Hazardous Materials Survey Report

Preston Rowe Paterson NSW Pty Ltd

Wharf 4-5, Hickson Road, Walsh Bay NSW

July 2007

Our Ref: SP0145 : 57607-02

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SP0145: MH
Hazardous Materials Survey Report Wharf 4-5 MH Jul07

Hazardous Materials Survey Report

Preston Rowe Paterson NSW Pty Ltd

Wharf 4-5, Hickson Road, Walsh Bay NSW

Executive Summary

Purpose

This report presents the findings of a Hazardous Materials Survey conducted of Wharf 4-5, Hickson Road, Walsh Bay NSW. Noel Arnold & Associates Pty Ltd (NAA) carried out the survey in July 2007.

Scope

The survey involved a visual inspection of representative construction materials and the collection and analysis of suspected asbestos-containing materials. Hazardous materials assessed included Asbestos, Synthetic Mineral Fibre (SMF), Polychlorinated Biphenyls (PCBs) capacitors in light fittings and Lead Containing Paint.

Findings

Asbestos

Asbestos containing fibre cement sheeting was identified in the following areas:

- Throughout, Infill panels below windows;
- Level 1, SCR, Toilet, Walls & ceiling;
- Level 1, SCR, Reception, Walls;
- Level 1, SCR, East training room, Shower walls and ceiling;
- Level 1, SCR, West training room, Ceiling; &
- Externals, Mid and high level window panels.

Suspected asbestos-containing materials were identified in the following areas:

- Level 3, Workshop, Entrance – Fire door core; &
- Level 3, Restaurant (Wharf), Apex infill panels – Fibre cement sheeting.

Synthetic Mineral Fibre (SMF)

SMF products were visually identified in the following areas:

- Throughout – Sarking Insulation to ceiling;
- Throughout – Insulation to air handling ductwork; &
- Throughout – Suspected insulation within hot water heaters.

Polychlorinated Biphenyls (PCBs)

The light fittings throughout the premises are not likely to contain PCBs due to their relatively young age.

Lead Paint

Lead-containing Paint was identified in the following area:

- Level 3, Paintwork shop, Metal paint container – Yellow paint system.

Recommendations

Asbestos Materials

- Consider labelling all asbestos containing materials to warn of the dangers of disturbing these materials.
- Schedule periodic reassessment of the asbestos-containing materials remaining on-site to monitor their aging/deterioration.

- When demolition or refurbishment works are required in those areas where suspected asbestos-containing materials were identified, these materials should be sampled and if they contain asbestos, licensed asbestos personnel should remove these materials prior to such works.

Synthetic Mineral Fibre (SMF)

Confirmed SMF materials should be maintained in good condition and removed under controlled conditions prior to refurbishment works.

Polychlorinated Biphenyls (PCBs)

Nil recommendations.

Lead-containing Paint

If refurbishment works are likely to involve the disturbance of confirmed lead-containing paint, dust suppression techniques should be utilised and a Lead Paint Removal plan should be developed by a suitably experienced consultant.

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Preston Rowe Paterson NSW Pty Ltd

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Statement of Limitations

This report has been prepared in accordance with the agreement between Preston Rowe Paterson NSW Pty Ltd and Noel Arnold & Associates Pty Ltd.

Within the limitations of the agreed upon scope of services, this assessment has been undertaken and performed in a professional manner, in accordance with generally accepted practices, using a degree of skill and care ordinarily exercised by members of its profession and consulting practice. No other warranty, expressed or implied, is made.

This report is solely for the use of Preston Rowe Paterson NSW Pty Ltd and any reliance of this report by third parties shall be at such party's sole risk and may not contain sufficient information for purposes of other parties or for other uses. This report shall only be presented in full and may not be used to support any other objective than those set out in the report, except where written approval with comments are provided by Noel Arnold & Associates Pty Ltd.

This report was prepared for Preston Rowe Paterson NSW Pty Ltd solely for the purpose set out herein and it is not intended that any other person use or rely on it. Whilst this report is accurate to the best of our knowledge and belief Noel Arnold & Associates Pty Ltd cannot guarantee completeness or accuracy of any descriptions or conclusions based on information supplied to it during site surveys, visits and interviews. Responsibility is disclaimed for any loss or damage, including but not limited to, any loss or damage suffered by Preston Rowe Paterson NSW Pty Ltd arising from the use of this report or suffered by any other person for any reason whatsoever.

This report relates only to the identification of asbestos containing materials used in the construction of the building and does not include the identification of dangerous goods or hazardous substances in the form of chemicals used, stored or manufactured with the building or plant.

The following should also be noted:

While the survey has attempted to locate the asbestos containing materials within the site it should be noted that the review was a visual inspection and a limited sampling program was conducted and/or the analysis results of the previous report were used. Representative samples of suspect asbestos materials for collected for analysis. Other asbestos materials of similar appearance are assumed to have a similar content.

Not all suspected asbestos materials were sampled. Only those asbestos materials that were physically accessible could be located and identified. Therefore it is possible that asbestos materials, which may be concealed within inaccessible areas/voids, may not have been located during the audit. Such inaccessible areas fall into a number of categories, including by not restricted to:

(a) In set ceilings or wall cavities.

(b) Those areas accessible only by dismantling equipment or performing minor localised demolition works.

(c) Service shafts, ducts etc., concealed within the building structure.

(d) Energised services, gas, electrical, pressurised vessel and chemical lines.

(e) Voids or internal areas of machinery, plant, equipment, air-conditioning ducts etc.

(f) Totally inaccessible areas such as voids and cavities created and intimately concealed within the building structure. These voids are only accessible during major demolition works.

(g) Height restricted areas.

(h) Areas deemed unsafe or hazardous at time of audit.

In addition to areas that were not accessible, the possible presence of hazardous building materials may not have been assessed because it was not considered practicable as:

1. It would require unnecessary dismantling of equipment; and/or
2. It was considered disruptive to the normal operations of the building; and/or
3. It may have caused unnecessary damage to equipment, furnishings or surfaces; and/or
4. The hazardous material was not considered to represent a significant exposure risk
5. The time taken to determine the presence of the hazardous building material was considered prohibitive.

Only minor destructive auditing and sampling techniques were employed to gain access to those areas documented in Appendix A. Consequently, without substantial demolition of the building, it is not possible to guarantee that every source of hazardous material has been detected.

During the course of normal site works care should be exercised when entering any previously inaccessible areas or areas mentioned above and it is imperative that work cease pending further sampling if materials suspected of containing asbestos or unknown materials are encountered. Therefore during any refurbishment or demolition works, further investigations and assessment may be required should any suspect material be observed in previously inaccessible or areas not fully inspected previously i.e. carpeted floors.

This report is not intended to be used for the purposes of tendering, programming of works, refurbishment works or demolition works unless used in conjunction with a specification detailing the extent of the works. To ensure its contextual integrity, the report must be read in its entirety and should not be copied, distributed or referred to in part only.

1. Introduction

This report presents the findings of a Hazardous Materials Survey conducted of the Wharf 4-5, Hickson Road, Walsh Bay NSW. The survey was undertaken to identify any potential hazardous materials located on-site. Marc Harris of Noel Arnold & Associates Pty Ltd (NAA) carried out the survey on 5th July 2007 at the request of Ben Greenwood, Consultant of Preston Rowe Paterson NSW Pty Ltd.

2. Scope of Work

The Hazardous Materials Survey included the whole premises. The interior & exterior of the building was surveyed. Hazardous materials assessed included:

- Asbestos containing materials;
- Synthetic Mineral Fibre (SMF) materials;
- Polychlorinated Biphenyls (PCBs) capacitors in light fittings; &
- Lead containing paint.

The survey was conducted during normal business hours and the areas surveyed were occupied during the assessment.

3. Site Description

Site Details					
Site Address	Wharf 4-5, Hickson Road, Walsh Bay NSW				
Age	~1920	**Size**	10,000 m^2	**No. Levels**	4
Construction Materials - Interior					
Walls	Timber				
Ceilings	Timber				
Floors	Timber, tiles and carpets				
Construction Materials - Exterior					
Walls	Timber & fibre cement panels				
Roof	Metal clip-lock				

4. Methodology

The survey involved a visual inspection of accessible and representative construction materials and the collection and analysis of materials suspected of containing hazardous materials. Limited destructive sampling techniques were undertaken where practicable. The site was visually inspected for the presence of the following hazardous materials:

Asbestos - This component of the assessment was carried out in accordance with the guidelines documented in the *Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC: 2018 (2005)]. Eighteen (18) samples of suspected asbestos-containing materials were collected during the survey. These samples were analysed in Noel Arnold & Associates' NATA-accredited laboratory for the presence of asbestos by Polarised Light Microscopy.

Synthetic Mineral Fibres (SMF) - This report broadly identifies SMF materials found or suspected of being present during the survey based on a visual assessment.

Polychlorinated Biphenyls (PCBs) - Where safe access could be gained, detailed information of capacitors in light fittings was noted for cross-referencing with the ANZECC Identification of PCB Containing Capacitors database – 1997. Due to the inherent hazard in accessing electrical components, or other reasons such as height restrictions, immovable equipment and furniture, light fittings may not be safely accessed. In these

instances, comment is made on the likelihood of PCB-containing materials based upon age and appearance.

Lead Paint - Representative painted surfaces were tested unobtrusively for the presence of lead using the LeadCheck paint swab method in several locations. This method can detect lead in paint at concentrations of 0.5% and above, and may indicate lead in some paint films as low as 0.2%. The sampling program was representative of the various types of paints found within the site, concentrating on areas where lead based paints may have been used (eg. Exterior gloss paints, window and door architraves, skirting boards etc). The objective of lead paint identification in this survey is to highlight the presence of lead-based paints within the building, not to specifically identify every source of lead-based paint.

4.1 Areas Not Accessible/Not Inspected

It is noted that given the constraints of practicable access encountered during the risk assessment survey, the following areas were not accessed or inspected:

- Within wall cavities;
- Within those areas accessible only by dismantling equipment;
- Within service shafts, ducts etc., concealed within the building structure;
- Within voids or internal areas of plant, equipment, air-conditioning ducts etc;
- Energised services, gas, electrical, pressurised vessel and chemical lines;
- Areas deemed unsafe or hazardous at time of audit;
- Within totally inaccessible areas such as voids and cavities created and intimately concealed within the building structure. These voids are only accessible during major demolition works; &
- Height restricted areas.

We advise that should refurbishment and demolition operations entail possible disturbance of materials in these locations, further investigation and sampling of specific areas should be conducted as part of an asbestos management and abatement program prior to any works proceeding.

It should be noted that the presence of any residual asbestos insulation and applications on steel members, concrete surfaces, pipe work, equipment and adjacent areas from prior abatement or refurbishment works cannot be ascertained without extensive removal and damage to existing insulation, fittings and finishes.

Other specific areas not accessed or inspected are described in Appendix A.

5. Survey Summary

5.1 Asbestos

Asbestos containing fibre cement sheeting was identified in the following areas:

- Throughout, Infill panels below windows;
- Level 1, SCR, Toilet, Walls & ceiling;
- Level 1, SCR, Reception, Walls;
- Level 1, SCR, East training room, Shower walls and ceiling;
- Level 1, SCR, West training room, Ceiling; &
- Externals, Mid and high level window panels.

Suspected asbestos-containing materials were identified in the following areas:

- Level 3, Workshop, Entrance – Fire door core; &
- Level 3, Restaurant (Wharf), Apex infill panels – Fibre cement sheeting.

5.2 Synthetic Mineral Fibre (SMF)

SMF products were visually identified in the following areas:

- Throughout – Sarking Insulation to ceiling;
- Throughout – Insulation to air handling ductwork; &
- Throughout – Suspected insulation within hot water heaters.

5.3 Polychlorinated Biphenyls (PCBs)

Due to an electrician not being present during the site inspection, no operating light fittings were dismantled/inspected. The light fittings throughout the premises are not likely to contain PCBs due to their relatively young age.

5.4 Lead Paint

Lead-containing Paint was identified in the following area:

- Level 3, Paintwork shop, Metal paint container – Yellow paint system.

6. Recommendations

6.1 Asbestos

- Consider labelling all asbestos containing materials to warn of the dangers of disturbing these materials. This is a particularly relevant for maintenance contractors and future staff to prevent inadvertent damage to unfamiliar asbestos materials.
- Schedule periodic reassessment of the asbestos-containing materials remaining on-site to monitor their aging/deterioration - as per the *Asbestos Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC: 2018 (2005)].
- When demolition or refurbishment works are required in those areas where suspected asbestos-containing materials were identified, these materials should be sampled and if they contain asbestos, licensed asbestos personnel should remove these materials prior to such works.
- It is imperative that demolition or refurbishment works cease pending further sampling if materials suspected of containing asbestos or unknown materials are encountered.

6.2 Synthetic Mineral Fibre (SMF)

Confirmed SMF materials should be maintained in good condition and removed under controlled conditions prior to refurbishment works.

6.3 Polychlorinated Biphenyls (PCBs)

Nil recommendations.

6.4 Lead-containing Paint

If refurbishment works are likely to involve the disturbance of confirmed lead-containing paint, dust suppression techniques should be utilised and a Lead Paint Removal plan should be developed by a suitably experienced consultant.

Hazardous Materials Survey Report

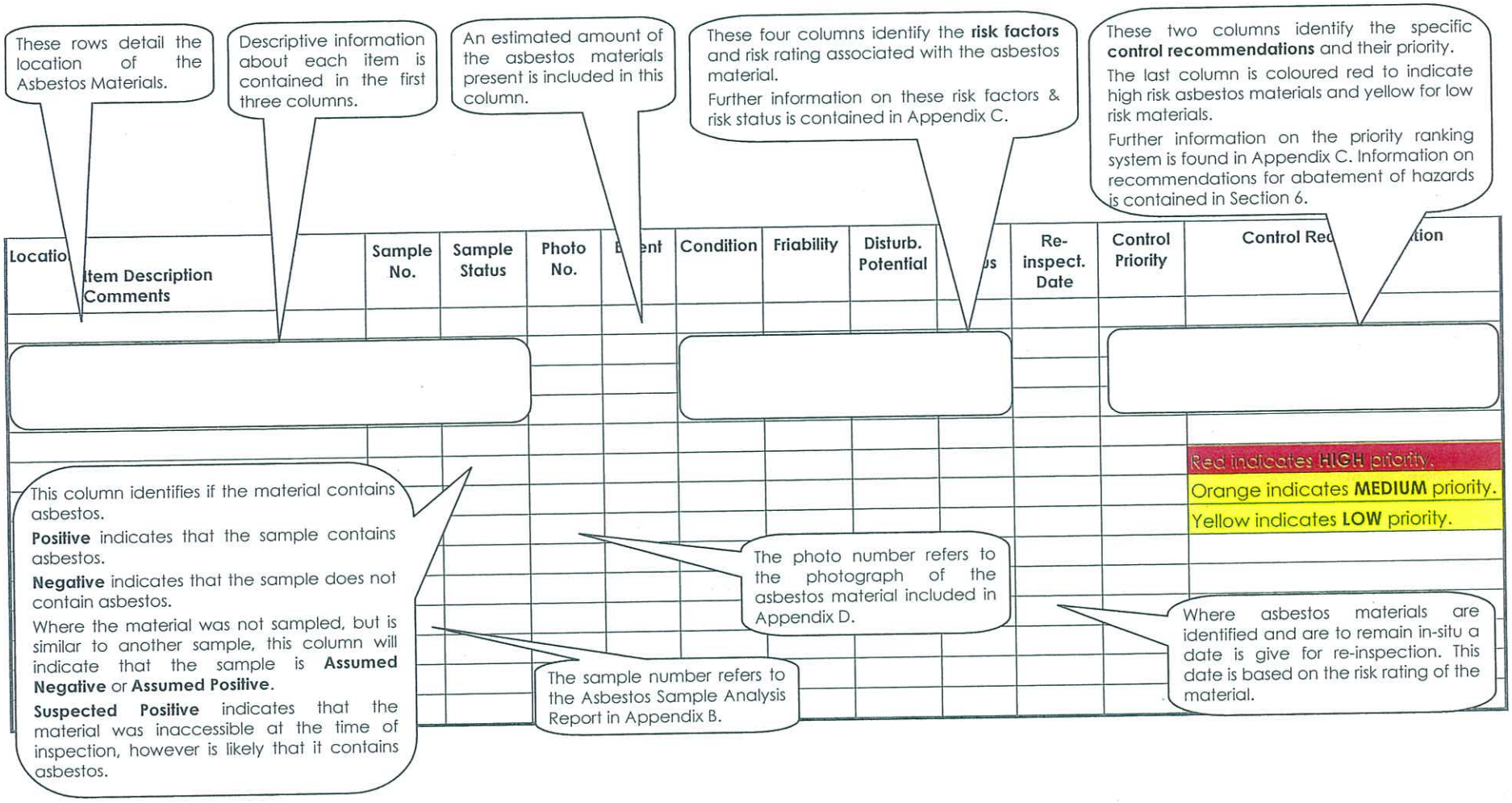
Preston Rowe Paterson NSW Pty Ltd

Wharf 4-5, Hickson Road, Walsh Bay NSW

Appendix A: Hazardous Materials Register

How to use this Report

- The findings of the report are contained in this appendix: Hazardous Materials Register.
- A summary of the significant findings is contained in Section 5.
- The table below outlines the layout of the tabulated Asbestos Register and the information presented.



Hazardous Materials Register

Wharf 4-5, Hickson Road, Walsh Bay NSW

Date: 5th July 2007

Assessed by: Marc Harris

Asbestos Materials

Location Item Description Comments	Sample No.	Sample Status	Photo No.	Extent	Condition	Friability	Disturb. Potential	Risk Status	Re-inspect Date	Control Priority	Control Recommendation
Level 4											
The loft Infill panels Fibre-cement sheeting	57607-02-10	Positive	-	2 units x 2 m²	Good	Non - Friable	Low	Low	July 2008	3	Label and maintain in current condition. Remove under controlled conditions prior to refurbishment/demolition works.
Level 3											
Restaurant (Wharf) Apex infill panels Fibre-cement sheeting *Not sampled due to height restrictions	-	Suspected Positive	1	20m²	Good	Non - Friable	Low	Low	July 2008	3	Confirm status, label and maintain in current condition. Remove under controlled conditions prior to refurbishment/demolition works.
Restaurant (Wharf) Infill panels under windows Fibre-cement sheeting *Note: Some panels are sealed	Same as 57607-02-10	Assumed Positive	-	2 units x 2 m²	Good	Non - Friable	Low	Low	July 2008	3	Label and maintain in current condition. Remove under controlled conditions prior to refurbishment/demolition works.
Restaurant (Wharf) Floor Bituminous membrane residue	57607-02-01	Negative	-	-	-	-	-	-	-	-	-
Restaurant (Wharf) Between floor boards Bituminous calking material	57607-02-02	Negative	-	-	-	-	-	-	-	-	-
Throughout floor Window frames Putty	57607-02-03	Negative	-	-	-	-	-	-	-	-	-
Office A/C Plant room Compressor Gaskets	57607-02-04	Negative	-	-	-	-	-	-	-	-	-

Location Item Description Comments	Sample No.	Sample Status	Photo No.	Extent	Condition	Friability	Disturb. Potential	Risk Status	Re-inspect Date	Control Priority	Control Recommendation
Costume department Floor Vinyl floor tiles	57607-02-05	Negative	-	-	-	-	-	-	-	-	-
Costume department Window frames Putty	Same as 57607-02-03	Assumed Negative	-	-	-	-	-	-	-	-	-
Costume department Kitchen Sink pad	57607-02-06	Negative	-	-	-	-	-	-	-	-	-
Workshop, Entrance Sliding fire door Fire door core Note: Unable to sample to metal cladding	-	Suspected Positive	-	1unit x 3 m^2	Good	Friable	Low	Low	July 2008	3	Confirm status, label and maintain in current condition. Remove under controlled conditions prior to refurbishment/demolition works.
Workshop, Male and female toilets Walls Fibre-cement sheeting	57607-02-08	Negative	-	-	-	-	-	-	-	-	-
Metal workshop Concrete floor expansion joints Bituminous sealant	57607-02-09	Negative	-	-	-	-	-	-	-	-	-
Prop room Sliding fire doors x 3 Fire door core Note: Unable to sample to metal cladding	-	Suspected Positive	2	3 units x 4 m^2	Good	Friable	Low	Low	July 2008	3	Confirm status, label and maintain in current condition. Remove under controlled conditions prior to refurbishment/demolition works.
Level 1											
Australian Theatre for Young People, Toilets Walls Fibre-cement sheeting	57607-02-11	Negative	-	-	-	-	-	-	-	-	-

Location Item Description Comments	Sample No.	Sample Status	Photo No.	Extent	Condition	Friability	Disturb. Potential	Risk Status	Re-inspect Date	Control Priority	Control Recommendation
Australian Theatre for Young People Theatre Loose blue vinyl floor tiles	57607-02-12	Negative	-	-	-	-	-	-	-	-	-
Australian Theatre for Young People Store room Black vinyl floor covering	57607-02-13	Negative	-	-	-	-	-	-	-	-	-
Sydney Dance Studio Studio 4 Insulation to beams	57607-02-14	Negative	-	-	-	-	-	-	-	-	-
Sydney Dance Studio, Café Floor Bituminous covering	Same as 57607-02-01	Assumed Negative	-	-	-	-	-	-	-	-	-
Sydney Dance Studio Studio 1 Insulation to beams	54607-02-15	Negative	-	-	-	-	-	-	-	-	-
Sydney Choir Rehearsal, Male and Female Toilets Walls Fibre-cement sheeting	57607-02-16	Positive	3	20m²	Good	Non - Friable	Low	Low	July 2008	3	Label and maintain in current condition. Remove under controlled conditions prior to refurbishment/demolition works.
Sydney Choir Rehearsal, Reception Room Walls Fibre-cement sheeting	57607-02-17	Negative	-	-	-	-	-	-	-	-	-
Sydney Choir Rehearsal, Reception room Ceiling Fibre-cement sheeting	57607-02-18	Positive	4	20m²	Good	Non - Friable	Low	Low	July 2008	3	Label and maintain in current condition. Remove under controlled conditions prior to refurbishment/demolition works.
Sydney Choir Rehearsal, East training room, Showers Walls and ceiling Fibre-cement sheeting	Same as 57607-02-16	Assumed Positive	-	20m²	Good	Non - Friable	Low	Low	July 2008	3	Label and maintain in current condition. Remove under controlled conditions prior to refurbishment/demolition works.

Location Item Description Comments	Sample No.	Sample Status	Photo No.	Extent	Condition	Friability	Disturb. Potential	Risk Status	Re-inspect Date	Control Priority	Control Recommendation
Sydney Choir Rehearsal, West training room Ceiling Fibre-cement sheeting	Same as 57607-02-18	Assumed Positive	-	16m²	Good	Non - Friable	Low	Low	July 2008	3	Label and maintain in current condition. Remove under controlled conditions prior to refurbishment/demolition works.
Bangarra Dance Studio No asbestos detected	-	-	-	-	-	-	-	-	-	-	-
Accessible Arts No asbestos detected	-	-	-	-	-	-	-	-	-	-	-
Throughout											
Infill panels around windows Fibre-cement sheeting	57607-02-07	Positive	5	~200 units x 2m²	Good	Non - Friable	Low	Low	July 2008	3	Label and maintain in current condition. Remove under controlled conditions prior to refurbishment/demolition works.
Floor Bituminous membrane residue	Same as 57607-02-01	Assumed Negative	-	-	-	-	-	-	-	-	-
External											
Throughout building Infill panels around windows and four hip roof skylights Fibre-cement sheeting	57607-02-07	Positive	6	~200 units x 2m²	Good	Non - Friable	Low	Low	July 2008	3	Label and maintain in current condition. Remove under controlled conditions prior to refurbishment/demolition works.

Synthetic Mineral Fibre (SMF)

Location Item Description	Photo No.	Form	Extent	Risk Status	Control Recommendation
Throughout Building Insulation to air handling ductwork	7	Bonded	100m²	Low	Maintain in current condition. Remove under controlled conditions prior to refurbishment
Throughout Building Sarking insulation to ceiling	8	Bonded	500m²	Low	Maintain in current condition. Remove under controlled conditions prior to refurbishment
Throughout Building Insulation within hot water heaters	9	Bonded	~15 units x 2m²	Low	Maintain in current condition. Remove under controlled conditions prior to refurbishment

Polychlorinated Biphenyls (PCBs)

Location Item Description	Photo No.	Specifications	No. Fittings	Comments/Control Recommendation
Throughout Double-tubed 4ft fluorescent light fitting	-	-	~100	PCB-containing capacitors unlikely due to modern appearance of light fittings.

Lead-containing Paint

Location Colour Description, Comments	Photo No.	Results	Extent	Condition	Control Recommendation
External, Walls White and grey paint system	-	Negative	-	-	-
Internal, Level 3, Paint workshop, Metal paint container Yellow paint system	10	Positive	10m²	Good	Maintain in current condition, over paint with a lead-free paint as part of ongoing maintenance.

Hazardous Materials Survey Report

Preston Rowe Paterson NSW Pty Ltd

Wharf 4-5, Hickson Road, Walsh Bay NSW

Appendix B: Asbestos Sample Analysis Report

Asbestos Sample Analysis Report
Wharf 4-5, Hickson Road, Walsh Bay NSW

This report presents the results of an asbestos fibre identification analysis performed on eighteen samples (18) collected by Marc Harris of Noel Arnold & Associates Pty Ltd from Wharf 4-5, Hickson Road, Walsh Bay NSW on 5th July 2007.

All sample analysis was performed using polarised light microscopy, including dispersion staining in our Sydney Laboratory in accordance with Noel Arnold & Associates Pty Ltd Test Method Number 2 "Qualitative Identification of Asbestos in Bulk Samples" and following the guidelines of Australian Standard 4964-2004, "Method for the qualitative identification of asbestos in bulk samples". The samples will be kept for six months and then disposed of, unless otherwise directed.

The results of the asbestos identification analysis are presented in the appended table overleaf.

Should you require further information please contact the undersigned.

Yours sincerely,

NOEL ARNOLD & ASSOCIATES PTY LTD

KIMBERLEY FEMIA

APPROVED IDENTIFIER & SIGNATORY

WORLD RECOGNISED ACCREDITATION

Corporate Accreditation No. 5450

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Sampling is not covered by the scope of the NATA accreditation.

Date of Analysis: 13/07/2006

The design of sampling strategies is outside the scope of accreditation because each situation is individual, which does not allow for an objective assessment of this aspect.

NAA Sample No.	Location / Description / Sample Size	Analysis Result
Location: Wharf 4-5, Hickson Road, Walsh Bay NSW		
57607-02-01	Level 3, Restaurant (Wharf) Floor, Floor – Bituminous Membrane; Black-brown compressed fibrous bituminous membrane material; ~42 x 17 x 3 mm	No Asbestos Detected
57607-02-02	Level 3, Restaurant (Wharf), Floor – Calking; Black-brown brittle compressed fibrous calking material; ~25 x 16 x 1 mm	No Asbestos Detected
57607-02-03	Level 3, Throughout, Window frames – sealant; Brown hard compressed fibrous mastic material; ~19 x 9 x 1 mm	No Asbestos Detected Note 1
57607-02-04	Level 3, Office A/C plant room, compressor – gaskets; Amber brown compressed fibrous gasket material; ~10 x 4 x <1 mm	No Asbestos Detected
57607-02-05	Level 3, Costume dept, Floor - Vinyl floor tiles; Grey brittle vinyl material and associated amber adhesive; ~45 x 21 x 2 mm	No Asbestos Detected Note 1
57607-02-06	Level 3, Costume dept, kitchen, sink – acoustic pad; Black sticky compressed fibrous bituminous membrane-like material; ~20 x 10 x <1 mm	No Asbestos Detected Note 1
57607-02-07	Throughout building, high level infill panels – Fibre-cement sheeting; Unpainted beige compressed fibre cement material; ~18 x 8 x <1 mm	**Chrysotile (White Asbestos)**
57607-02-08	Level 3, Workshop, Male and female toilets, walls – Fibre-cement sheeting; White painted beige compressed fibre cement material; ~10 x 4 x <1 mm	No Asbestos Detected

NAA Sample No.	Location / Description / Sample Size	Analysis Result
57607-02-09	Metal workshop, concrete slabs expansion joints – bituminous sealant; Black sticky fibrous bituminous mastic material; ~48 x 11 x 1 mm	No Asbestos Detected Note 1
57607-02-10	Level 4, The loft, upper wall infill panels – Fibre cement sheeting; Dull blue tough fibrous material; ~10 x 1 x <1 mm	**Crocidolite (Blue Asbestos)**
57607-02-11	Level 2, ATYP, Male and female toilets, walls – Fibre cement sheeting; White painted beige compressed fibre cement material; ~9 x 8 x <1 mm	No Asbestos Detected
57607-02-12	Level 2, ATYP Theatre, floor, SE corner – Vinyl debris; Green brittle vinyl material; ~91 x 48 x 2 mm	No Asbestos Detected
57607-02-13	Level 2, ATYP Storeroom, floor – Vinyl floor covering; Black brittle vinyl material with attached brown fibrous sheet-like backing and associated amber adhesive; ~30 x 12 x 2 mm	No Asbestos Detected
57607-02-14	Level 2, Sydney Dance Studio no.1, high-level structural beams – 'vermiculite' fire rating material; Beige powdery non-fibrous gold shiny mica vermiculite material; ~102 x 22 x 3 mm	No Asbestos Detected
57607-02-15	Level 2, Sydney Dance Studio no., high-level structural beams – 'vermiculite' fire rating material; Beige powdery non-fibrous gold shiny mica vermiculite material; ~33 x 24 x 3 mm	No Asbestos Detected
57607-02-16	Level 2, SCR East training room showers, walls - Fibre cement sheeting; White painted beige compressed fibre cement material; ~24 x 10 x <1 mm	**Chrysotile (White Asbestos)**

NAA Sample No.	Location / Description / Sample Size	Analysis Result
57607-02-17	Level 2, SCR East training room, floors – Vinyl floor tiles; Brown soft compressed fibrous mastic-like material; ~8 x 5 x <1 mm	No Asbestos Detected
57607-02-18	Level 2, SCR Reception, Ceiling - Fibre cement sheeting; White painted beige compressed fibre cement material; ~32 x 5 x 1 mm	**Chrysotile (White Asbestos)**

***All samples are analysed by polarised light microscopy, including dispersion staining.**
***Shaded rows indicate a positive result for asbestos.**

Note 1. Confirmation by another analytical technique advised due to the nature of the sample.

Hazardous Materials Survey Report

Preston Rowe Paterson NSW Pty Ltd

Wharf 4-5, Hickson Road, Walsh Bay NSW

Appendix C: Risk Assessment Factors

Risk Assessment Factors - Asbestos

To assess the health risk posed by the presence of asbestos-containing material, all relevant factors must be considered. These factors include:

- Evidence of physical damage;
- Evidence of water damage;
- Proximity of air plenums and direct air stream;
- Friability of asbestos material;
- Requirement for access for building operations;
- Requirement for access for maintenance operations;
- Likelihood of disturbance of the asbestos material;
- Accessibility;
- Exposed surface areas; &
- Environmental conditions.

These aspects are in turn judged upon; (i) potential for fibre generation, and, (ii) the potential for exposure. Where these factors have indicated that there is a possibility of exposure to airborne fibres, appropriate recommendations for repair, maintenance or abatement of the asbestos-containing materials are made.

Condition

The condition of the asbestos products identified during the survey is usually reported as either being good or poor.

- *Good* refers to asbestos materials, which have not been damaged or have not deteriorated.
- *Minor* damage refers to the asbestos material having suffered minor cracking or de-surfacing.
- *Poor* describes asbestos materials, which have been damaged, or their condition has deteriorated over time.

Friability

The friability of asbestos products describes the ease of which the material can be crumbled, and hence to release fibres.

- *Friable asbestos* (eg limpet beam insulation, pipe lagging) can be easily crumbled and is more hazardous than non-friable asbestos products.
- *Non-friable asbestos,* commonly known as bonded asbestos, is typically comprised of asbestos fibres tightly bound in a stable non-asbestos matrix.

Examples of non-friable asbestos products include asbestos cement materials (sheeting, pipes etc), asbestos containing vinyl floor tiles and electrical backing boards.

Accessibility/Disturbance Potential

Asbestos products can be classified as having low, medium or high accessibility/disturbance potential.

- *Low* accessibility describes asbestos products that cannot be easily disturbed, such as materials in building voids, set ceilings etc.
- *Medium* accessibility describes asbestos products that are visible but normal access is impeded, such as materials behind cladding material or is present in a ceiling space or are height restricted.
- *High* accessibility asbestos products can be easily accessed or damaged due to their close proximity to personnel, eg asbestos cement walls or down pipes.

Risk Status

The risk factors described above are used to rank the health risk posed by the presence of asbestos-containing materials.

- A *low* risk ranking describes asbestos materials that pose a low health risk to personnel, employees and the general public providing they stay in a stable condition, for example asbestos materials that are in good condition and have low accessibility.
- A *medium* risk ranking applies to materials that pose an increased risk to people in the area.
- Asbestos materials that posses a *high* risk ranking pose a high health risk to personnel or the public in the area of the material. Materials with a high risk ranking will also possess a Priority 1 recommendation to manage the asbestos and reduce the risk.

Priority Rating System for Control Recommendations - Asbestos

The following priority rating system is adopted to assist in the programming and budgeting of the control of asbestos risk identified at the site.

Priority 1: Hazard with Significant Risk Potential (Red)

An area has asbestos containing materials, which are either damaged or are being exposed to continual disturbance. Due to these conditions, there is an increased potential for exposure and/or transfer of the material to other parts with continued unrestricted use of this area. Representative asbestos fibre monitoring should be conducted in the building area during normal building operation where recommended. Prompt abatement of the asbestos hazard is recommended and instigation of control measures under an asbestos management plan.

Priority 2: Hazard with Elevated Risk Potential (Orange)

An area has asbestos containing materials with a potential for disturbance due to the following conditions:

- Material has been disturbed or damaged and its current condition, while not posing an immediate hazard, is unstable.
- The material is accessible and can when disturbed, present a short-term exposure risk.
- Demolition, renovation, refurbishment, maintenance, modification or new installations, involving air-handling system, ceilings, lighting, fire safety systems or floor layout.

Appropriate abatement measures should be taken at earliest possible convenient time. A negligible health risk exists if materials remain undisturbed under the control of an asbestos management plan.

Priority 3: Maintenance Controllable – Potential Hazard During Refurbishment (Yellow)

An area has asbestos-containing materials, where

- The condition of the friable asbestos material is now stable and has low potential of being disturbed or
- The material is currently in a non-friable condition and does not present an exposure risk unless cut, drilled, sanded or otherwise abraded.

Negligible health risks are present if materials are left undisturbed under the control of an asbestos management plan. Defer any major action unless materials are to be disturbed as a result of maintenance, refurbishment or demolition operations.

Risk Assessment Factors for SMF

Risk assessment factors for Synthetic Mineral Fibre is very similar for asbestos products, where evidence of damage, accessibility, likelihood of disturbance etc is used when assessing SMF materials. Similarly SMF condition, accessibility and risk status headings used above for asbestos can be applied to SMF materials.

There are two basic forms of SMF insulation, bonded and un-bonded.

- *Bonded* SMF is where adhesives or cements have been applied to the SMF before delivery and the SMF product has a specific shape.
- *Un-bonded* SMF has no adhesives or cements and the SMF is loose material packed into a package.

Removal of bonded materials is easier and less hazardous than removal of un-bonded SMF material.

Risk Assessment Factors for Polychlorinated Biphenyls

The handling and disposal of PCBs must be performed in accordance with *The New South Wales Protection Of The Environment Operations Act*, 1997.

The following Personal Protective Equipment should be worn when handling items containing Polychlorinated Biphenyls - nitrile gloves, eye protection, and disposable overalls. The PPE should be worn when removing capacitors from light fittings in case Polychlorinated Biphenyls material leaks from the capacitor housing.

Generally, metal-cased capacitors contain PCBs. Plastic–cased capacitors usually do not. However, all leaking capacitors should be treated as if they contain PCBs unless proven otherwise.

Risk Assessment Factors for Lead Paint

Lead paint, as defined by the Australian Standard *AS4361.2 – 1998 Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings*, is that which contains in excess of 1% Lead by weight.

Lead carbonate (white lead) was once the main white pigment in paints for houses and public buildings. Paint with lead pigment was manufactured up until the late 1960's, and in 1969 the National Health and Medical Research Council's Uniform Paint Standard was amended to restrict lead content in domestic paint.

Lead in any form is toxic to humans when ingested or inhaled, with repeated transmission of particles cumulating in lead poisoning. Lead paint is assessed based on two potential routes of exposure. Firstly by the likelihood of inhalation or ingestion by people working in the vicinity of the paint and secondly by the condition of the paint. Paint that is flaking or in poor condition is more likely to be ingested than paint that is in a good, stable condition.

Hazardous Materials Survey Report

Preston Rowe Paterson NSW Pty Ltd

Wharf 4-5, Hickson Road, Walsh Bay NSW

Appendix D: Photographs

Hazardous Materials

Photo 1. Upper wall panels, Level 3, Restaurant (Wharf) – Asbestos fibre-cement sheeting

Photo 2. Sliding fire door, Workshop entrance, Level 3 – Suspected Asbestos fire door core

Photo 3. Walls, Male and Female Toilets, Level 1, Sydney Choir Rehearsal – Asbestos fibre-cement sheeting

Photo 4. Ceiling, Reception room, Level 1, Sydney Choir Rehearsal – Asbestos fibre-cement sheeting

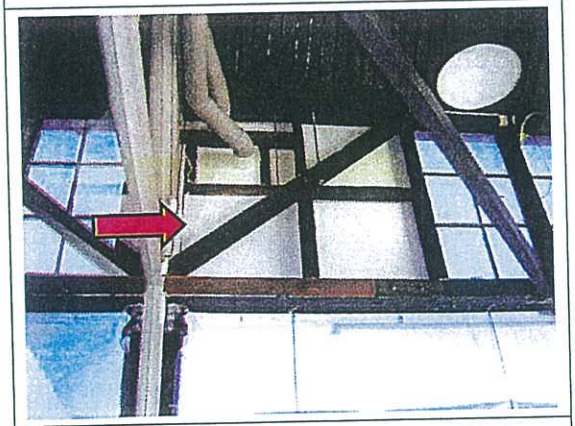

Photo 5. Infill panels around windows, Throughout Building – Asbestos fibre-cement sheeting

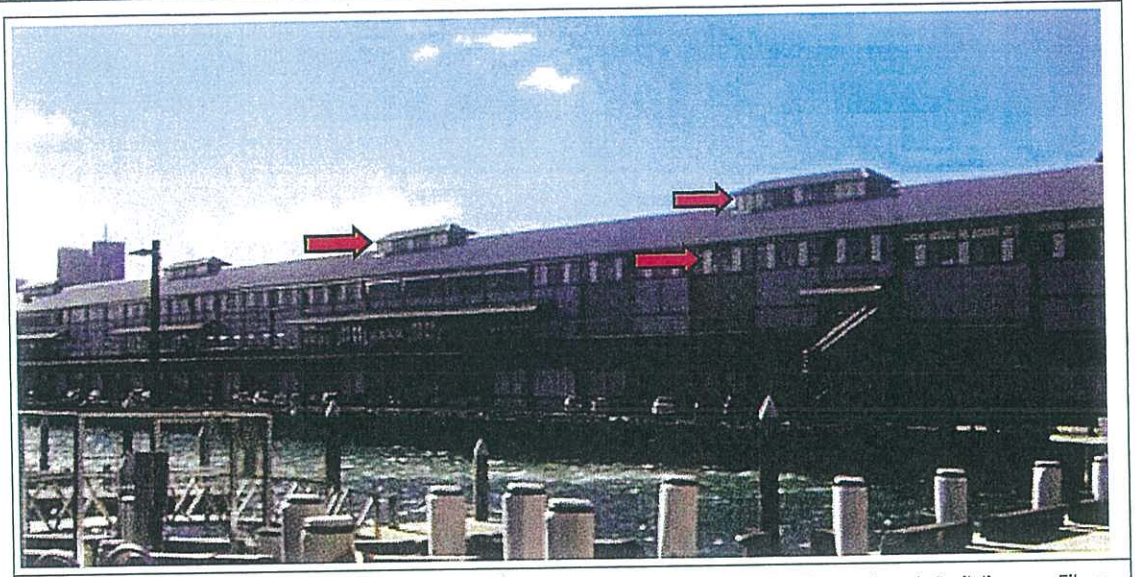

Photo 6. Infill panels around windows and four hip roof skylight, Throughout Building – Fibre-cement sheeting

Photo 7. SMF insulation to air conditioning ductwork throughout building.

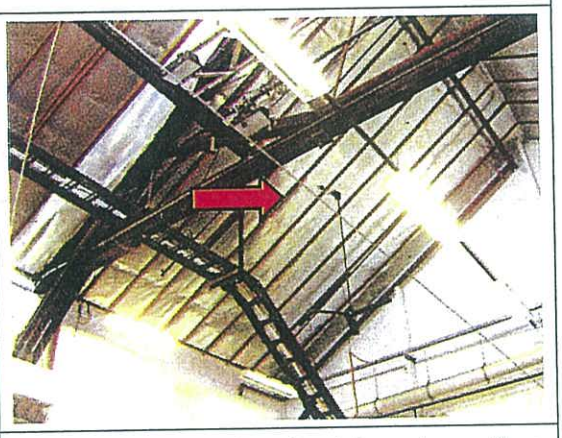

Photo 8. SMF sarking insulation to ceilings throughout building

Photo 9. Suspected SMF material within Hot water heaters throughout builing.

Photo 10. Yellow lead containing paint on paint storage container, Paint workshop, Level 3.

Hazardous Materials Survey Report

Preston Rowe Paterson NSW Pty Ltd

Wharf 4-5, Hickson Road, Walsh Bay NSW

Appendix E: General Hazardous Materials Information

Information on Common Asbestos Materials

Asbestos-containing materials can be classified into the following main categories:-

- Sprayed or trowelled asbestos materials applied to ceilings, walls and other surfaces for fire-rating purposes. This material is commonly referred to as limpet asbestos.
- Asbestos-containing insulation on pipes, boilers, tanks, ducts etc. which is often referred to as asbestos lagging.
- Asbestos cement products, Cementitious or concrete like products.
- Asbestos paper products, millboard in electrical switchboards or underlaying lining for linoleum or vinyl floor coverings.
- Asbestos textiles, braided asbestos, rope, tape, gaskets etc (note that rope and millboard are potentially friable).
- Vinyl tiles, linoleum and vinyl flooring mastic and associated adhesives.
- Asbestos-containing compounds, gaskets and mastic from mechanical fittings, and roofing membranes.
- Electrical switchboards containing compressed asbestos tar electrical boards, asbestos cement sheeting, asbestos rope to spark arresters and asbestos millboard from inside auxiliary switchboxes/fuse boards.
- Roofing sealants, bituminous membranes, tar composites and similar materials were occasionally mixed with asbestos materials.
- Some office furnishings such as wall partitions may contain an asbestos cement internal lining inside plaster or "Stramit" type panelling. Certain types of older vinyl covered desktops and workbenches may contain an underlying asbestos millboard lining.

Sprayed Asbestos Materials

Sprayed asbestos or limpet asbestos is most often found on structural steel members to provide a fire-rating. Limpet asbestos is a friable material. Friable materials are those which can easily be crumbled, pulverised or reduced to powder by hand pressure. Limpet asbestos tends to be the most friable of all asbestos-containing materials and can contain relatively high percentage of asbestos (30% - 90%).

Limpet asbestos can slowly release fibres as the materials age ie. As its friability increases. Direct mechanical damage or excessive machinery vibration can lead to more significant release of airborne asbestos fibres.

Asbestos Containing Lagging Materials

Insulation such as lagging usually contains a smaller percentage of asbestos (usually 20% - 50%). Protective jackets on the insulation materials (such as metal jacketing or calico on pipe lagging) prevent asbestos fibre release. Physical damage to the protective jacket however, may lead to the release of respirable fibres. The binding material in the insulation can deteriorate with age rendering it more friable.

Asbestos Cement Sheeting Materials

Asbestos cement products and asbestos gaskets generally do not present a significant health risk unless they are cut, sanded or otherwise disturbed so as to release asbestos dust. Fibre release due to occasional damage is negligible and thus not a significant health risk. Care must be taken therefore in the removal of asbestos cement products to avoid the release of airborne fibres. Unless analysis of fibro-cement products indicates otherwise, these materials should be considered as containing asbestos.

External asbestos cement claddings become weathered after many years by the gradual loss of cement from the exposed surface. This leaves loosely bound layers enriched with asbestos fibres. In other words, the material becomes more friable through the weathering process.

Asbestos Containing Vinyl Products

Vinyl tiles and linoleum flooring manufactured before 1984 may contain asbestos in various quantities in a well-bound cohesive matrix. Asbestos containing vinyl floor and wall coverings generally do not present a significant health risk unless they are sanded or otherwise mechanically abraded so as to release asbestos dust. Fibre release due to occasional damage is negligible and thus not a significant health risk. Care must be taken therefore, in the removal of asbestos containing vinyl tiles to avoid the release of airborne fibres. Unless analysis of vinyl tiles and linoleum flooring indicates otherwise, these materials should be considered as containing asbestos. Older bituminous adhesives may also contain asbestos and must be removed as an asbestos process in circumstance where the floor is to be renewed and re-levelled by floor sanding or grinding.

Asbestos Containing Gaskets

Gaskets and sealing compounds in equipment, duct work and re-heat air conditioning boxes may contain asbestos. These should be replaced with non-asbestos equivalents during routine maintenance. In addition, asbestos containing mastic and seals in air handling duct work joints. These usually do not pose a hazard as the asbestos fibres are firmly held within the plastic resinous compound and should be replaced as part of routine maintenance or removed during the demolition of the plant equipment.

Asbestos Insulation to Re-Heat Boxes

Insulation to internal lining of ductwork sections and electrical re-heat air conditioning boxes generally contain asbestos millboard. These should be replaced with non-asbestos equivalents during routine maintenance.

Asbestos Containing Mastics and Sealants

Many mastic and sealant products contain Chrysotile asbestos within the pliable, resinous matrix. The nature of the substrate is such that it does not readily dry out in situ, and therefore the fibres are well bound and pose a low risk.

Management of Asbestos Hazards

The health effects associated with asbestos exposure are due to the inhalation of airborne respirable asbestos fibres. In general, the asbestos fibres cannot be released to become airborne in significant quantities unless the asbestos-containing material is severely disrupted such as in the case of cutting asbestos cement products with power saws etc.

A range of control measures are available for the abatement of asbestos hazards. The selection of the appropriate control measure is based on the assessment risk for each specific location. These measures include:

- **Leave and maintain** in existing condition.
- **Repair and maintain** in good condition.
- **Enclose** asbestos or synthetic mineral fibre material by providing a barrier such as a box enclosure or steel cladding.
- **Remove** by approved methods under controlled conditions.
- **Labelling** of asbestos materials that are to remain in situ should be undertaken where practical to ensure that the asbestos materials are not damaged inadvertently by maintenance contractors etc.

Synthetic Mineral Fibre (SMF)

General

In the late 1980's the International Agency for Research on Cancer (IARC) evaluated certain SMF materials as being possibly carcinogenic to humans. The similarity in application and appearance to asbestos has resulted in some community concern regarding the health effects associated with exposure to SMF.

Current medical research indicates that the slightly increased risk of lung cancer for workers employed in the early days of rockwool and slagwool manufacture, and workers in the glasswool sector is not anticipated under present day working conditions. However, acute health affects such as eye, skin and upper respiratory tract irritation may occur with certain SMF products.

Caution is required when handling SMF products in order to minimise disturbance of the materials and subsequent airborne SMF fibre levels. Where SMF materials are to be installed or removed, then suitable controls and appropriate personal protection are to be provided.

It is recommended that the following Code of Practice be closely adhered to for appropriate procedures when handling such materials:

- *WorkSafe Australia Synthetic Mineral Fibre, National Standard & National Code of Practice, May 1990.*

Polychlorinated Biphenyls (PCBs)

General

PCBs are usually identified as a colourless to darker coloured oily liquid. PCBs are considered probable carcinogens. They can be absorbed through the skin, inhaled as a vapour or ingested, therefore contact with them should be prevented. They are often found in old transformers and metallised capacitors of fluorescent light fittings. These synthetic compounds are chemically stable, have good insulating properties and do not degrade appreciably over time or with exposure to high temperatures. It is these properties that made PCBs useful in electrical devices.

Lead-containing Paint

General

Lead paint, as defined by the Australian Standard *AS4361.2 – 1998 Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings,* is that which contains in excess of 1% Lead by weight.

Lead carbonate (white lead) was once the main white pigment in paints for houses and public buildings. Paint with lead pigment was manufactured up until the late 1960's, and in 1969 the National Health and Medical Research Council's Uniform Paint Standard was amended to restrict lead content in domestic paint.

Many older Australian homes and buildings still contain lead paint, even though it may be covered with layers of more recent paint. Lead paint was used mainly on exterior surfaces, and to a lesser degree on interior doors plus door and window architraves, especially in undercoats and primers, where concentrations of up to 20% lead content were used. Interior walls weren't commonly painted with paint containing white lead pigment, though some colours did contain red, orange and yellow lead pigments.

All paints manufactured for Australian dwellings from the 1970's onwards have been required to contain less than 1% lead, though higher lead-content industrial paints may have been applied since then to housing and commercial buildings.

Lead in any form is toxic to humans when ingested or inhaled, with repeated transmission of particles cumulating in lead poisoning. Lead paint removal poses two potential avenues of transmission. Firstly by inhalation or ingestion by workers and public in the vicinity of the works, and secondly by the deposition of particles on nearby footpaths, streets or soil where they may be resuspended, tracked into houses or buildings where it can be inhaled or ingested.