May 2011

ASBESTOS REGISTER
No. NT0414

16 Bennett Street
Darwin
NORTHERN TERRITORY

Prepared for

Engscribe Pty. Ltd.

PO Box 36030
Winnellie NT 0821

Date: May 2011
Register No: NT0414/01
Our Ref: PP/GP

Prepared by:
AEC Environmental Pty Ltd

Written/Submitted by:

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RECORD OF REGISTER UPDATE

DATE:	ORGANISATION
UPDATE NOTES:	
Signed:	

DATE:	ORGANISATION
UPDATE NOTES:	
Signed:	

DATE:	ORGANISATION
UPDATE NOTES:	
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APPENDICES

1.0 INSTRUCTIONS

AEC Environmental Pty Ltd (AEC) was contracted by Engsribe Pty. Ltd. to compile this Asbestos Register for the Qantas Building at 16 Bennett Street, Darwin Northern Territory. The location of the property is shown in the figure below.

Figure 1. Location plan

The property was inspected in April 2011. All reasonable steps have been taken to identify asbestos in the building. Inaccessible areas and some areas requiring destruction or demolition have not been inspected and caution should be exercised if demolition or alterations are contemplated. (***Refer to Page 6***)

2.0 REGULATORY FRAMEWORK FOR ASBESTOS MANAGEMENT

There are a number of codes and regulatory documents which apply to the identification and management of asbestos products in buildings. The most important of these are:-

- Work Health (Occupational Health and Safety) Act NT 2007
- Work Health (Occupational Health and Safety) Regulations NT 2007
- National Code of Practice for the Safe Removal of Asbestos (2nd Edition) NOHSC: 2002 (2005)
- Code of Practice for Management and Control of Asbestos in the Workplace NOHSC: 2018 (2005)
- Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibers 2nd Edition NOHSC: 3003 (2005)

3.0 LIMITATIONS

Asbestos is known to have been used in some 3,000 building products, the most common being in fibro cement products, vinyl flooring, electrical switchboards and insulation materials to hot water and steam pipes. However, asbestos can also be found in many other products located in **inaccessible components** of buildings, plant and equipment including the following areas:

- Interior parts of air conditioning systems
- Wall cavities, slabs, underside of floors
- Interior workings of pumps and boilers
- Services, in ceiling spaces, floor spaces or underground
- Wall "chased" lagged pipe work
- Floor coverings subsequently overlaid
- Where asbestos products have been removed (eg vinyl floor coverings), residue may exist under skirting boards and/or subsequently laid floor coverings.

Whilst this report provides approximate measurements and quantities of some materials found, we stress that they are approximate only. Accurate details would require a further visit to the site.

The work involved in preparing an Asbestos Register is based on visual inspection of the building and/or plant and equipment. As well, representative samples of suspect materials are collected and reasonable assumptions are made from those samples. These samples may not be a true representation of every element, part or component of the area of material concerned. Further, it is becoming increasingly apparent that some building materials containing asbestos have been removed and replaced by non-asbestos containing materials, particularly cement sheeting. In numerous cases only partial removal has occurred, leaving asbestos product remaining and this is often painted. While appropriate sampling has occurred the only sure determinant is to sample and analyse every section or piece in question. Full clarification would require a further visit to the site to obtain and analyse appropriate samples.

There is no known instrument available for in-situ asbestos detection. Asbestos is a naturally occurring mineral of inert characteristics. **For the above reasons, including the inaccessibility of many asbestos products, no guarantee can be given, express or implied, that the inspection will reveal all the asbestos that may be located in the property described in this report.**

This asbestos register includes all asbestos products detected in the course of the inspection. As well, assumptions made on where asbestos is likely to be found are also stated. If an inaccessible area is suspected of having asbestos, it may need further verification. The decision regarding this will remain purely at the discretion of the client.

This report should be read in conjunction with any other asbestos related reports and or communication/documentation prepared for the property.

No individual section of this report should be read in isolation without taking the whole report into account. If the report is to be copied for whatever reason the whole of the report should be included.

Finally, this report has been prepared for the sole use of the client and is not to be relied upon by a third party without prior authorisation from AEC Environmental Pty Ltd.

4.0 INSPECTION REPORT

An inspection of the buildings was undertaken using a systematic procedure developed by AEC Environmental Pty Ltd. As previously stated, the identification of asbestos and/or products containing asbestos cannot be carried out with any known in-situ measuring instrument and final confirmation of asbestos can only be done under microscopic examination. The inspection procedure developed relies on identifying asbestos bearing materials by visual means. Representative samples of materials that are considered to contain asbestos are often taken for analysis to confirm the presence of asbestos.
Access to gasket material in pipe work and pumps was not possible due to either equipment in operation or inaccessibility. In order to comply with current legislation, for this reason, it is recommended that all gasket material be considered to contain asbestos until further testing. Please refer to Section 9.2 of the CODE OF PRACTICE FOR THE MANAGEMENT AND CONTROL OF ASBESTOS IN WORKPLACES [NOHSC: 2018 (2005)].

Full details of all asbestos products located within the property are found within the next section of this report. Section 6.0 outlines suggested management procedures.

5.0 ASBESTOS REGISTER

5.1 AREAS WHERE ASBESTOS HAS BEEN IDENTIFIED

Location	Type of Material	Condition	Recommendation	Action
It was common practice until the late 1970s for small diameter hot water pipes to be concealed in walls and to be partially or totally insulated with brown or white asbestos. Confirmation or otherwise as to the presence of these "chased" pipes is simply not possible with a non-destructive visual inspection. Appropriate precaution must be observed if the walls are disturbed in the vicinity of concealed hot water pipes. Refer to Section 6.0 - Policies and Management Procedures, where reference is made to the possibility of hot water pipes (with asbestos) concealed ("chased") in walls.				
External				
Cladding to levels 1-3 of north & west elevations (270^{m2}) **Refer Photo 1*	Fibre cement sheet material containing white (Chrysotile) asbestos (Refer to AEC sample no.2 in Report NT0336 – Sept 2009)	Stable	Warning signs 5 small plastic per level Refer Section 6.0: Management Procedure	
Lining to underside of cladding overhang levels 1 - 3 (90^{m2}) **Refer Photo 2*	Fibre cement sheet material containing white (Chrysotile) asbestos (Per AEC sample no.2 in Report NT0336 – Sept 2009)	Stable	Warning signs 5 small plastic per level Refer Section 6.0: Management Procedure	
Ceiling lining to carport/driveway area at north east corner of building (125^{m2}) **Refer Photo 3*	Fibre cement sheet material containing white (Chrysotile) asbestos (Refer to AEC sample no.3 in Report NT0336 – Sept 2009)	Stable	Warning signs 6 small plastic Refer Section 6.0: Management Procedure	
Internal				
Ground Level – No Asbestos Detected				
Level 1 - ABC Tenancy – No Asbestos Detected				
Level 2 - Indigenous Legal Services Tenancy				
HWS in kitchen, wire insulation ($<1m^2$) **Refer photo 4*	Not accessed or sampled. Based on past experience in similar areas, asbestos in some form may exist. It is recommended that if work is contemplated in this area, due care and diligence should be exercised.	**Friable when exposed.**	Warning signs 1 small Refer Section 6.0: Management Procedures.	

Location	Type of Material	Condition	Recommendation	Action
It was common practice until the late 1970s for small diameter hot water pipes to be concealed in walls and to be partially or totally insulated with brown or white asbestos. Confirmation or otherwise as to the presence of these "chased" pipes is simply not possible with a non-destructive visual inspection. Appropriate precaution must be observed if the walls are disturbed in the vicinity of concealed hot water pipes. Refer to Section 6.0 - Policies and Management Procedures, where reference is made to the possibility of hot water pipes (with asbestos) concealed ("chased") in walls.				
Level 3 - Qantas Tenancy				
Vinyl tile floor covering to storeroom of Qantas Corporate office (6^{m2}) **Refer photo 5*	Vinyl tiles containing white (Chrysotile) asbestos (Refer to AEC sample no.10 in Report NT0336 – Sept 2009)	Stable	Warning signs 2 small Refer Section 6.0: Management Procedure	
HWS below sink in lunchroom ($<1^{m2}$) **Refer photo 6*	Not accessed or sampled. Based on past experience in similar areas, asbestos in some form may exist. It is recommended that if work is contemplated in this area, due care and diligence should be exercised.	**Friable when exposed.**	Warning signs 1 small Refer Section 6.0: Management Procedures.	
Plant Room				
Fire doors x 2 to plant room core material (2^{m2} per door) **Refer photo 7*	Core material containing white (Chrysotile) and brown (Amosite) asbestos (Refer to AEC sample no.12 in Report NT0336 – Sept 2009)	**Friable when exposed.** **Some damage exposed core material**	Warning signs 2 small per door. Refer Section 6.0: Management Procedures.	**Remove**
Main Air-condition unit (Blue) **Refer photo 8*	Gasket Material – brown mastic containing white (Chrysotile) asbestos (AEC sample no. 6)	Stable	Warning signs 8 small plastic Refer Section 6.0: Management Procedures.	
Roof				
Fire door to roof access stairwell core material (2^{m2}) **Refer photo 9*	Not accessed or sampled. Based on past experience in similar areas, asbestos in some form may exist. It is recommended that if work is contemplated in this area, due care and diligence should be exercised.	**Friable when exposed.**	Warning signs 2 small plastic Refer Section 6.0: Management Procedures.	
Brake shoe linings to lift motor ($<1^{m2}$) **Refer photo 10*	Not accessed or sampled. Based on past experience in similar areas, asbestos in some form may exist. It is recommended that if work is contemplated in this area, due care and diligence should be exercised.	Stable	Warning signs 1 small Plastic Refer Section 6.0: Management Procedure	

5.2 SUSPECT MATERIALS TESTED – NO ASBESTOS DETECTED

Location	Material Tested	Result
ADMINISTRATION BUILDING		
External		
Ceiling lining to front verandah (North elevation)	Cement sheet (Refer to Sample 1 in Report NT0336 – Sept 2009)	No asbestos
Wall cladding to Carport/Driveway area (at NE corner of building – upon exit to Bennett St – Left side)	Cement sheet (Sample 8)	No asbestos
Infill panel adjacent to and above windows (West elevation)	Cement sheet (Refer to Sample 5 in Report NT0336 – Sept 2009)	No asbestos
Ceiling lining to entry canopy (West elevation)	Cement sheet (Refer to Sample 6 in Report NT0336 – Sept 2009)	No asbestos
Internal		
Proposed disabled toilet on ground floor – floor covering	Blue vinyl floor covering (Sample 1)	No asbestos
Air conditioning duct mastic throughout ceiling spaces	Green mastic (Sample 2)	No asbestos
Inner core material for all fire doors in stairwell	Pale brown micaceous mass (Sample 3)	No asbestos
Wall lining to disabled toilet (Level 2)	Cement sheet (Sample 4)	No asbestos
Floor covering to lunchroom/Kitchen (Level 3)	Grey pebbled pattern vinyl Sheet (Sample 5)	No asbestos
Floor covering to lunchroom/Kitchen (Level 3)	Off white fibrous backing to grey pebbled vinyl sheet (Sample 5)	No asbestos
Air conditioning duct above fire doors in plant room Level 3	White mastic (Sample 7)	No asbestos
Wall lining to cleaners area (Ground Floor)	Cement sheet (Refer to Sample 7 in Report NT0336 – Sept 2009)	No asbestos

AREAS OF LIMITED OR NO ACCESS

Ceiling spaces - Limited
Wall cavities in Level 1- ABC Tenancy – No access
All return air cavities– No access
Distribution boards, switchboards and fuse boxes – No access to live electrical equipment
Plant room gaskets in pipe work and pumps – No access
Plant room switchboards – No access to live electrical equipment

AREAS NOT TESTED AS PER INSTRUCTIONS

Ground floor toilets
Elevator
Elevator plant room

6.0 POLICIES & MANAGEMENT PROCEDURES

It is important to note that if asbestos products are disturbed, asbestos fibers may be released, thereby resulting in a health risk. Great care therefore must be exercised in the immediate and ongoing management of any products found to contain asbestos.

If products containing asbestos have been identified in this building, specific actions are required as follows:

"Friable/Damaged" asbestos products:

Action required: The product should be removed as soon as it is reasonably practicable to do so. Additionally, specific on-going procedures are required to be undertaken (see notes below).

"Stable" asbestos products:

Action required: The product is not required to be removed immediately, however specific on-going procedures are required to be undertaken (see below).

We recommend that the following management plan be prepared:

6.1 Adopt procedures that restrict access to the asbestos containing products.

6.2 Ensure that all parties having management responsibilities in relation to the building or site are made aware of the Asbestos Register the audit report and risks of asbestos containing materials.

6.3 Management should ensure all staff, contractors and sub-contractors are aware of the presence of asbestos on the site, particularly prior to work being carried out on asbestos containing materials.

6.4 When removal of asbestos containing materials is required or changes to the building are required affecting asbestos containing materials; management, staff, contractors and sub-contractors should be aware that breakage, cutting or machining of asbestos containing materials is likely to cause asbestos fibers to be released, resulting in an increased health and safety risk.

6.5 Within prescribed parameters, when friable materials or non-friable material greater than 10 square meters is to be removed, NT Worksafe regulations stipulate only licensed asbestos removal companies can remove the materials. For further information contact AEC Environmental or NT Worksafe.

6.6 It is recommended that asbestos registers should be updated annually to monitor the condition of the asbestos containing materials.

6.7 Install warning signs as recommended within this report. Contact AEC regarding sign installation.

6.8 Any person who intends to carry out work should first be shown this asbestos register and sign the control form in Section 8.

6.9 Vinyl tile and vinyl sheet flooring manufactured prior to 1982, in many cases, contained asbestos. It is a safe practice therefore, in the event of renovation work or other activities disturbing such flooring, to assume that the material does in fact contain asbestos.

Laboratory testing at the time of works would verify the existence or otherwise of asbestos. If the existence of asbestos has been positively identified within this report then no further testing would be required.

6.10 It was common practice until the late 1970s for small diameter hot water pipes to be concealed in walls and to be partially or totally insulated with brown or white asbestos. Confirmation or otherwise as to the presence of these "chased" pipes is simply not possible with a non-destructive visual inspection. Appropriate precaution must be observed if the walls are disturbed in the vicinity of concealed hot water pipes.

6.11 In the event that the subject property has been found to contain products containing friable asbestos, eg pipe lagging, woven asbestos rope material, please take note of specific recommendations within this section of the report. In broad terms, great care should be taken at all times not to disturb the friable asbestos, signage must at all times be present and, finally, removal should take place along the guidelines of our recommendations.

6.12 If roof cladding contains asbestos (eg "Deep 6" corrugated fibre cement), the following special restrictions apply:

- Limit access to the roof to suitably qualified persons.
- Prepare and review work plan before any work is undertaken on the roof.
- Incorporate the use of walk and work platforms if the external roof surface is accessed.
- Incorporate annual audit of the roof to monitor its condition (incorporate airborne monitoring tests into audit results).

6.13 All work which could involve using the materials containing asbestos should be carried out in accordance to the requirements of the Work Health legislation and regulations.

6.14 In the event of further asbestos products being located at the property, details should be immediately added to any existing asbestos register.

6.15 A copy of the Asbestos Register must be kept on the premises at all times and available for inspection.

7.0 CONCLUSION & RECOMMENDATIONS

The inspection carried out has **identified asbestos** in some of the building materials.

It is important to note that if asbestos products are disturbed, asbestos fibers may be released, thereby resulting in a health risk. Great care therefore must be exercised in the immediate and ongoing management of any products found to contain asbestos.

It is very important that the Policies & Management Procedures as listed in Section 6.0 are adopted.

The real risk of asbestos exposure is only likely to occur if these materials are disturbed in some way in contradiction to the recommendations listed in this report. It is recommended that implementation of the prevention measures listed in this report be adopted.

In addition, it is important that trades people and any persons carrying out maintenance activities in the building are made aware of the asbestos register before commencing any work.

If the reader is in doubt in respect to any of the detail and or implications of the contents of this report, then they are invited to call the following:

AEC Environmental Pty Ltd:	08 8941 9441
NT Worksafe:	08 8999 5010

8.0 FUTURE MANAGEMENT

8.1 CONTROL FORM

The persons listed below have seen the Asbestos Register and shall conform to the guidelines recommended.

Date	Name	Company	Nature of Work

APPENDIX A

AEC Laboratory Test Results

APPENDIX B

Photographs

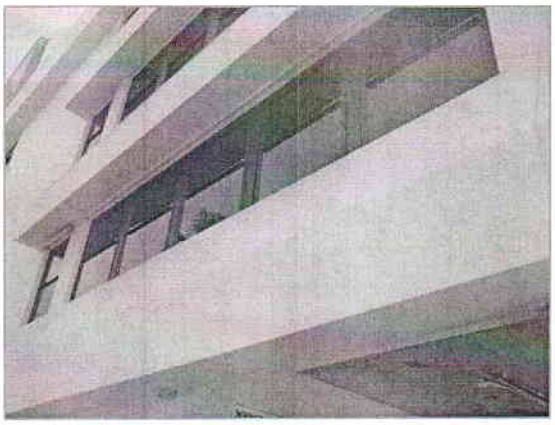

Photo 1. External wall cladding

Photo 2. Lining to underside of cladding overhang

Photo 3. Ceiling lining to carport area

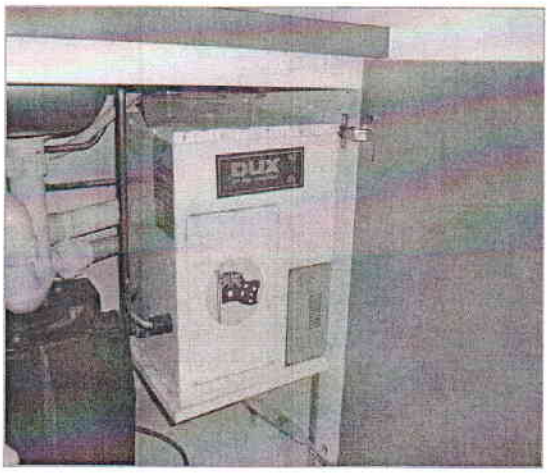

Photo 4. Wire insulation to HWS in kitchen

Photo 5. Vinyl floor tiles to store room

Photo 6. Wire insulation to HWS in lunchroom

Photo 7. Fire doors to plant room

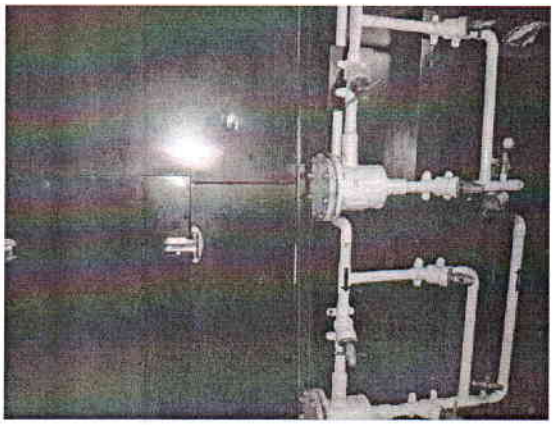

Photo 8. Main Air Conditioner unit (Blue) – Brown gasket material

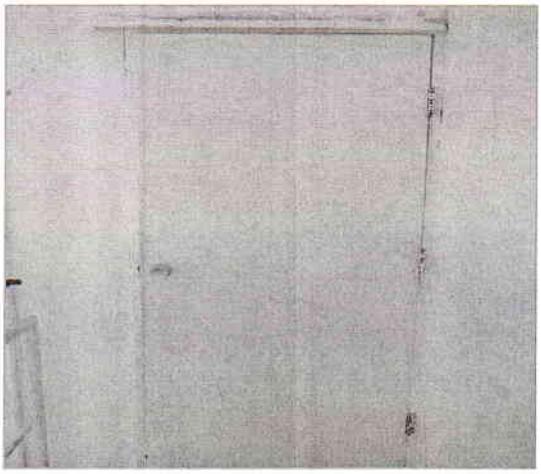

Photo 9. Roof access fire door

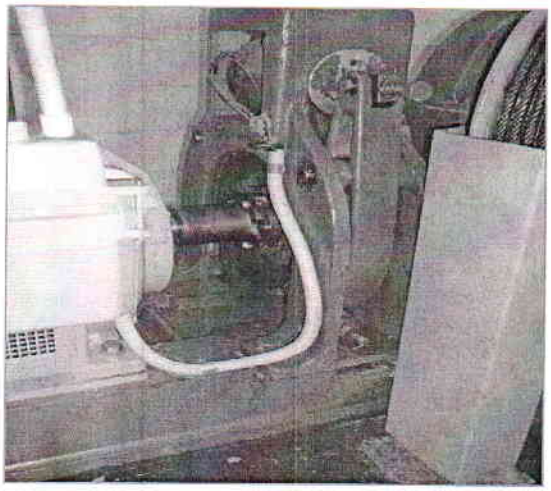

Photo 10. Brake shoes to lift motor

ASBESTOS IDENTIFICATION REPORT No. NT0414

CLIENT:	Engscribe	**ORDER NO:**	
ATTENTION:	Craig Robbins	**RECEIVED DATE:**	2 May 2011
PROPERTY ADDRESS:	Qantas Building,	**TEST DATE:**	5 May 2011
	16 Bennett Street, Darwin		
SAMPLED BY:	Tony Boskovic (AEC Environmental)	**REPORT DATE:**	9 May 2011

Test Method: In house method LOP-002 Asbestos Identification by Polarised Light Microscopy including Dispersion Staining (Based on AS4964-2004 Method for the qualitative identification of asbestos in bulk samples)

RESULTS

No.	Location	Dimensions	Description	Asbestos	SMF	OF
1	Future disabled toilets Floor covering	15x10x2mm	Blue floor covering	No		
2	A/C Duct mastic	40x5x2mm	Green mastic	No		
3	Inner core material of fire door in stairwell – Level 1	10x10x2mm	Pale brown micaceous mass	No		
4	Wall lining in disabled toilets – Level 2	25x25x3mm	Pale brown cement sheet, painted white	No		Yes
5	Floor covering in kitchen – Level 3	40x40x2mm	Grey pebbled pattern vinyl floor covering	No		
		40x40x1mm	Off-white fibrous backing	No	Yes	Yes
6	External gasket in Plant Room	100x5x2mm	Brown mastic	Chrysotile		
7	Mastic on A/C duct above firedoors	15x10x5mm	White mastic	No		
8	Left wall lining in driveway upon exit to Bennett Street	20x10x5mm	Pale grey cement sheet	No		Yes
9	Ceiling lining of driveway	30x15x2mm	Pale grey cement sheet, painted white	Chrysotile		Yes

Approved Identifier & Signatory:

N. Haliloff

Naciye Haliloff

Please note that the results contained in this report relate only to the sample(s) submitted for testing. Sample Dimensions and Descriptions are approximate only. Chrysotile is commonly known as white asbestos, Amosite is commonly known as brown asbestos and Crocidolite as blue asbestos. SMF (Synthetic Mineral Fibre) is commonly known as glass fibre and OF (Organic Fibre) includes natural fibres and synthetic organic fibre. A blank in the SMF or OF column implies not detected. ^ Confirmation by an independent analytical technique is advised due to the nature of the sample.

NATA
WORLD RECOGNISED ACCREDITATION

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