling Inspections:** Limited ceiling inspection(s) were accessible from random location(s) revealed (assume similar construction throughout):

There was no access above the ceiling within the mussel business due to stored items within the store room.

The underside of the corrugated iron roof was directly visible from within the main depot and works store shed.

There was no access for inspection above the flush cement ceiling within the chemical store.

There was no access for inspection above the timber veneer ceiling within the transportable toilet block.

#### **Other:**

Informed by staff onsite that the lunch shed within the main works shed was constructed of modern materials in the last 6-8 years. Informed no asbestos used in the construction of this structure

No asbestos detected to the electrical board located within a wall mounted cabinet externally on the south side of the main works shed.

No asbestos detected to the 'Dux' hot water service located within the transportable toilet block.

No asbestos detected to the electrical board 'Clipsal safety switch' located within the within the transportable toilet block.

No asbestos visible to external of wall mounted 'Kelvinator' air-conditioner.

No inspection to fire services main / pipework, access gaskets with caution as may contain asbestos.

No inspection to bathroom / toilet access hatches in walls.

Due to the extent of the cement sheet based materials used at different stages of construction on the buildings, and dates of installations not known / provided then treat all cement sheet products encountered ( including those visually identified above ) as suspected to contain asbestos. It is possible that some of the cement sheeting is non-asbestos cement sheeting however must be confirmed by sample analysis.


General awareness signs were installed throughout the site at the time of inspection.

A general awareness sign was supplied to the tenants within the mussel business to be installed at the ceiling access point when access becomes available.


### General Notes

- No inspection carried out (unless specifically noted otherwise) to inaccessible areas and items such as - Internal of plant / equipment / air-conditioning ductwork / heater banks, ductwork mastic, electrical and service components such as internal of hot water service units, switch components, behind electrical panels, to porcelain electrical fuse holders, oyster type light fittings, service conduits and pits, wiring and cable trays and risers. No inspection is carried out to pipe-work chases, wall and column cavities, above flush panel ceilings, underground services, beneath current floor coverings / under floor spaces, window and control joint putty, lost formwork and floor / beam packers etc.
- Asbestos containing materials may be part of the above items and as a 'visual only / non-destructive' inspection has been performed it is recommended to access these items with caution if working on or in the vicinity of, using an asbestos safe work method as a pre-caution when disturbing or dismantling these materials. Should asbestos or suspected asbestos containing materials be detected then consult register controller and revise work methods accordingly.
- Specifically no inspection has been conducted (unless otherwise stated) to the internal of air-conditioning systems to identify the extent / location of any heater bank units (if any). As this is an area that is inaccessible and may contain an asbestos insulation, it is recommended that the client qualify air conditioning heaterbank locations (whether redundant or operational) with their nominated mechanical services / air-conditioning contractor. If heater-banks are detected, they are to be inspected only under strict asbestos conditions. Recommend engage a competent person (according to the WHS Regulations) to assess, in particular, the possibility of "Millboard" type asbestos lining to the internal of the ductwork, and to instigate hazard management to minimise the potential for disturbance within the duct whilst accessing, assessing, and/or sampling. All work to be in conjunction with the mechanical services contractor who can locate possible additional units, and isolate and dismantle the "live" heaterbank unit(s) to enable access within the units for assessment.
- Recommend treat all suspect materials as asbestos containing when carrying out works. Material can be sample analysed upon major works to confirm content. Samples taken in certain locations may not necessarily be indicative of similar looking items for the entire building. Sample results are indicative of the specific area from which they were taken.
- Treat all vinyl floor products, bituminous containing products, cement sheet products, window, air conditioning ductwork and control joint putty and all gaskets (other than rubber and cork) and friction materials as asbestos containing unless confirmed otherwise by sample analysis. Treat all fire rated doors as having an asbestos internal core unless confirmed otherwise.
- It is possible upon building works / demolition to encounter unidentified or undetected asbestos material. Access with caution and consult register controller and implement revised safe work procedure. If major demolition works are planned, it is recommended to conduct a 'destructive' type inspection incorporating additional / unrestricted sample analysis.
- It is recommended to wear suitable personal protective equipment ( PPE ) including respiratory protection when entering all ceiling and confined spaces as a minimum pre-caution.
- Inspections are conducted based upon the Consultant performing and completing a job safety analysis / risk assessment prior to commencement of the inspection to ensure work is carried out in accordance with the relevant WHS Regulations and company Standard Operating Procedures. Subsequently no inspection has been performed to ceiling height and roofing heights greater than 2.5m unless site specific safe access systems have been made available. No inspection has been performed to operating / in service plant and equipment.


LOCATION - DESCRIPTION	EXTENT	ASBESTOS ASSESSMENT	CONDITION	SAMPLE NO VISUAL TEST	SIGNAGE STATUS
A. External, west area of yard, materials storage, pipe – fibre cement product.	Approx 2m <sup>2</sup> visible	-	Not located	-	-
<b>SURVEY FINDINGS and HAZARD MANAGEMENT RECOMMENDATIONS</b>					
Item not located 2010 – possibly removed. <u>Previous findings:</u> Recommend immediate removal in accordance with “Approved Code of Practice”.					



LOCATION - DESCRIPTION	EXTENT	ASBESTOS ASSESSMENT	CONDITION	SAMPLE NO VISUAL TEST	SIGNAGE STATUS
B. External, mussel business building, roof cladding – corrugated fibre cement sheet and associated flashings.	Approx 450m <sup>2</sup> Limited access	Presume asbestos content	Moderate Unsealed Non friable	Visual	Visible
<b>SURVEY FINDINGS and HAZARD MANAGEMENT RECOMMENDATIONS</b>					
<b>Low Risk P4</b> – Avoid physical and mechanical damage. When maintenance/upgrade is required, recommend removal and reinstate with non-asbestos product. Recommend sample (x2) to qualify material content, otherwise treat item as asbestos containing. Total access to the roof area was not gained, as safe access was not available. This asbestos product is inherently hard and brittle. Treat all asbestos roof areas as fragile. Access with caution. Use safe access systems.					



LOCATION - DESCRIPTION	EXTENT	ASBESTOS ASSESSMENT	CONDITION	SAMPLE NO VISUAL TEST	SIGNAGE STATUS
C. External, mussel business building, north elevation, eaves lining – fibre cement sheet.	Approx 26m <sup>2</sup> Limited access	Presume asbestos content	Good Sealed Non friable	Visual	Visible
<b>SURVEY FINDINGS and HAZARD MANAGEMENT RECOMMENDATIONS</b>					
<b>Low Risk P4</b> – Avoid physical and mechanical damage. When maintenance/upgrade is required, recommend removal and reinstate with non-asbestos product. Recommend sample (x1) to qualify material content, otherwise treat item as asbestos containing.					



LOCATION - DESCRIPTION	EXTENT	ASBESTOS ASSESSMENT	CONDITION	SAMPLE NO VISUAL TEST	SIGNAGE STATUS
D. External, mussel business building, south rear entry, porch lining – fibre cement sheet.	Approx 3m <sup>2</sup> Limited access	Presume asbestos content	Good Unsealed Non friable	Visual	Visible
<b>SURVEY FINDINGS and HAZARD MANAGEMENT RECOMMENDATIONS</b>					
<p><b>Low Risk P4</b> – Avoid physical and mechanical damage. When maintenance/upgrade is required, recommend removal and reinstate with non-asbestos product.</p> <p>Recommend sample (x1) to qualify material content, otherwise treat item as asbestos containing.</p>					



LOCATION - DESCRIPTION	EXTENT	ASBESTOS ASSESSMENT	CONDITION	SAMPLE NO VISUAL TEST	SIGNAGE STATUS
E. External, mussel business building, south rear entry, porch lobby, within timber cabinet, electrical board – black resin board.	Approx 0.5m <sup>2</sup> visible Accessible	Presume asbestos content	Good Unsealed Non friable	Visual	Visible
<b>SURVEY FINDINGS and HAZARD MANAGEMENT RECOMMENDATIONS</b>					
<p><b>Low Risk P4</b> – Avoid physical and mechanical damage. When maintenance/upgrade is required, recommend removal and reinstate with non-asbestos product.</p> <p><b>October 2008</b> - Dust residue and debris in base of electrical cabinet cleaned up with approved asbestos vacuum system in accordance with "Approved Code of Practice".</p>					




LOCATION - DESCRIPTION	EXTENT	ASBESTOS ASSESSMENT	CONDITION	SAMPLE NO VISUAL TEST	SIGNAGE STATUS
F. External, toilet transportable building, beneath building, possible packers – fibre cement fragments.	Not quantified Limited access	Presume asbestos content	Moderate Unsealed Non friable	Visual	Not visible
<b>SURVEY FINDINGS and HAZARD MANAGEMENT RECOMMENDATIONS</b>					
<p><b>Low Risk P4</b> – Avoid physical and mechanical damage. When maintenance/upgrade is required, recommend removal and reinstate with non-asbestos product. Unable to affix specific warning sign to item, covered by General sign.</p>					



LOCATION - DESCRIPTION	EXTENT	ASBESTOS ASSESSMENT	CONDITION	SAMPLE NO VISUAL TEST	SIGNAGE STATUS	No Photograph
1. Internal, mussel business building, laundry, ceiling lining – fibre cement sheet	Approx 15m <sup>2</sup> Accessible	Presume asbestos content	Not assessed	Not accessed	Not visible	
<b>SURVEY FINDINGS and HAZARD MANAGEMENT RECOMMENDATIONS</b> <b>Low Risk P4</b> – Avoid physical and mechanical damage. When maintenance/upgrade is required, recommend removal and reinstate with non-asbestos product. <b>2012 inspection.</b> No access to this room / item. Recommend gain access to qualify condition of item. <b>2013 inspection.</b> No access to this room / item. Recommend gain access to qualify condition of item.						

LOCATION - DESCRIPTION	EXTENT	ASBESTOS ASSESSMENT	CONDITION	SAMPLE NO VISUAL TEST	SIGNAGE STATUS	No Photograph
2. Internal, mussel business building, corridor and kitchen, floor covering – vinyl tiles (dark yellow colour).	Approx 60m <sup>2</sup> visible	No asbestos detected	-	Sample no. 1 (Feb/ 06)	-	
<b>SURVEY FINDINGS and HAZARD MANAGEMENT RECOMMENDATIONS</b> No asbestos detected upon laboratory analysis of sample. Refer also notes below.						

LOCATION - DESCRIPTION	EXTENT	ASBESTOS ASSESSMENT	CONDITION	SAMPLE NO VISUAL TEST	SIGNAGE STATUS	
G. External, ground floor, mussel business building, windows, expansion / control joint – mastic / caulking.	-	No asbestos detected	-	01/LJ/090513	-	
<b>SURVEY FINDINGS and HAZARD MANAGEMENT RECOMMENDATIONS</b> No asbestos detected upon laboratory analysis of sample.						



LOCATION - DESCRIPTION	EXTENT	ASBESTOS ASSESSMENT	CONDITION	SAMPLE NO VISUAL TEST	SIGNAGE STATUS
3. Internal, Works Depot fuel storage room, ground floor, ceiling, lining – fibre cement sheet.	Approx 5m <sup>2</sup> Limited access	Presume asbestos content	Good Sealed Non friable	Visual	Visible
<b><i>SURVEY FINDINGS and HAZARD MANAGEMENT RECOMMENDATIONS</i></b>					
<p><b>Low Risk P4</b> – Avoid physical and mechanical damage. When maintenance/upgrade is required, recommend removal and reinstate with non-asbestos product. Recommend sample (x1) to qualify material content, otherwise treat item as asbestos containing.</p>					



## Appendix B – CERTIFICATES OF ANALYSIS

Samples submitted for laboratory analysis are analysed in accordance with NATA approved methods for analysis. Certificates of analysis are provided by the laboratory as a reference of the results for inclusion into the register.

Samples as received in our offices (taken by others) are analysed in accordance with NATA approved methods for analysis, No responsibility is taken for the actual sampling collection technique, determination of sample location, and the consequent bearing on the sample result.

### **Limitations of Sample Analysis**

The certificate of analysis provided by the laboratory is a record of asbestos or non-asbestos content of the sample piece provided for analysis.

Generally sample size is approximately 30mm square for a non-friable material where the material is accessible to sample. Consideration is given to minimise damage to clients property where taking necessary samples as it is difficult to remove a sample from installed materials such as flushed fixed panel wall, ceiling linings and fixed floor coverings. In other cases it may not be safe to access materials to take samples such as electrical panels, and integral gasket / seal or insulation materials to plant and equipment.

### **Inconclusive Sample Identification**

In some instances it is not possible to determine asbestos fibre content within a sample using the NATA approved method ( PLM – polarized light microscopy ). Items such as vinyl floor products, adhesives and mastics due to low asbestos content and/or non uniform asbestos fibre concentration are often difficult to analyse. Due to the nature of these materials the NATA laboratory has recommended that the material be tested using another independent technique ( XRD – x-ray diffraction ), where PLM and XRD analysis have been made two certificates of analysis will be supplied.

XRD can determine what group of minerals are present in the sample i.e. Serpentine and or Amphibole however the test does not specify what type of asbestos fibre is present. The result may show a sample for example from the Amphibole group but this does not confirm the mineral is actually an asbestos fibre; however the material is presumed to contain asbestos and will be treated as asbestos.

### **Representative Sample Analysis**

Asbestos content can vary within a material dependant upon factors such as installation procedures, differences in stocks and supplies, time differences in stages of construction and physical mixing of varying quantities of asbestos with other materials. Sections of asbestos containing materials may have also been replaced with non-asbestos materials that look identical from inspection (eg damaged eaves or wall cladding patched or repaired with non-asbestos). Inconsistencies in sample results may be possible due to the inspected materials within a property not being typical throughout. Carter Corporation accepts no responsibilities for the representativeness of the sample(s) presented for analysis.



**Amdel Ltd**

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**ASBESTOS IDENTIFICATION REPORT**

CLIENT: Carter Corporation Pty Ltd  
ADDRESS: 95 Currie Street, Adelaide SA 5000  
CC REGISTER NO: AS2250-44

DATE: 15 February 2007  
REPORT NO: 7AD0220X  
PAGE NO: 1 of 1

**RESULTS:**

<b>SAMPLE NO.</b>	<b>1 of 1</b>		
<b>BUILDING NO.</b> (if applicable)		<b>BLDG DESCRIPTION</b> (if applicable)	<i>Old Fertilizer sheds</i>
<b>SAMPLE LOCATION</b>	<i>Wallaroo</i>	<b>SAMPLE DESCRIPTION</b>	<i>Dark yellow vinyl tiles</i>
<b>SAMPLE SIZE</b>	<i>(a) 50x30x3</i>		
<b>LAB DESCRIPTION</b>	<i>Dark yellow flooring</i>		
<b>LAB RESULT</b>	<i>No** asbestos was detected by polarized light microscopy</i>		

APPROVED IDENTIFIER: Michael Till

APPROVED SIGNATORY:

The approximate dimensions (in mm) stated above refer to the size of (a) a single piece (b) largest of several particles (c) largest of many particles (d) volume in ml of unconsolidated particles (e) weight in grams of unconsolidated particles of ash from heating at 400°C  
Note: Chrysotile is a fibrous silicate mineral commonly known as white asbestos, amosite is a fibrous silicate commonly known as brown or grey asbestos and crocidolite is a fibrous silicate commonly known as blue asbestos.

The results contained in this report relate only to the sample(s) submitted for testing. Amdel Ltd accepts no responsibilities for the representivity of the sample(s) submitted.  
SCOPE OF ACCREDITATION: Class 7.82.31: Qualitative identification of asbestos types in bulk samples by polarized light microscopy.



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**ASBESTOS-FORMING MINERAL IDENTIFICATION REPORT**

CLIENT: Carter Corporation Pty Ltd

DATE: 15 February 2007

ADDRESS: 95 Currie Street, Adelaide SA 5000

REPORT NO: 7AD0220XX

CC REGISTER NO: AS2250-44

PAGE NO: 1 of 1

**PROCEDURE**

The sample was analysed by X-ray diffraction, which detects crystalline substances and minerals (including asbestos-forming minerals). Non-crystalline substances (eg glass, most organic compounds) are not detectable by this technique.

**RESULTS**

**SAMPLE NO.** 1 of 1

**BUILDING NO.**  
(if applicable)

**BLDG DESCRIPTION**  
(if applicable)

*Old Fertilizer sheds*

**SAMPLE LOCATION**

*Wallaroo works depot*

**SAMPLE DESCRIPTION**

*Dark yellow vinyl tiles*

**SAMPLE SIZE**

*(a): 15x10x2*

**LAB DESCRIPTION**

The sample is 3mm thick dark yellow flooring.

**LAB RESULT**

Kaolinite and rutile were detected by X-ray diffraction. Asbestos-forming minerals were not detected.

TESTING OFFICER: Michael Till

Note: Chrysotile is a fibrous silicate mineral commonly known as white asbestos. The other minerals listed are fillers or pigments. They may include calcite (calcium carbonate), rutile (titanium dioxide – white pigment), aragonite (calcium carbonate found in shellgrit), kaolinite (white clay), dolomite (calcium magnesium carbonate) and goethite (brown iron oxide). Magnesium hydroxide (if present) is an as-mined impurity of chrysotile.  
The results contained in this report relate only to the sample(s) submitted for testing. Amdel Laboratories Ltd accepts no responsibilities for the representivity of the sample(s) submitted.



A M D E L

**RESULTS OF QUALITATIVE  
IDENTIFICATION OF ASBESTOS  
AND OTHER FIBRES**

**Job No:** 13AA0052\_00252      **Report No:** 13AA0052\_00252.0  
**Client:** Carter Corporation  
**Client Address:** 42 Trembath Street, Bowden SA 5007  
**Date:**  
**Client Reference:** AS2250-44 E5334      **Received:** 16<sup>th</sup>-May-13  
**Sampling Location:** Mussel Business Building Windows  
**Laboratory:** Bureau Veritas-Amdel Mineral Processing  
**Test Method:** Polarised light microscopy dispersion staining in accordance with AS4964-2004 Method for qualitative identification of asbestos in bulk samples and internal Method MP-ASB-003

Sample Number	External Sample ID	Sample Description	Mass (g)	Result
00252A	01/LJ/090513	Putty	15.80	No asbestos detected <sup>(1)</sup> .

<sup>(1)</sup> Confirmation by an independent analytical method advised due to nature of sample.  
Limit of Detection – 0.1 g/kg

Results contained within this report only relate to samples as received and tested by this laboratory. Bureau Veritas-Amdel accepts no responsibility for sample representivity.

This test report must not be reproduced except in full without prior approval sought from the Laboratory.

**Approved Identifier:** Wang He

**Approved Signatory:** Wang He

**Date:** 17-5-2013



**NATA Accredited Laboratory Number: 1526**  
Accredited for compliance with ISO/IEC 17025.

**Amdel Ltd**  
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## XRD DETERMINATION OF ASBESTOS FORMING MINERALS

### 1. INTRODUCTION

One sample was received from Carter with a request for the identification of potential asbestos forming minerals by X-ray diffraction analysis. For reference, this sample was submitted on Order No: AS2250-44 E5334.

### 2. PROCEDURE

The sample was ashed, pulverised and mounted onto a sample holder and analyzed by X-ray diffraction to identify the presence of any asbestos forming minerals, namely amphiboles and serpentine.

### 3. RESULTS

Minerals within the serpentine group are structurally similar. Amphiboles also have similar structures within their group. Where detected serpentine and/or amphibole may or may not be fibrous. The fibrous nature of minerals cannot be determined by XRD, only their internal crystalline structures. To determine whether any of the amphibole or serpentine is fibrous or not, it is recommended that an optical method be applied.

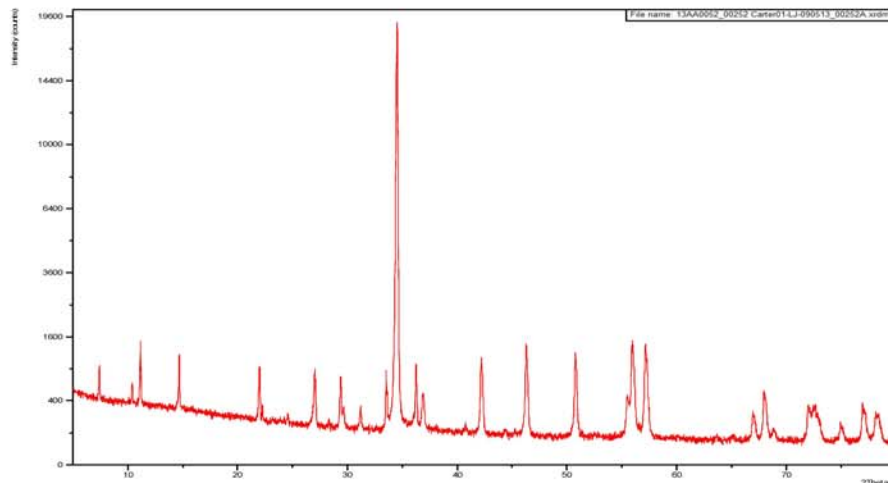
The results contained in this report relate only to the sample submitted for testing. Bureau Veritas-Amdel Limited accepts no responsibility for whether or not the submitted sample is representative.

The test results are tabulated below and the XRD pattern is attached.

Sample ID	Serpentine $Mg_3Si_2O_5(OH)_4$	Amphibole silicate – variable composition
01/LJ/090513	ND	ND

#### Qualitative Abbreviations

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
- CD = Co-dominant. Used for two (or more) predominating components, both or all of which are judged to be present, in roughly equal amounts.
- SD = Sub-dominant. The next most abundant component(s) providing its percentage level is judged above about 20.
- A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
- Tr = Trace. Components judged to be below about 5%.
- ND = Not Detected.



## Appendix C – REGISTER DRAWING

**LEGEND: This drawing is indicative only, not to scale and is to be read in conjunction with register.**

- X = designates ceiling access point
- (A.) = letters indicate location of external asbestos containing materials, refer to asbestos register location schedule
- (1.) = no.'s indicate location of internal asbestos containing materials, refer to asbestos register location schedule

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