Hazardous Materials Assessment
Wharf 2/3
13A Hickson Road
The Rocks NSW 2000

Preston Rowe Paterson New South Wales

October 2011 - Rev01

Level 1, 50 Yeo Street

Neutral Bay NSW 2089

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Job No: 50290-07: Client No: P0009

Executive Summary

Introduction

Prensa Pty Ltd (Prensa) was engaged by Preston Rowe Paterson New South Wales (PRP) to conduct a hazardous materials assessment (Assessment) of Wharf 2/3, 13A Hickson Road, The Rocks NSW (the Site). Scott Bamford of Prensa conducted the Assessment on the 19th October 2011 at the request of Elizabeth Duncan of PRP.

Objective

The objective of the Assessment was to identify and assess the risks associated with the suspected hazardous materials at the Site and develop a hazardous materials register.

The Assessment will assist PRP with fulfilling its obligations in accordance with the NSW *Occupational Health and Safety Regulation* 2001, the *Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC:2018(2005)] and other relevant regulations, codes of practice, guidance notes and australian standards.

Scope of Works

The scope of the Assessment was to:

- Undertake a desktop document review of available previous hazardous materials reports and hazardous materials abatement records relating to the Site;
- Conduct a visual inspection of suspected hazardous materials of the nominated and accessible areas of the Site;
- Collect suspected ACMs for analysis by Prensa's National Association of Testing Authorities (NATA), Australia accredited laboratory;[1] and
- Deliver to PRP an assessment report that includes a hazardous materials register with recommendations where appropriate and NATA endorsed sample analysis results for asbestos bulk sample analysis.

The interior and exterior of the property were assessed. For the purposes of the Assessment, Prensa investigated for the following hazardous materials:

- Asbestos-containing materials (ACM);
- Synthetic mineral fibre (SMF) materials;
- Polychlorinated biphenyls (PCB) containing capacitors in electrical fittings;
- Lead-containing paint (LCP); and
- Ozone depleting substances (ODS).

Methodology

The Assessment comprised a review of available information, interviews with available Site personnel and a visual inspection of reasonably accessible areas. The Assessment was conducted in

[1] Prensa's laboratory is accredited by NATA to conduct asbestos analysis in bulk samples and soils. The Prensa laboratory conducts asbestos bulk sample analysis in accordance with Australian Standard (AS) 4964 – 2004 *Method for the qualitative identification of asbestos in bulk samples* and AS ISO/IEC 17025 – 2005 *General requirements for the competence of testing and calibration laboratories*.

accordance with the NSW *Occupational Health & Safety Regulations* 2001 and relevant state legislation and documentation in regards to hazardous materials.

Findings

The following hazardous materials were identified or suspected at the time of the Assessment:

Area	Asbestos-containing Materials (ACM)		Synthetic Mineral Fibre (SMF)	Poly-chlorinated Biphenyls (PCB)	Lead-containing Paint (LCP)	Ozone Depleting Substances (ODS)
	Bonded	Friable				
Exterior	✓	-	-	-	✓	-
Ground level	✓	✓	-	-	✓	-
Level 1	✓	-	✓	-	✓	-

Recommendations

Based on the findings of this Assessment, it is recommended that the following control measures be adopted as part of the management of hazardous materials at the Site. The following recommendations are provided for the management and removal of hazardous materials:

Asbestos-Containing Materials (ACMs)

- Encapsulate the asbestos-containing fibre cement infill panels to the urinal and windows, located on Level 1 within the northern toilet block as soon as practicable.
- An asbestos hygienist who is independent of the asbestos removalist should be engaged by PRP to conduct a visual clearance inspection subsequent to the completion of the encapsulation works.
- Unlabeled building materials on site should be marked as containing asbestos and maintained in good condition if to remain in-situ.
- An Asbestos Management Plan (AMP) should be created and maintained for all ACMs that remain at the Site.
- Schedule periodic reassessment of ACMs remaining on-site.
- A Destructive Hazardous Material Survey should be carried out prior to any demolition or refurbishment works.
- During demolition/refurbishment works, if any materials that are not referenced in this report and are suspected of containing asbestos are encountered, then works must cease and an asbestos hygienist should be notified to determine whether the material contains asbestos.

Synthetic Mineral Fibre (SMF) Materials

- SMF materials should be maintained in good condition.

Polychlorinated Biphenyls (PCB)

- No recommendations

Lead-Containing Paint (LCP)

- Works that are likely to cause disturbance of LCP systems should be conducted under controlled conditions by a suitably qualified contractor.

Ozone Depleting Substances (ODS)

- No recommendations.

This executive summary must be read in conjunction with this entire report.

Statement of Limitations

This document has been prepared in response to specific instructions from PRP NSW (the Client) to whom the report has been addressed. The work has been undertaken with the usual care and thoroughness of the consulting profession. The work is based on generally accepted standards, practices of the time the work was undertaken. No other warranty, expressed or implied, is made as to the professional advice included in this report.

The report has been prepared for the use by the Client and the use of this report by other parties may lead to misinterpretation of the issues contained in this report. To avoid misuse of this report, Prensa advise that the report should only be relied upon by the Client and those parties expressly referred to in the introduction of the report. The report should not be separated or reproduced in part and Prensa should be retained to assist other professionals who may be affected by the issues addressed in this report to ensure the report is not misused in any way.

Unless otherwise stated in this report, the scope is limited to a re-inspection of previously identified fixed and installed materials and excludes buried waste materials, contaminated dusts and soils.

Unless expressly stated it is not intended that this report be used for the purposes of tendering works. Where this is the intention of the Client, this intention needs to be communicated with Prensa and included in the scope of the Proposal.

Prensa is not a professional quantity surveyor (QS) organisation. Any areas, volumes, tonnages or any other quantities noted in this report are indicative estimates only. The services of a professional QS organisation should be engaged if quantities are to be relied upon.

Sampling Risks

It is noted that while the survey has attempted to locate the asbestos-containing materials within the building(s), the investigation was limited to only a visual assessment and limited sampling program and/or the review and analysis of previous reports made available. Prensa notes that sampling is representative only and that due to the lack of homogeneity of building materials it is possible that sampling has not detected all asbestos within the nominated locations.

Given that a representative sampling program has been adopted, not all materials suspected of containing asbestos and that at the time of the investigation were sampled and assessed. It is noted that some asbestos materials may have been assumed to contain asbestos based on their similar composition to previously sampled materials.

Therefore, it is possible that asbestos materials, which may be concealed within inaccessible areas/voids, may not have been located during the investigation. Such areas include, but are not limited to:

- Materials concealed behind structural members and within inaccessible building voids
- Areas inaccessible without the aid of scaffolding or lifting devices
- Areas below ground
- Inaccessible ceiling or wall cavities
- Areas which require substantial demolition to access
- Areas beneath floor covering where asbestos containing materials were not expected to exist
- Materials contained within plant and not accessible without dismantling the plant
- Areas where access is restricted due to locked doors, safety risks, or being occupied at the time of the investigation

Future Works

During future works at the Site, care should be taken when entering or working in any previously inaccessible areas or areas mentioned above and it is imperative that works cease immediately pending further investigation and sampling (if necessary) if any unknown materials are encountered. Therefore, during any refurbishment or demolition works, further investigation, sampling and/or assessment may be required should any suspect or unknown material be observed in previously inaccessible areas or areas not fully inspected, i.e. carpeted floors.

Table of Contents

1 Introduction

Prensa Pty Ltd (Prensa) was engaged by Preston Rowe Paterson New South Wales (PRP) to conduct a hazardous materials assessment (Assessment) of Wharf 2/3 13A Hickson Road, The Rocks NSW (the Site). Scott Bamford of Prensa conducted the Assessment on the 19th October 2011 at the request of Elizabeth Duncan of PRP.

2 Objective

The objective of the Assessment was to identify and assess the risks associated with the suspected hazardous materials at the Site and develop a hazardous materials register.

The Assessment will assist PRP NSW with fulfilling its obligations in accordance with the NSW *Occupational Health and Safety Regulation* 2001, the *Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC:2018(2005)] and other relevant regulations, codes of practice, guidance notes and australian standards

3 Scope of Works

The scope of the Assessment was to:

- Undertake a desktop document review of available previous hazardous materials reports and hazardous materials abatement records relating to the Site;
- Conduct a visual inspection of suspected hazardous materials of the nominated and accessible areas of the Site;
- Collect suspected ACMs for analysis by Prensa's National Association of Testing Authorities (NATA), Australia accredited laboratory[2];and
- Deliver to PRP an assessment report that includes a hazardous materials register, with recommendations where appropriate, and NATA endorsed sample analysis results for asbestos bulk sample analysis.

The interior and exterior of the property were assessed. For the purposes of the Assessment, Prensa investigated for the following hazardous materials:

- Asbestos-containing materials (ACM);
- Synthetic mineral fibre (SMF) materials;
- Polychlorinated biphenyls (PCB) containing capacitors in electrical fittings;
- Lead-containing paint (LCP); and
- Ozone depleting substances (ODS).

The Assessment was conducted during normal business hours and the Site was occupied at the time of our inspection.

[2] Prensa's laboratory is accredited by NATA to conduct asbestos analysis in bulk samples and soils. The Prensa laboratory conducts asbestos bulk sample analysis in accordance with Australian Standard (AS) 4964 – 2004 *Method for the qualitative identification of asbestos in bulk samples* and AS ISO/IEC 17025 – 2005 *General requirements for the competence of testing and calibration laboratories*.

4 Site Description

The Site consists of 2 levels of open space situated on an approximate 10,000 m^2 timber dock above Sydney Harbour. The wharf is of timber construction on submerged piers and was constructed circa 1920's. The wharf has a corrugated metal roof and the internal walls comprise of timber, metal and fibre cement sheeting. Floors are timber with bitumen coverings.

4.1 Areas not Accessed

Areas that are generally not accessed as part of Prensa's assessments are listed in **Appendix C: Areas Not Accessed**. Site-specific areas that were not accessed during Prensa's inspection are also listed in this appendix.

5 Methodology

The Assessment comprised a review of relevant Site information made available to Prensa, interviews with available site personnel and a visual inspection of reasonably accessible areas of the proposed work area.

When safe to do so, materials suspected of containing asbestos were sampled at the discretion of the Prensa consultant. Collected samples were then submitted to the Prensa laboratory for asbestos bulk sample analysis. Representative sampling was undertaken only where items were deemed by Prensa to be physically and reasonably accessible.

Paints that were suspected of containing lead were tested for the presence of lead on site, the methodology for assessing the hazardous materials at the Site is presented in the following sections.

Asbestos-Containing Materials (ACMs) – 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)]. Samples of suspected ACM were analysed in Prensa's laboratory, which is NATA accredited to conduct asbestos bulk sample analysis. The analysis was conducted using polarised light microscopy including dispersion staining techniques.

Synthetic Mineral Fibres (SMF) – This component of the Assessment was carried out in accordance with the guidelines documented in the *Code of Practice for the Safe Use of Synthetic Mineral Fibres* [NOHSC: 2006 (1990)]. This report broadly identifies SMF materials found or suspected of being present during the assessment and is based on a visual assessment.

Polychlorinated Biphenyls (PCB) – Where safely accessible, specifications of capacitors incorporated in light fittings and ceiling fans were recorded and cross-referenced with the *ANZECC Identification of PCB-containing Capacitors information booklet* – 1997. Due to the danger of accessing electrical components, or for other reasons, such as height restrictions, some electrical fittings may not have been accessed. In these instances, comment is provided in the Assessment report on the likelihood of PCB-containing materials being present. This determination is based upon the age and appearance of the electrical fittings.

Lead-Containing Paint (LCP) – Representative painted surfaces were tested in several locations for the presence of lead using the LeadCheck paint swab method. 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 attempts to be representative of the various types of paints found at the Site, however, particular attention is paid to areas where LCPs were more likely to have been used (e.g. exterior gloss paints, window and door architraves and skirting boards). The objective of LCP

identification in this Assessment is to highlight the presence of LCP within the Site building(s), not to specifically identify every source of LCP.

Ozone Depleting Substances (ODS) – This component of the Assessment comprised a visual inspection of air conditioning units and any chillers (if applicable) at the Site and included a review of the air conditioner refrigerant types.

6 Results

6.1 Document Review

No previous hazardous materials reports were known to exist for the Site.

6.2 Analytical results

6.2.1 Asbestos Bulk Sample Analysis

A total of four (4) samples suspected to contain asbestos were collected and submitted to Prensa's NATA accredited laboratory for analysis. The asbestos bulk sample analysis report is provided in **Appendix A: NATA-endorsed Laboratory Sample Analysis Reports** of this Assessment report. In summary, two (2) samples were reported to contain asbestos.

6.3 Assessment Results

The findings of this Assessment are presented in tabulated format in **Appendix B: Hazardous Materials Register** of this Assessment report. A risk assessment was conducted on hazardous materials identified, using the Risk Assessment Factors presented in **Appendix C: Areas not accessed.** Hazardous materials that have been photographed are depicted in **Appendix D: Photographs** of this Assessment report.

The following hazardous materials were identified in the following locations at the Site:

6.3.1 Asbestos-containing Materials (ACM)

ACMs confirmed by laboratory analysis are listed below:

- Interior, level 1, north toilet, infill panels to urinal – fibre cement sheeting; and
- Interior, level 1, north toilet, infill panels to windows – fibre cement sheeting.

ACMs that could not be sampled but are suspected of containing asbestos are listed below:

- Exterior/interior, upper roof gables (north and south), infill panels – fibre cement sheeting;
- Exterior/interior, ceiling throughout, green light fittings, cables – woven material;
- Exterior/interior, throughout, infill panels to windows – fibre cement sheeting;
- Exterior/interior, level 1, north wall, gable infill – fibre cement sheeting; and
- Ground level, throughout, infill panels to windows – fibre cement sheeting.

6.3.2 Synthetic Mineral Fibre Materials (SMF)

Suspected SMF materials were identified in the following locations:

- Interior, level 1, ceiling space, sarking – insulation material; and
- Interior, level 1, upper gables (north and south), ceiling space, sarking – insulation material.

6.3.3 Polychlorinated Biphenyls (PCB)

Based on inspection by Bass Electrical the presence of PCB-containing capacitors has been confirmed as no suspected PCB-containing capacitors within the light fittings.

6.3.4 Lead-Containing Paint (LCP)

LCP was identified in the following locations:

- Exterior, throughout, timber features – white lower colour paint system;
- Interior, throughout, timber features – white lower colour paint system; and
- Interior, level 1, stored timber windows – white lower colour paint system.

6.3.5 Ozone Depleting Substances (ODS)

No suspected ODS were identified at the time of the Assessment.

Refer to **Appendix B: Hazardous Materials Register** for further details of these reported findings.

7 Recommendations

Based on the findings of this Assessment, it is recommended that the following control measures be adopted as part of the management of the hazardous materials at the Site. The following recommendations are provided for the management and removal of ACMs. Recommendations for specific items of hazardous materials are also presented in **Appendix B: Hazardous Materials Register** of this Assessment report.

7.1 Asbestos-Containing Materials (ACMs)

- Encapsulate the asbestos-containing fibre cement infill panels to the urinal and windows, located on Level 1 within the northern toilet block as soon as practicable. The asbestos removal works should be conducted by an appropriately licensed asbestos removal contractor (i.e. AS-1 friable or AS-2 bonded) under controlled asbestos removal working conditions.
- An asbestos hygienist who is independent of the asbestos removalist should be engaged by PRP to conduct a visual clearance inspection subsequent to the completion of the encapsulation works.
- Unlabeled building materials on site should be marked as containing asbestos and maintained in good condition if to remain in-situ. If materials are to be disturbed or removed. This work should be undertaken, by an appropriately licensed asbestos removal contractor under controlled asbestos removal conditions.
- An Asbestos Management Plan (AMP) should be created and maintained for all ACMs that remain at the Site to assist the Site controller with the management of these materials. As an initial step to the development of the AMP, a register of ACMs present at the Site must be developed and maintained. The AMP must ensure that suitable control measures are implemented to prevent Site personnel and others from being exposed to airborne asbestos fibre.
- Schedule periodic reassessment of ACMs remaining on-site to monitor their aging/deterioration so that the Site controller can be alerted if any asbestos-containing materials require encapsulation or removal – in accordance with Part 9.3.1 of the *Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC: 2018 (2005)].

- A Destructive Hazardous Material Survey should be carried out prior to any demolition or refurbishment works. Any hazardous materials identified within this survey should be removed prior to the commencement of any works that may cause disturbance - as per Australian Standard (AS) 2601:2001 *The Demolition of Structures.*
- During demolition/refurbishment works, if any materials that are not referenced in this report and are suspected of containing asbestos are encountered, then works must cease and an asbestos hygienist should be notified to determine whether the material contains asbestos.

7.2 Synthetic Mineral Fibre (SMF) Materials

- SMF materials should be maintained in good condition as per the *National Code of Practice for the Safe Use of Synthetic Mineral Fibres* [NOHSC:2006(1990)].

7.3 Polychlorinated Biphenyls (PCB)

- No recommendations.

7.4 Lead-Containing Paint (LCP)

- Lead carbonate (white lead) was once the main white pigment in paints for houses and public properties. Paint with lead pigment was manufactured up until the late 1960s, and in 1912-18 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 absorption 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.
- Works that are likely to cause disturbance of LCP systems should be conducted under controlled conditions by a suitably qualified contractor. Dust suppression techniques should be utilized and works should be conducted in accordance with the requirements of AS 4361.2 1998 *Guide to lead paint management, Part 2: Residential and commercial buildings*.

7.5 Ozone Depleting Substances (ODS)

- No recommendations.

Appendix A: NATA Endorsed Laboratory Sample Analysis Report

prensa
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Malvern, VIC, 3144
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F: 9509 6125
E: admin@prensa.com.au
ABN: 12 142 106 581

24th October 2011

Elizabeth Duncan
Preston Rowe Paterson NSW
Level 11, 80 Clarence Street
Sydney NSW 2000

Dear Elizabeth,

Asbestos Bulk Sample Analysis Report - Wharf 2-3 (Shore Sheds), 13A Hickson Rd, Walsh Bay NSW 2000

Please find attached the asbestos bulk sample analysis results for four (4) samples collected by James Thompson & Chantal Hooper of Prensa Pty Ltd on 19th October 2011 from Wharf 2-3 (Shore Sheds), 13A Hickson Road, Walsh Bay New South Wales 2000 and received at the Prensa Pty Ltd laboratory on 20th October 2011. The samples were analysed on 20th October 2011 and the results are presented on the following page.

Prensa qualitatively analyses bulk samples for asbestos using polarising light microscopy and dispersion staining techniques in accordance with Prensa's National Association of Testing Authorities (NATA), Australia approved PRLAB2002 Asbestos Identification Test Method, and in accordance with Australian Standard (AS) 4964 – 2004, *Method for the qualitative identification of asbestos in bulk samples* and AS ISO/IEC 17025 – 2005, *General requirements for the competence of testing and calibration laboratories*.

This document is issued in accordance with NATA's accreditation requirements.

If you require further information please contact the Prensa office on (03) 9508 0100.

Regards,

Susan Simmonds

NATA Approved Analyst & Signatory

NATA
WORLD RECOGNISED ACCREDITATION

Asbestos Bulk Sample Analysis Report - Wharf 2-3 (Shore Sheds), 13A Hickson Rd, Walsh Bay NSW 2000

Sample No.	Sample Location/Description/Size	Result
50290-07-01	Ground level, sliding doors, sealant to joints – mastic / Grey & white brittle mastic material / 10 x 10 x 2 mm	No asbestos fibres detected*
50290-07-02	Ground level (central), west wall, infill panel – fibre cement sheet / Unpainted grey fibre cement material / 30 x 10 x 2 mm	No asbestos fibres detected Organic fibres detected
50290-07-03	Level 1 (north), toilet block, infill panel to window – fibre cement sheet / White painted grey fibre cement material / 10 x 5 x 3 mm	***Chrysotile (white asbestos) detected*** ***Amosite (brown asbestos) detected***
50290-07-04	Level 1 (north), toilet block, infill panel to urinal – fibre cement sheet / grey fibre cement material / 15 x 4 x 3 mm	***Chrysotile (white asbestos) detected*** ***Amosite (brown asbestos) detected***

Please note that Prensa Pty Ltd does not accept responsibility for the representation of the sample submitted in relation to its source. Only the samples submitted for analysis have been considered in presenting these results.

*AS 4964 notes that asbestos may be difficult to detect in samples of this material, consequently an alternative method of analysis may be required.

NATA accredited laboratory number 17366.

Accredited for compliance with ISO/IEC 17025.

Appendix B: Hazardous Materials Register

Appendix B - Hazardous Materials Register

Prensa Pty Ltd
Level 1, 50 Yeo Street
Neutral Bay, NSW 2089
Ph.: (02) 9033 8634
Fax: (02) 9033 8600

Site Address: 13A Hickson Road, Walsh Bay
Survey Date: 19/10/2011
Assessor: S. Bamford
Age (Circa): 1920's

Levels: 2
Approx. area (m^2): 10,000
Roof Type: Corrugated metal
External Walls: Timber, metal and fibre cement

Internal Walls: Timber
Ceilings: Open ceiling
Floor: Timber
Floor Coverings: Bitumen

Level / Area	Room & Location	Feature	Item Description	Hazard Type	Sample No.	Sample Status	Photo No.	Quantity	Condition	Friability	Disturb. Potential	Risk Status	Reinspect date	Control Priority	Recommendations & Comments
Exterior/Interior	Upper roof gables (north and south)	Infill panels	Fibre cement sheeting	Asbestos	Not sampled due to height	Suspected Positive	1	4 x ~38m^2	Good	Non-Friable	Low	Low	Oct-12	P4	Confirm Status, label as containing asbestos and maintain in good condition if to remain in-situ, remove under controlled bonded asbestos removal conditions prior to refurbishment or demolition works by an AS-2 (bonded) licensed asbestos removal contractor.
Exterior/Interior	Ceiling, throughout	Green light fittings, cables	Woven material	Asbestos	Not sampled due to live electricity	Suspected Positive	2	~200 x <1m	Good	Friable	Low	Low	Oct-12	P3	Confirm Status, label as containing asbestos and maintain in good condition if to remain in-situ, remove under controlled friable asbestos removal conditions prior to refurbishment or demolition works by an AS-1 (friable) licensed asbestos removal contractor.
Exterior/Interior	Sliding doors, throughout	Sealant to joints	Mastic	Asbestos	50290-07-01	Negative	-	-	-	-	-	-	-	-	-
Exterior/Interior, level 1	Throughout	Infill panels to windows	Fibre cement sheeting	Asbestos	Not sampled due to height	Suspected Positive	3	~166m^2	Good	Non-Friable	Low	Low	Oct-12	P4	Confirm Status, label as containing asbestos and maintain in good condition if to remain in-situ, remove under controlled bonded asbestos removal conditions prior to refurbishment or demolition works by an AS-2 (bonded) licensed asbestos removal contractor.
Exterior/interior, level 1	North wall	Gable infill	Fibre cement sheeting	Asbestos	Not sampled due to height	Suspected Positive	4	4 x ~36m^2	Good	Non-Friable	Low	Low	Oct-12	P4	Confirm Status, label as containing asbestos and maintain in good condition if to remain in-situ, remove under controlled bonded asbestos removal conditions prior to refurbishment or demolition works by an AS-2 (bonded) licensed asbestos removal contractor.
Exterior/interior, ground level	Throughout	Infill panels to windows	Fibre cement sheeting	Asbestos	Not sampled due to height	Suspected Positive	5	~240m^2	Good	Non-Friable	Low	Low	Oct-12	P4	Confirm Status, label as containing asbestos and maintain in good condition if to remain in-situ, remove under controlled bonded asbestos removal conditions prior to refurbishment or demolition works by an AS-2 (bonded) licensed asbestos removal contractor.
Interior, level 1	North, toilet	Infill panels to window	Fibre cement sheeting	Asbestos	50290-07-03	Positive	6	~2m^2	Good	Non-Friable	Low	Low	Oct-12	P4	Encapsulate exposed sections, label as containing asbestos and maintain in good condition if to remain in-situ, remove under controlled bonded asbestos removal conditions prior to refurbishment or demolition works by an AS-2 (bonded) licensed asbestos removal contractor.
Interior, level 1	North, toilet	Infill panels to urinal	Fibre cement sheeting	Asbestos	50290-07-04	Positive	6	~3m^2	Good	Non-Friable	Low	Low	Oct-12	P4	Encapsulate exposed sections, label as containing asbestos and maintain in good condition if to remain in-situ, remove under controlled friable asbestos removal conditions prior to refurbishment or demolition works by an AS-1 (friable) licensed asbestos removal contractor.
Interior, ground level and level 1	Fire exits	Fire doors	Fire door core	Asbestos	Not sampled	Assumed Negative	-	-	-	-	-	-	-	-	No suspect asbestos material identified at the time of the assessment due to new age appearance/construction (Circa 2008/2009).
Interior, ground level	South	Switchboard	-	Asbestos	-	Assumed Negative	-	-	-	-	-	-	-	-	No suspect asbestos material identified at the time of the assessment due to new age appearance/construction.
Interior, gound level	Central, western wall	Infill panel	Fibre cement sheeting	Asbestos	50290-07-02	Negative	-	-	-	-	-	-	-	-	-

Level / Area	Room & Location	Feature	Item Description	Hazard Type	Sample No.	Sample Status	Photo No.	Quantity	Condition	Friability	Disturb. Potential	Risk Status	Reinspect date	Control Priority	Recommendations & Comments
Interior, level 1	Ceiling, throughout	Sarking	Insulation material	SMF	-	Suspected Positive	7	~2,000m^2	Good	Bonded	Low	Low	-	-	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].
Interior, level 1	Upper roof gables (north and south)	Sarking	Insulation material	SMF	-	Suspected Positive	-	4 x ~40m^2	Good	Bonded	Low	Low	-	-	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].
Interior, level 1	Ceiling, throughout	Fluorescent light fitting - double tube	Capacitor	PCBs	-	Suspected Negative	8	~140 units	-	-	-	-	-	-	Suspected negative based on inspection completed by Bass Electrical.
Ground level	Ceiling, throughout	Fluorescent light fitting - double tube	Capacitor	PCBs	-	Suspected Negative	9	~76 units	-	-	-	-	-	-	Suspected negative based on inspection completed by Bass Electrical.
Ground level	Central, northern stairwell	Fluorescent light fitting - double tube	Capacitor	PCBs	-	Suspected Negative	10	~4 units	-	-	-	-	-	-	Suspected negative based on inspection completed by Bass Electrical.
Exterior	Throughout	Timber features	White - lower coloured paint system	Lead Paint - Swab	-	Positive	11	~20,000m^2	Good	-	Low	Low	-	-	Maintain in current condition, over paint with a lead-free paint as part of ongoing maintenance. Remove under controlled conditions in accordance with AS 4361.2:1998 Guide to lead paint management prior to renovation or demolition works.
Exterior	Throughout	Timber features	Blue (light) - upper coloured paint system	Lead Paint - Swab	-	Negative	-	-	-	-	-	-	-	-	-
Exterior	Throughout	Timber features	Grey (dark) - upper coloured paint system	Lead Paint - Swab	-	Negative	-	-	-	-	-	-	-	-	-
Interior	Throughout	Timber features	White - lower coloured paint system	Lead Paint - Swab		Positive		~1,800m^2	Fair	-	Low	Low	-	-	Maintain in current condition, over paint with a lead-free paint as part of ongoing maintenance. Remove under controlled conditions in accordance with AS 4361.2:1998 Guide to lead paint management prior to renovation or demolition works.
Interior	Throughout	Timber features	Grey (light) - upper coloured paint system	Lead Paint - Swab		Negative	-	-	-	-	-	-	-	-	-
Interior, level 1	North	Stored timber windows	White - lower coloured paint system	Lead Paint - Swab	-	Positive	-	~10m^2	Fair	-	Low	Low	-	-	Maintain in current condition, over paint with a lead-free paint as part of ongoing maintenance. Remove under controlled conditions in accordance with AS 4361.2:1998 Guide to lead paint management prior to renovation or demolition works.

Appendix C: Areas Not Accessed

Given the constraints of practicable access encountered during this Assessment, the following areas were not inspected. Assessments are restricted to those areas that are reasonably accessible at the time of our assessment with respect to the following:

- Without contravention of relevant statutory requirements or codes of practice.
- Without placing the Prensa consultant and/or others at undue risk.
- Without demolition or damage to finishes and structure.
- Excluding plant and equipment that was 'in service' and operational.

Documented below are the areas where the Prensa consultant encountered access restrictions during the Assessment:

Areas Not Accessed
Underneath the ground level of the structure at the Site (void between ground level and sydney harbour).
Exposed soils surrounding the building structures of the Site.
Energised services, gas, electrical, pressurised vessel and chemical lines.
Height restricted areas above 2.7m or any area deemed inaccessible without the use of specialised access equipment.
Within cavities that cannot be accessed by the means of a manhole or inspection hatch.
Within voids or internal areas of plant, equipment, air-conditioning ducts etc.
Within service shafts, ducts etc., concealed within the building structure.
Within those areas accessible only by dismantling equipment.
Within totally inaccessible areas such as voids and cavities present but intimately concealed within the building structure.
All areas outside the Scope of Work.

Note:

If proposed works entail possible disturbance of any suspect materials in the above locations, or any other location not mentioned in **Appendix B,** further investigation may be required as part of a hazardous materials management and abatement program prior to the commencement of such works.

The presence of residual asbestos insulation on steel members, concrete surfaces, pipe work, equipment and adjacent areas remaining from prior removal works cannot normally be determined without extensive removal and damage to existing insulation, fixtures and fittings at the Site.

Appendix D: Risk Assessment Factors

Risk Assessment Factors for Asbestos (ACM)

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

- Product type;
- Evidence of any damage;
- Accessibility;
- Friability of asbestos material;
- Proximity to direct air stream;
- Likelihood of disturbance of the asbestos material;
- Amount of damage or deterioration; and
- Surface treatment (if any).

The purpose of the material risk assessment is to establish the relative ability of various types of ACMs to release fibres into the air, should they be disturbed. A simple three parameter algorithm is used to assess the likely magnitude of release from the material, given a standard disturbance. This is evaluated using four categories: high, medium, low and very low. Where these factors have indicated that there is a possibility of exposure to airborne fibres, appropriate recommendations to seal, encapsulate or remove the ACMs are made.

Condition

The condition of the ACMs identified during the assessment is usually reported as being **good**, **fair** or **poor**.

- **Good** refers to a material that is in sound condition with no or very minor damage or deterioration.
- **Fair** refers to a material that is generally in a sound condition, with some areas of damage or deterioration.
- **Poor** refers to a material that is extensively damaged or deteriorated.

Friability

The friability of ACMs describes the ease by which the material can be crumbled, which in turn, can increase the release of airborne asbestos fibres.

- **Friable asbestos** can be crumbled, pulverised, or reduced to powder by hand pressure, which makes it more dangerous than non-friable asbestos.
- **Non-friable asbestos**, more commonly known as bonded asbestos, is typically comprised of asbestos fibres tightly bound in a non-asbestos matrix. If accidentally damaged or broken these ACMs may release fibres initially but will not continue to do so.

Accessibility/Disturbance Potential

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

- **Low accessibility** describes ACMs that has very little or no activity in the immediate area with the potential to disturb the material. Low accessibility is considered as monthly occupancy or less, or the inaccessible due to its height or its enclosure.
- **Medium accessibility** describes an ACMs that has moderate activity in the immediate area with the potential to disturb the material. Medium accessibility is considered weekly access or occupancy.
- **High accessibility** describes ACMs that have regular activity in the immediate area with the potential to disturb the material.

Health Risk Status

The risk factors described above are used to grade the potential health risk ranking posed by the presence of asbestos-containing materials. These risk rankings are described below:

- A **low health risk** describes an ACM that poses a negligible or low health risk to occupants of the area due to the material not readily releasing fibres unless seriously disturbed. Usually applies to bonded products in at least average condition, or materials with no or low accessibility.
- A **medium health risk** describes ACM that pose a moderate health risk due to the material status and activity in the area. Usually applies to bonded materials in a state of minor deterioration and in moderate to high activity levels, or accessible friable materials in good condition.
- A **high health risk** describes ACMs that pose a high health risk to personnel or the public in the area of the material. Immediate action is required to restrict access and stop the spread of fibres as well as plan for decontamination and remedial works. Materials with a high health risk ranking will also possess a Priority 1 recommendation to manage the asbestos and reduce the risk.

Priority Rating System for Control Recommendations

The following schedule of health risk status priority rating is adopted to assist in the programming of the management removal or encapsulation of asbestos-containing building materials in the property.

Priority 1 (P1): Hazard with High Health Risk Potential

Status: - ACMs that 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 ACM to other parts of the property if unrestricted use of the area containing the material is allowed.

Recommendation: - If the ACM is in a poor/unstable condition and accessible with risk to health from exposure, immediate access restrictions to the immediate area should be applied, air monitoring be considered and removal is recommended as soon as practicable using an appropriately licensed asbestos removalist.

Priority 2 (P2): Hazard with Medium Health Risk Potential

Status: - ACM 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 risk, is unstable.
- The material is accessible and can, when disturbed, presents a short-term exposure risk.
- The material could pose an exposure risk if workers are in close proximity.

Recommendation: - If the ACM is easily accessible but in a stable condition, removal is preferred. However, if removal is not immediately practicable, short-term control measures (i.e. restrict access, sealing, enclosure etc.) may be employed until removal can be facilitated as soon as is practical (3-6 months). Negligible health risk if material remains undisturbed under the control of an AMP.

Priority 3 (P3): Hazard with Low Health Risk Potential

Status: - ACMs with a low potential for disturbance due to the following conditions:

- The condition of any friable ACM that is stable and has a low potential for disturbance i.e. is encased in metal cladding.
- The ACM is in a non-friable condition, however further disturbance or damage is unlikely other than during maintenance or service and does not present an exposure risk unless cut, drilled, sanded or otherwise abraded.

Recommendation: - Minor health risks if the material is left undisturbed under the control of an AMP. Consider removal or encapsulation within 12 months of the damaged bonded ACMs.

Priority 4 (P4): Hazard with Negligible (very low) Health Risk Potential

Status: - The ACM is in a non-friable form and is in good condition. It is unlikely that the material can be disturbed under normal circumstances. Even if it were subjected to minor disturbance the asbestos-containing material poses a minor health risk.

Recommendation: - These ACM should be left in a good and stable condition, with ongoing maintenance and periodic inspection. It is advisable that any remaining identified or presumed ACM should be appropriately labelled, where possible, and regularly inspected to ensure they are not deteriorating, resulting in a potential risk to health.

Risk Assessment Factors for Synthetic Mineral Fibre (SMF)

SMF material is referred to as either un-bonded or bonded. Un-bonded SMF materials are defined as those manufactured without the use of any binding agents, facing/cladding or other sealants. There are two main applications of un-bonded materials, wet spray and loose fill. Un-bonded SMF material refers to severely deteriorated thermal insulation, batts and debris, and other applications that can release fibres with only minimal disturbance. Bonded SMF materials are defined as those that are manufactured using binding or sealing agents to hold the SMF material in a batt or blanket form.

The selection of the most appropriate control measure should be determined from risk assessments and a detailed knowledge of the workplace and its activities. The following principles may be applied:

- If the SMF material is un-bonded or deteriorated, is in a poor/unstable condition and is accessible with risk to health from exposure, the immediate access restrictions should be applied and removal is required as soon as practicable.
- If the SMF material is un-bonded or deteriorated, is in a poor/unstable condition but is in inaccessible areas (i.e. ceiling space), then removal is preferred. However, if removal is not immediately practicable, then short-term control measures (i.e. restrict access, or provide personal protective equipment to personnel required to access the area etc.) may be employed until removal can be facilitated.
- If the SMF material is bonded and in a poor/unstable condition; minimising disturbance, then removal or encapsulation may be appropriate controls.
- For bonded SMF material in a good and stable condition, ongoing maintenance and periodic inspection to ensure they are not deteriorating would be appropriate controls.
- Prior to any demolition, partial demolition, renovation or refurbishment works, SMF materials likely to be disturbed by these works should be removed in accordance with the *NOHSC Code of Practice for the Safe Use of Synthetic Mineral Fibres* [NOHSC:2006 (1990)].

Further assessment of health risk through airborne fibre monitoring can assist with decisions on the most appropriateness, and urgency of, control measures.

Risk Assessment Factors for Polychlorinated Biphenyls (PCB)

For the purpose of this assessment, only capacitors within in electrical equipment, such as fluorescent light fittings and ceiling fans were included.

To assess the health risk posed by the presence of PCB-containing capacitors within electrical equipment the relevant factors must be considered. These factors include:

- Any **Demolition/refurbishment works** that are likely to disturb the PCBs;
- The **condition** of the capacitor is determined by a visual inspection of the fitting, and internal capacitor where safe access is available. This will determine the level of priority and control measures required during removal of the fittings from service;
- The **accessability** to PCB-containing capacitors is determined by the priority of the area in which the materials are located;
- The **likelihood** of human and/or environmental exposure to PCBs during occupational activities.
- Quanitiy of PCB-containing capacitors at the Site. The quantity is based on the aggregate weight of all PCBs on the a premises.

Risk Assessment Factors for Lead-containing Paint (LCP)

LCP 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.

The selection of the most appropriate control measure for lead exposure should be determined through a risk assessment process that includes a detailed knowledge of workplace activities likely to impact on lead-containing paints. Risk of lead exposure through lead-containing paint is based on the following factors:

- **Demolition/refurbishment works** that are likely to disturb the LCPs;
- The **condition** of the lead-contining paint. Paint that is flaking or in a poor condition is more likely to be ingested than paint that is in a good and stable condition; and
- The **likelihood** of inhalation or ingestion by people working in the vicinity of the paint.

Risk Assessment Factors for Lead-containing Dust (LCD)

As defined by Section 5.6.4.2 Surface dust loadings of AS4361.2 – 1998 *Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings*, the acceptance concentration limits for surface lead dust loadings are:

- Interior floors: 1mg/m^2;
- Interior Window Sills: 5mg/m^2; &
- Exterior Surfaces: 8mg/m^2

Appendix C2 of AS4361.2 – 1998 states ingestion of lead is the most common exposure pathway to lead for humans, measuring the amount of lead present on surfaces (loading) can be used to determine the likelihood and effect of lead exposure. Measuring the lead loading on surfaces can also be used to assess the hazard from deteriorating paint, from disturbance of accumulated dust in void spaces, or of lead deposition in a building from external sources. External sources of surface lead dust loading include industrial pollution, car exhausts, breakdown of old lead paint or emissions from burning coal or lead-painted wood and is most common in the ceiling spaces of properties in which surface lead dust loading has accumulated over many years.

High lead containing dust levels can cause serious long-term health problems and harm all parts of the body, especially the brain, kidneys and reproductive organs. Exposure from lead containing dust can be through breathing in dust that contains lead or by swallowing food or water that has been contaminated by lead containing dust.

The condition of lead surface dust loading will always be noted as poor due to the nature of the material. The disturbance potential and risk status are the variable in regards how lead surface dust loading should be assessed and managed.

Risk of lead exposure through lead surface dust loading is based on the following factors:

- **Demolition, refurbishment and maintenance works** that are likely to disturb the lead surface dust loading;
- The **location, extent** and **access** (disturbance potential) to the lead surface dust loading (i.e. ceiling spaces with designated walkways are a lower risk than ceiling spaces with no walkways); and
- The **likelihood** of inhalation or ingestion by people working in the vicinity of the surface dust loading.

The selection of the most appropriate control measure should be determined from risk assessments and a detailed knowledge of the workplace and its activities. The following principles may be applied:

- If the lead surface dust loading is, is accessible with risk to health from exposure, the immediate access restrictions should be applied and removal is required as soon as practicable.
- If the lead surface dust loading is in inaccessible areas (i.e. ceiling space with walkways), then removal is preferred. However, if removal is not immediately practicable, then short-term control measures (i.e. restrict access to areas off walkways, or provide personal protective equipment to personnel required to access the area etc.) may be employed until removal can be facilitated.
- If the lead surface dust loading is subject to minimal disturbance, then removal or encapsulation may be appropriate controls.
- Prior to any demolition, partial demolition, renovation or refurbishment works, lead surface dust loading likely to be disturbed by these works should be removed in accordance with Section 5.5 of AS4361.2 – 1998 *Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings*.

For surface dust loadings that are identified as a 'high risk' a specific occupational risk assessment for the task will be recommended to determine specific management/work control procedures which may include lead dust air monitoring which assist with decisions on the most appropriateness, and urgency of, control measures.

Risk Assessment Factors for Ozone Depleting Substances (ODS)

For the purpose of this assesment only ODS within in air conditioning units and chillers were included. The inspection visually identified stored refrigerants in accessible areas. The status of suspected ODSs were compared to the United Nations Environment Programme's Division of Technology, Industry and Economics (UNEP DTIE) *Inventory of Trade Names of Chemical Products Containing Ozone Depleting Substances and their* Alternatives and the Australian Institute of Refrigeration Air Conditioning and Heating Inc (AIRAH) *Air Conditioning and Refrigeration Industry Refrigeration Selection Guide* 2003. The risk assessment factors utilised in this report relate to the potential of exposure of personnel (excluding programmed hazardous material removal works). This assessment is based on the following factors and properties of the ODS, particularly:

- Location and accessibility;
- Condition;
- Volatility and quantity;
- Potential of disturbance and ongoing deterioration; and
- Health risk potential..

Appendix E: Photographs

Photo 1. Exterior/interior, upper roof gables (north and south), infill panels – suspected asbestos-containing fibre cement sheet

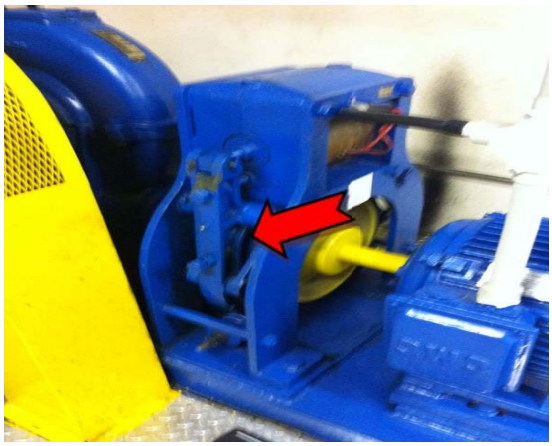

Photo 2. Exterior/interior, ceiling throughout, green light fittings, cables – suspected asbestos-containing woven material

Photo 3. Exterior/interior, throughout, infill panels – suspected asbestos-containing fibre cement sheeting

Photo 4. Exterior/interior, level 1, north wall, gable infill panel – suspected asbestos-containing fibre cement sheeting

Photo 5. Interior, ground level, throughout, infill panels to windows – suspected asbestos-containing fibre cement sheeting

Photo 6. Interior, level 1, north toilet, infill panels to urinal and windows – asbestos-containing fibre cement sheeting

Photo 7. Interior, level 1, ceiling throughout, sarking – suspected SMF-containing insulation material

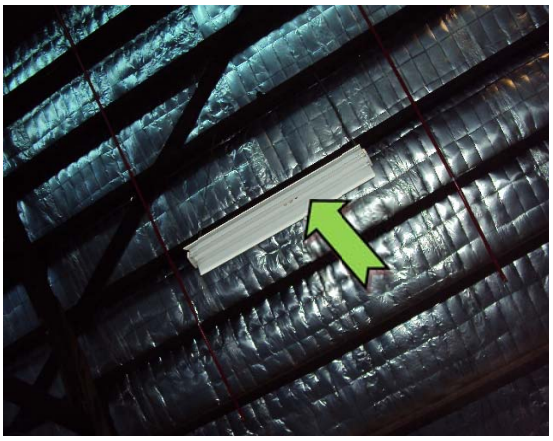

Photo 8. Interior, level 1, ceiling throughout, double tube fluorescent light fittings – suspected PCB-containing capacitors

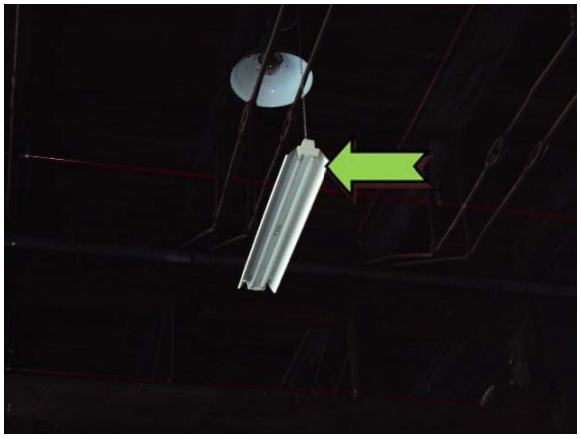

Photo 9. Interior, ground level, ceiling throughout, double tube fluorescent light fittings – suspected negative for the presence of PCB-containing capacitors

Photo 10. Interior, ground level, central, northern stairwell, ceiling throughout, double tube fluorescent light fittings – suspected negative for the presence of PCB-containing capacitors

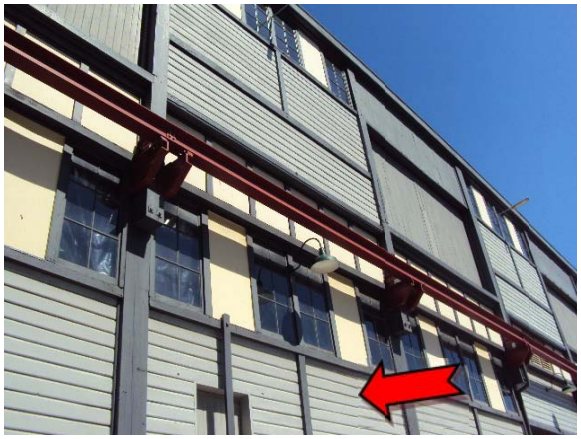

Photo 11. Exterior, throughout, timber features – lead-containing white lower colour paint system