Appendix 1 – Hazardous Materials Survey and Register

Environmental
ABN 36 926 003 197

HAZARDOUS MATERIALS SURVEY AND REGISTER

Former Pelican Beach Resort

740-742 Pacific Highway

Sapphire Beach NSW 2450

Lot 100 DP 629555

Lot 101 DP 629555

Lot 2 DP 800836

Prepared for:

Sapphire Beach Development Pty. Ltd.

210/117 Old Pittwater Road

Brookvale, 2100, NSW

Prepared by:

DAVID LANE ASSOCIATES

DL 1800

June 2009

SYDNEY Unit 2B 30 Leighton Place, Hornsby NSW 2077 P 9476 1765 F 9476 1557 E dlassociates@bigpond.com
NEWCASTLE PO Box 137, Branxton NSW 2335 P 4938 3800 F 49383811 E dolane@bigpond.com

Contents

Page No.

1.0 INTRODUCTION 1

2.0 TYPES, USES AND REGULATORY CONTROL 2

3.0 NATURE OF SURVEY 5

4.0 EXTENT OF SURVEY 6

5.0 RESULTS 7

5.1 Asbestos 7

5.1.1 Seafood Restaurant 7

5.1.2 Resort and Associated Structures 9

5.2 Lead Paint 10

5.3 Polychlorinated Biphenyls (PCB's) 10

6.0 SAMPLE DETAILS 12

7.0 CONCLUSIONS 12

APPENDICES

Appendix 1 NATA Results
Appendix 2 Print Gallery

1.0 INTRODUCTION

DAVID LANE ASSOCIATES were commissioned by Mr. William Jenner on behalf of Sapphire Beach Development Pty Ltd to prepare a Hazardous Materials Survey and Register on the property identified as the Former Pelican Beach Resort, located at 740-742 Pacific Highway, Sapphire Beach NSW 2450 (Site). Emphasis was placed on detailing the presence of asbestos, lead paint containing materials and polychlorinated biphenyls within the resort buildings and restaurant currently present on site. A register of these materials and recommendations are contained in this report.

The inspection was undertaken on Wednesday 20th of May 2009.

2.0 TYPES, USES AND REGULATORY CONTROL

2.1 Asbestos

Asbestos is the fibrous form of mineral silicates belonging to the serpentine and amphibole groups of rock-forming minerals. The most significant types include chrysotile, crocidolite, and amosite (white, blue and brown or grey asbestos respectively). Asbestos is mined as a naturally occurring rock fibre, broken down from mineral clumps to groups of loose fibres.

During the 1950s, 1960s and 1970s it was common to use asbestos as a fire retardant on structural members and as a fire rating of penetration core holes. Its thermal energy conservation characteristics were used to insulate both hot and cold water pipes and ducting. Later such products as asbestos cement sheeting, bituminous mastic and membrane, vinyl tiles, bakelite and zelminite boards and many others utilised asbestos in their manufacture as it increased their compression and tensile properties.

Asbestos exposure both personal and to the environment is covered generally by the requirements of the National Occupational Health and Safety Commissions Code of Practice and Guidance Notes:

- Code of Practice for the Safe Removal of Asbestos [NOHSC:2002 (2005)]
- Code of Practice for the Management and Control; of Asbestos in Work places [NOHSC:2018] (2005)
- Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [NOHSC:3003 (2005)];

Other relevant legislation includes:

- OH&S Act 2000;
- OH&S Regulation 2001;
- Environmentally Hazardous Chemicals Regulation 1999;
- Protection of the Environment Operations (Waste) Regulation 2005, and;
- Protection of the Environment Operations Act 1997.

2.2 Lead Paint

Lead naturally exists in three (3) forms, elemental lead, oxides and metal complexes. According to current guidelines, where the lead content of paint exceeds 1.0% the paint is classified as a lead based paint and appropriate steps should be taken to ensure minimal exposure in the workplace and the receiving environment.

Maximum allowable lead content in new paint was lowered to 0.25% in March 1992. This was further reduced to 0.1% in 1997 (NHMRC). For existing paint, levels exceeding 1.0% lead should be managed in accordance with AS4361.1 – 1995 *Guide to Lead Paint Management. Part 1: Industrial Applications* and AS4361.2 – 1998 *Guide to Lead Paint Management Part 2: Residential and Commercial Buildings.*

Lead was a major constituent of paint from the late 1800's to 1970. It was used as a base, a drying agent, as colouring (often white, red, orange, yellow and scarlet) and to protect steel or iron from rust. Most Australian homes and buildings constructed before 1970 contain lead based paint.

The current Standards, Regulations and Guidelines pertaining to lead paint management; removal, stabilisation and disposal include the following:

- OH&S Act 2000;
- Worksafe Australia exposure level for airborne lead of 0.15 mg/m^3 TWA;
- NSW EPA Environmental Guidelines: Assessment and Management of Non-Liquid Wastes;
- Protection of the Environment Operations (Waste) Regulation 1996, and;
- Protection of the Environment Operations Act 1997.

2.3 Polychlorinated Biphenyls

Polychlorinated Biphenyls (PCB's) are produced in France, Germany, Italy and the USA under the trade names Phenchlor, Clophen, Fenchlor, Kanechlor, Arochlor and Sovol etc. The main properties of PCB's that account for their production in a variety of items are: low solubility in water, miscibility with organic solvents and polymers, high dielectric constant, chemical stability, high boiling point and flame resistance.

PCB's are used in closed systems such as electrical transformers, capacitors, fluorescent light capacitors, hydraulic fluids and insulated electric wires and cables.

A safe exposure level of 1 mg/m^3 for the lower chlorinated biphenyls (42%) and 0.5 mg/m^3 for the higher chlorinated biphenyls (54%) in the working environment has been adopted in Australia by Worksafe Australia.

The current Standards, Regulations and Guidelines pertaining to PCB management, removal, stabilisation and disposal include the following:

- OH&S Act 2000;
- OH&S Regulation 2001;
- Worksafe Australia Exposure Standards for Atmospheric Contaminants in the Occupational Environment;
- NSW EPA Environmental Guidelines: Assessment and Management of Non-Liquid Wastes;
- Protection of the Environment Operations (Waste) Regulation 1996, and;
- Protection of the Environment Operations Act 1997.

3.0 NATURE OF SURVEY

The survey was undertaken by way of a visual inspection of construction materials within the building structures present at the Pelican Beach Resort Site, including;

- A double story seafood restaurant with a subfloor space located in the north western corner of the site,
- A multi levelled resort building with a total of one hundred and fourteen (114) guest rooms; and,
- Several smaller buildings surrounding the pool area, including a bar, sauna, spa and several storage facilities.

Samples of building construction materials that were suspected to contain asbestos, were collected and analysed to NATA standards.

The asbestos samples were examined under Stereo Microscope with selected fibres analysed using Polarized Light Microscopy in conjunction with Dispersion Staining Methods. A total of twelve (12) samples were collected for asbestos analysis. No lead paint or PCB samples were observed or collected for analysis.

4.0 EXTENT OF SURVEY

This report is confined to reporting the discovery (or non-discovery) and presence of asbestos, lead-based paints and PCB's by visual inspection and non-destructive sampling methods of those areas of the building accessible and inspected by DLA on the date of inspection.

Visual inspections were able to provide information on the extent, matrix, and condition of the asbestos material encountered.

5.0 RESULTS

5.1 Asbestos

The site comprised of a seafood restaurant of brick and fibro construction present in the north western corner of the site. It is understood that the restaurant was constructed in the late 1970's and therefore is likely to contain asbestos containing building materials.

The construction of the resort buildings began in the mid 1980's and therefore the presence of asbestos containing materials is unlikely. The main resort building is of brick and cement construction, with the buildings surrounding the pool and garden area of similar construction with timber panelled roofs.

5.1.1 Seafood Restaurant

External

The eaves of the restaurant appeared to be asbestos cement sheeting – No Sample Available – **Asbestos Detected**
Refer to Print 1

The maroon sections of the external walls present on the eastern, northern and southern frontages of the building are fibrous cement sheet – Sample R1 – No Asbestos Detected
Refer to Print 1

The maroon external walls of the western frontage of the building, including the cool room appeared to hardy plank – Sample R3 - No Asbestos Detected
Refer to Print 2

The electrical distribution board present on the eastern frontage of the building contains an asbestos containing Zelminite backing board – No Sample Available - **Asbestos Detected**
Refer to Print 3

The roof of the building is of tin construction – No Asbestos Detected

Refer to Print 2

The western frontage advertising sign is of timber construction - No Asbestos Detected
Refer to Print 2

A grease trap was located on the southern side of the building – No Asbestos Detected

Asbestos containing fibro fragments were found within a layer of fill located in the elevated plateau area to the east of the restaurant. The fill covers an area of approximately 150m^2 to a maximum depth of 0.3m. Soil samples collected from the fill and immediate surrounds did not indicate the presence of either fibrous or bonded asbestos containing materials – Sample C9-2 - **Asbestos Detected**
Refer to Print 4

Sub Floor Area

The hot water system previously present within the subfloor area had been completely removed – No Asbestos Detected

Fragments of fibrous cement sheet were scattered on the ground within the subfloor area – Sample R2 - **Asbestos Detected**
Refer to Print 5

The male and female toilets are of brick, plaster and tiled construction – No Asbestos Detected

Several sheets of fibrous cement material were located on the ground adjacent to the entry to the toilets – Sample R8 – No Asbestos Detected

Internal

The eastern portion of the ceiling within the dining room is fibrous cement sheet – Sample R4 – **Asbestos Detected**
Refer to Print 6

The walls and ceiling within the remaining dining room area are wood panels – No Asbestos Detected

The kitchen appeared to have been recently renovated, with walls and ceilings of plaster construction – No Asbestos Detected.
Refer to Print 7

The floor within the kitchen, cool rooms, adjoining office and store rooms appeared to be a green vinyl covering – No Asbestos Detected
Refer to Print 7

The office adjoining the kitchen was observed have a cream/brown coloured vinyl floor covering – Sample R7 – No Asbestos Detected

The walls, bar and ceiling within the bar area and adjoining storeroom were all panelled with wood – No Asbestos Detected

The floor within the bar was covered by two different vinyl floor coverings. A brown covering – Sample R5 – No Asbestos Detected, was present overlying a brown patterned covering – Sample R6 – No Asbestos Detected.
Refer to Print 8

Inspection of the ceiling cavity indicated that no insulation material was present – No Asbestos Detected

5.1.2 Resort and Associated Structures

Inspection of the main resort building indicated that the construction materials present were common throughout.

The internal and external walls, ceilings and floors of the building were of brick and cement construction.

The bathrooms present within the guestrooms appeared to have fibrous cement ceilings which were of modern construction. The baths within the guestrooms were lined with bricks and fibreglass – No Asbestos Detected

The ceilings within most rooms and hallways within the building appeared to have been coated with a cream coloured vermiculite like paint – Sample Resort 3 – No Asbestos Detected

The electrical distribution boards within the buildings were of metal construction – No Asbestos Detected

Hot water within the main building appeared to have been supplied by stand alone hot water systems – No Asbestos Detected

Access to the air conditioning plant room was not available during inspection, however due to the age of the building, the presence of asbestos containing fibres is unlikely.

The veranda panelling and external court yard walls appeared to be of fibrous cement construction – Sample Resort 2 – No Asbestos Detected
Refer to Print 9

Pipe work within the main building appeared to be copper or lined with either foam or synthetic mineral fibre – No Asbestos Detected

Fragments of what appeared to be fibro cement material were located within the sub floor area accessed via the main reception – Sample Resort 1 – No Asbestos Detected.
Refer to Print 10

5.2 Lead Paint

No lead paints were observed within the restaurant or resort buildings during site inspection.

5.3 Polychlorinated Biphenyls (PCB's)

No PCBs were observed within the restaurant or resort buildings during site inspection

6.0 SAMPLE DETAILS

Analytical results for asbestos are contained in Table 6.1. NATA Certification details are included in **Appendix 1**.

Table 6.1
Asbestos Containing Materials

Sample No.	Location	Result
R1	Restaurant – External Marron Wall Panels	No Asbestos Detected
R2	Restaurant – Sub Floor Fragment	**Chrysotile Asbestos Detected**
R3	Restaurant – Western/Cool Room External Walls	No Asbestos Detected
R4	Restaurant – Eastern Section of Dining Room Ceiling	**Chrysotile Asbestos Detected**
R5	Restaurant – Brown Vinyl Floor Covering within Bar Area	No Asbestos Detected
R6	Restaurant – Brown Patterned Vinyl Floor Covering within Bar Area	No Asbestos Detected
R7	Restaurant – Brown/Cream Vinyl Floor Covering within Office	No Asbestos Detected
R8	Restaurant – Green Vinyl Floor Covering within Kitchen and adjoining Rooms	No Asbestos Detected
Resort 1	Resort Building – Sub Floor Fragment	No Asbestos Detected
Resort 2	Resort Building – Veranda Panelling	No Asbestos Detected
Resort 3	Resort Building – Cream Ceiling Paint	No Asbestos Detected
C9-2-ASB FRAG	Grassed plateau area to the east of the Restaurant – Fragment within Fill Materials	**Chrysotile Asbestos Detected**

7.0 CONCLUSIONS

7.1 Asbestos

The hazardous materials survey conducted, found asbestos fibre containing materials within the following locations at the Former Pelican Beach Resort, 740-742 Pacific Highway, Sapphire Beach NSW 2450:

- Restaurant sub floor – Asbestos fragments on ground.
- Restaurant dining room – Eastern portion of ceiling.
- Fill materials present on the grassed plateau to the east of the Restaurant.

The removal of any asbestos contained within a building or soil, should be undertaken by a professional licensed contractor in accordance with the methods and procedures as outlined in the *Guide to Control of Asbestos Hazards in Buildings and Structures [NOHSC: 3002(1998)]*, the *Code of Practice for the Safe Removal of Asbestos [NOHSC: 2002(1988)]* and *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust [NOHSC: 3003 (1988)] and the Waste Guideline (NSW EPA 2008).*

7.2 Lead Based Paints

No lead paints were observed within the restaurant or resort buildings during site inspection

Lead based paint is best controlled by the implementation of a management and works plan following the guidelines as outlines in AS4361.1 - 1995 *Guide to Lead Paint Management Part 1: Industrial Applications* and AS4261.2 - 1998 *Guide to Lead Paint Management Part 2: Residential and Commercial Buildings.*

7.3 Polychlorinated Biphenyls (PCBs)

No PCBs were observed within the restaurant or resort buildings during site inspection

PCB's are to be removed in accordance with the NSW EPA Guidelines *Chemical Control Order for PCB's.*

Appendix 1

NATA Results

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET18316/ 21496 / 1 - 8
Your ref; Pelican Beach Restaurant Hazmat
NATA Accreditation No: 14484

26 May 2009

David Lane Associates
778, Old North Road,
Rothbury,
NSW 2335.

Attn:Mr David Lane
Fax No:02-4938 3811

Dear David,

Asbestos Identification
This report presents the results of eight samples, forwarded by David Lane Associates on 25 May 2009, for analysis for asbestos.

1.Introduction: Eight samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining Method **(Safer Environment Method 1.)**

3. Results :

Sample No. 1. ASET18316 / 21496 / 1. R 1.
Approx dimensions 1.0 cm x 0.75 cm x 0.24 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 2. ASET18316 / 21496 / 2. R 2.
Approx dimensions 5.0 cm x 5.5 cm x 0.65 cm
The sample consisted of a fragment of a fibro plaster cement material.
Chrysotile asbestos detected.

Sample No. 3. ASET18316 / 21496 / 3. R 3.
Approx dimensions 2.0 cm x 0.5 cm x 0.25 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 4. ASET18316 / 21496 / 4. R 4
Approx dimensions 1.25 cm x 1.0 cm x 0.35 cm
The sample consisted of a fragment of a fibro plaster cement material.
Chrysotile asbestos detected.

ASET

Sample No. 5. ASET18316 / 21496 / 5. R 5.
Approx dimensions 3.0 cm x 0.25 cm x 3.0 cm
The sample consisted of a fragment of a hard floor tile.
No asbestos detected (An independent confirmatory analytical technique is advised due to the nature of the sample).

Sample No. 6. ASET18316 / 21496 / 6. R 6.
Approx dimensions 6.0 cm x 3.5 cm x 0.25 cm
The sample consisted of a fragment of a soft floor tile having synthetic mineral fibres in the back side of the tile.
No asbestos detected.

Sample No. 7. ASET18316 / 21496 / 7. R 7.
Approx dimensions 2.0 cm x 2.0 cm x 0.22 cm
The sample consisted of a fragment of a hard floor tile.
No asbestos detected (An independent confirmatory analytical technique is advised due to the nature of the sample).

Sample No. 8. ASET18316 / 21496 / 8. R 8.
Approx dimensions 8.0 cm x 5.5 cm x 0.45 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Analysed and reported by,

Mahen De Silva . BSc. MSc. Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Signatory.
Approved Identifier.

NATA
WORLD RECOGNISED
ACCREDITATION

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET18315/ 21495 / 1 - 3
Your ref: Pelican Beach Resort Hazmat
NATA Accreditation No: 14484

26 May 2009

David Lane Associates
2B/ 30 Leighton Place
Hornsby NSW 2077

Attn: Mr David Lane

Dear David,

Asbestos Identification
This report presents the results of three samples, forwarded by David Lane Associates on 25 May 2009, for analysis for asbestos.

1.Introduction: Three samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with dispersion Staining method **(Safer Environment Method 1.)**

3. Results :

Sample No. 1. ASET18315 / 21495 / 1. Resort 1 - Internal sub floor fragment.
Approx dimensions 6.4 cm x 4.3 cm x 0.25 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 2. ASET18315 / 21495 / 2. Resort 2 - Veranda Panelling.
Approx dimensions 5.8 cm x 4.6 cm x 0.25 cm
The sample consisted of a fragments of fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 3. ASET18315 / 21495 / 3. Resort 3 - Ceiling Paint.
Approx dimensions 1.5 cm x 0.8 cm x 0.15 cm
The sample consisted of fragments of soft plaster material containing vermiculite like material.
No asbestos detected.

Analysed and reported by,

Laxman Dias . BSc.
Approved Identifier/ Approved Signatory.

NATA
WORLD RECOGNISED
ACCREDITATION

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET18317/ 21497 / 1 - 8
Your ref :Pelican Beach Resort Phase 2
NATA Accreditation No: 14484

26 May 2009

David Lane Associates
778, Old North Road,
Rothbury,
NSW 2335.

Attn:Mr David Lane,
Fax No:02-4938 3811

Dear David,
Asbestos Identification
This report presents the results of eight samples, forwarded by David Lane Associates on 25 May 2009, for analysis for asbestos.

1.Introduction: Eight samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibre were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining Method **(Safer Environment Method 1.)**

3. Results : **Sample No. 1. ASET18317 / 21497 / 1. Pelican Beach Resort Phase 2-C9 -1 - ASB.**
Approx dimensions 6.5 cm x 6.5 cm x 3.75 cm
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 2. ASET18317 / 21497 / 2. Pelican Beach Resort Phase 2 -C9-2-ASB FRAG.
Approx dimensions 6.0 cm x 4.0 cm x 0.4 cm
The sample consisted of a fragment of a fibro plaster cement material.
Chrysotile asbestos detected.

Sample No. 3. ASET18317 / 21497 / 3. Pelican Beach Resort Phase 2 - C15 - 1 - ASB.
Approx dimensions 6.0 cm x 6.0 cm x 3.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 4. ASET18317 / 21497 / 4. Pelican Beach Resort Phase 2 - C17 - 1 - ASB.
Approx dimensions 6.0 cm x 6.0 cm x 3.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

ASET

Sample No. 5. ASET18317 / 21497 / 5. Pelican Beach Resort Phase 2 - C 18 - 1 ASB.
Approx dimensions 6.5 cm x 6.5 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick like material.
No asbestos detected.

Sample No. 6. ASET18317 / 21497 / 6. Pelican Beach Resort Phase 2 - C21 - 1 - ASB.
Approx dimensions 6.0 cm x 6.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 7. ASET18317 / 21497 / 7. Pelican Beach Resort Phase 2 - C22 - 1 - ASB.
Approx dimensions 6.5 cm x 6.5 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 8. ASET18317 / 21497 / 8. Pelican Beach Resort Phase 2 - C23 - 1 - ASB.
Approx dimensions 6.5 cm x 6.5 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Analysed and reported by,

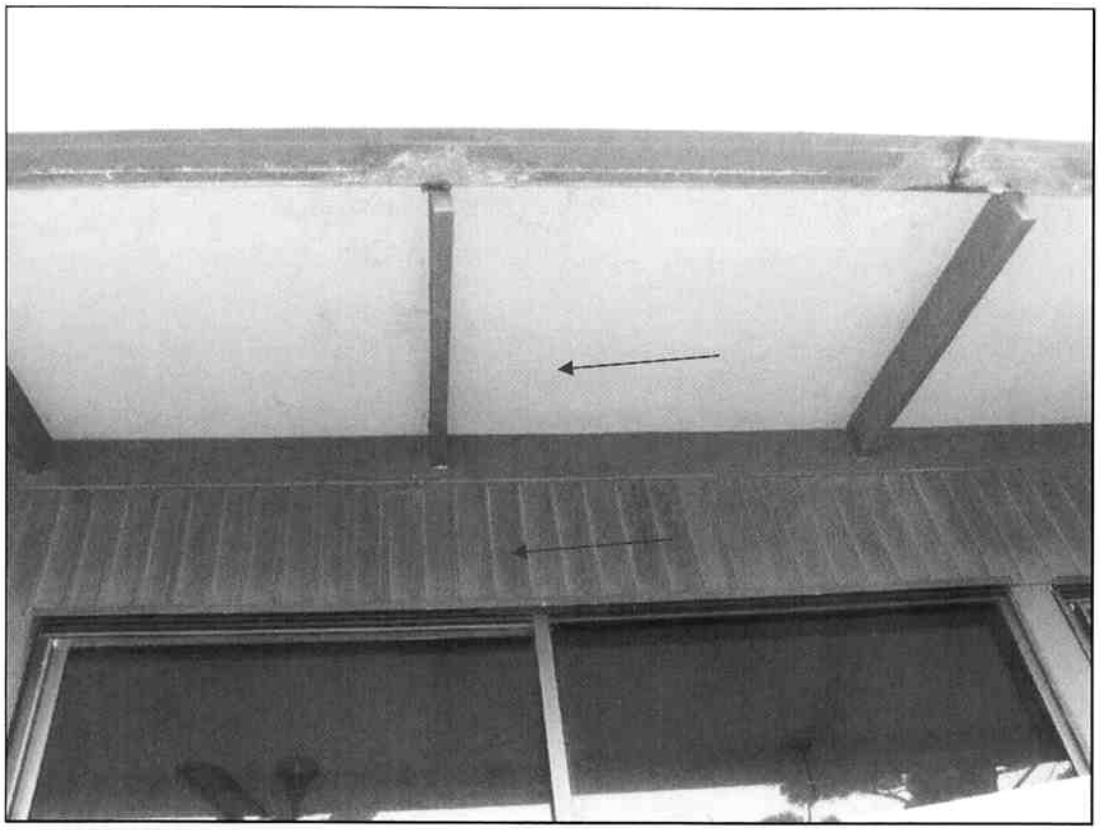
Mahen De Silva . BSc. MSc. Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Signatory.
Approved Identifier.

NATA
WORLD RECOGNISED
ACCREDITATION

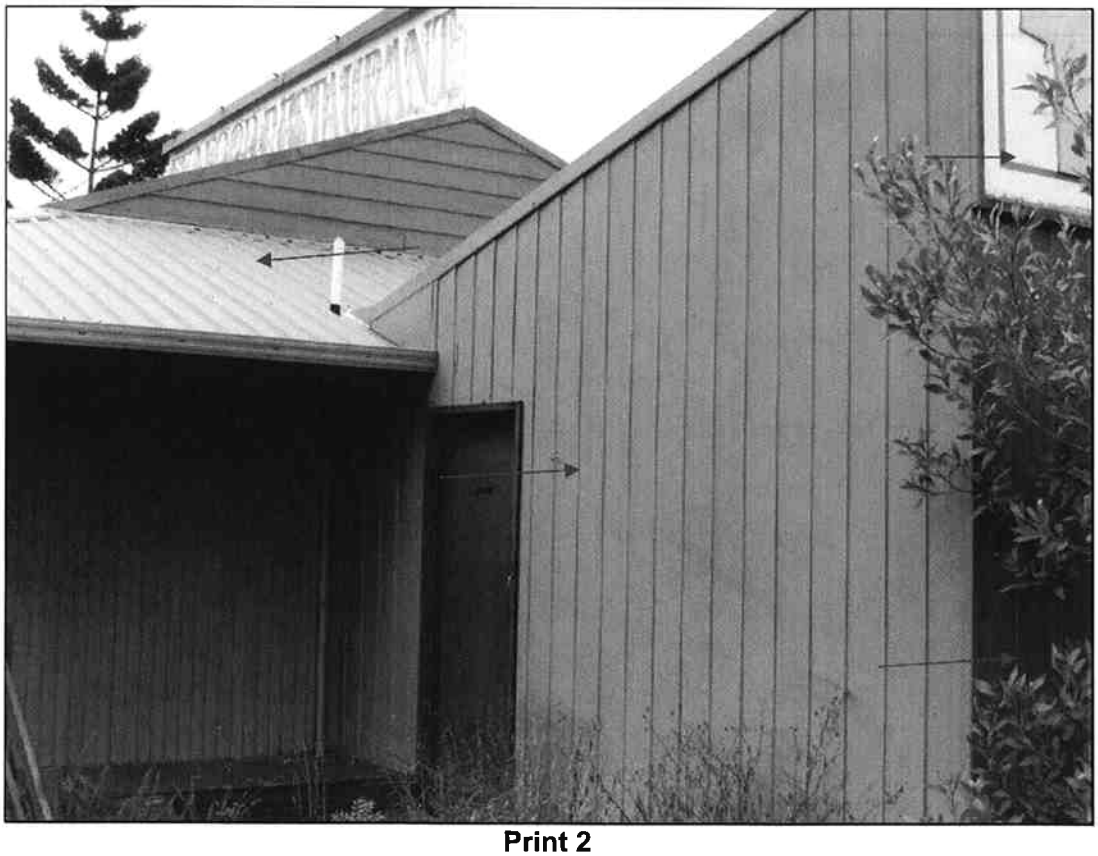
This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

Appendix 2

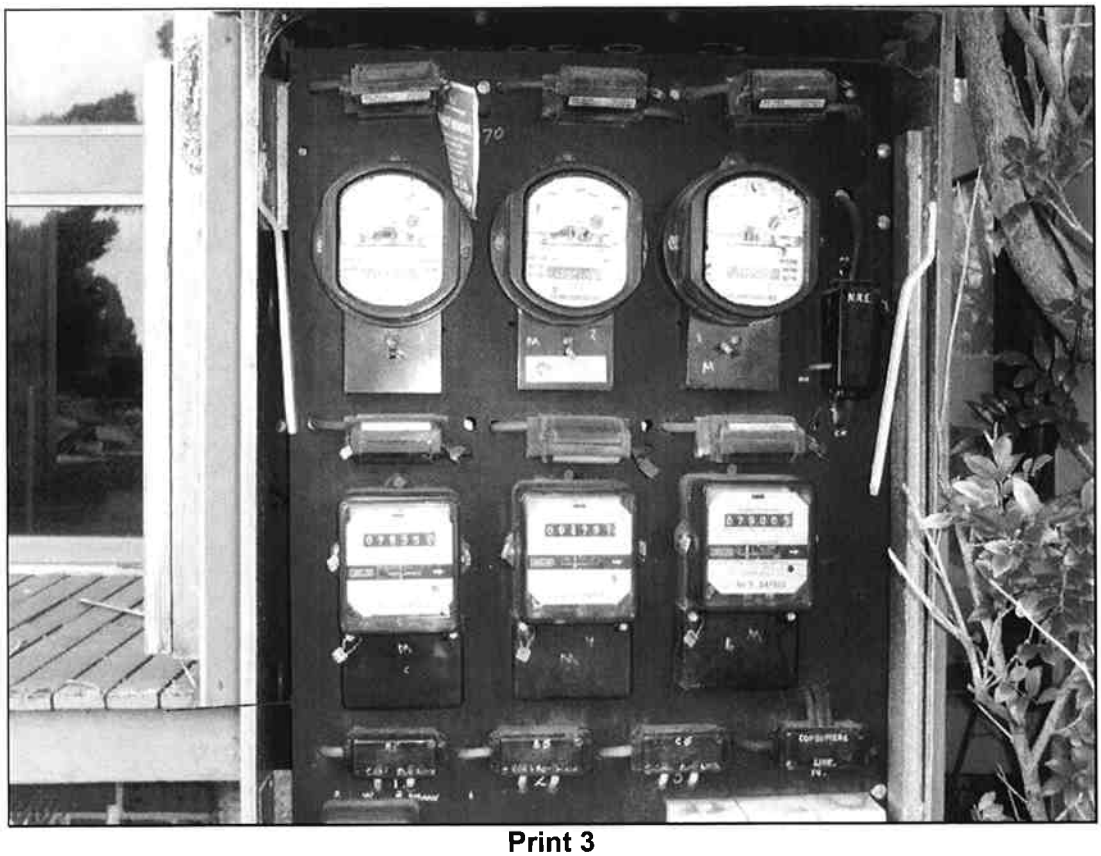
Print Gallery



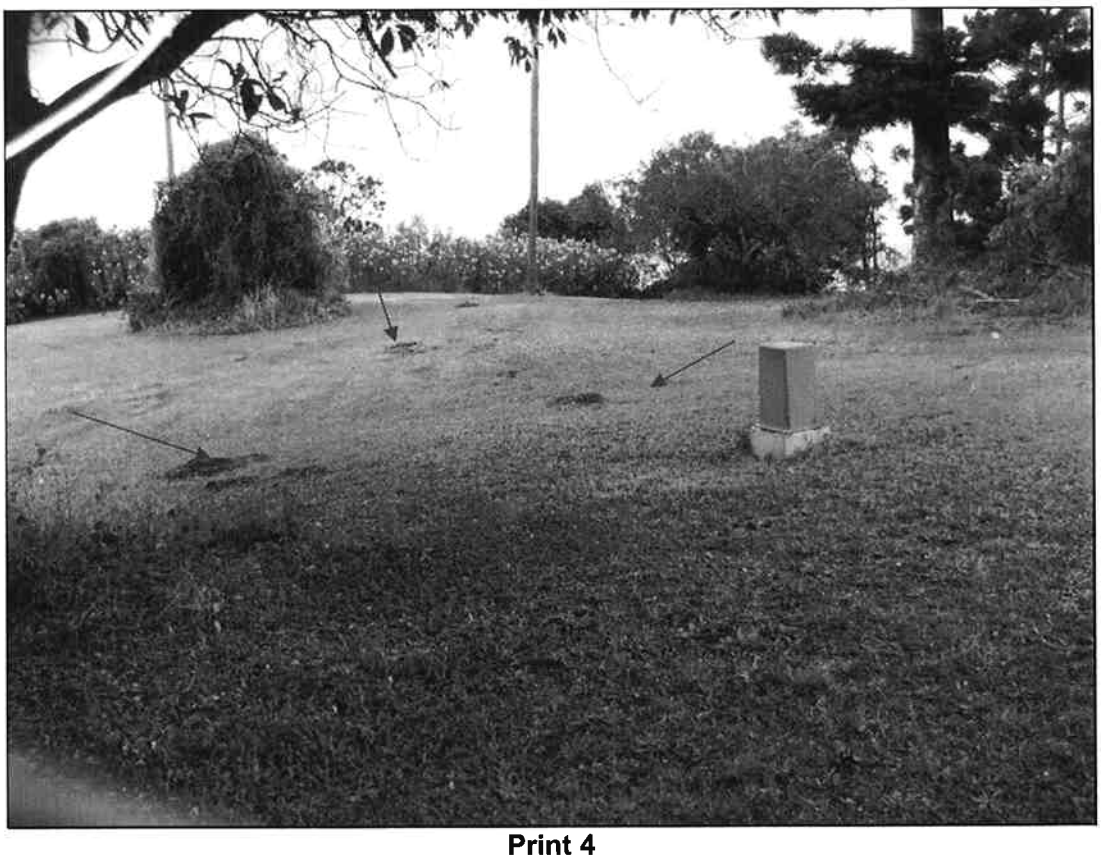
Print 1
Restaurant Eaves and External Wall Panels



Print 2
Western Section of Restaurant. Note Wall Panels Advertising Sign and Roof



Print 3
Restaurant External Asbestos Containing Electrical Distribution Board



Print 4
Asbestos Containing Fill Area