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Asbestos Survey & Management Plan

High Court of Australia
Parkes
Canberra ACT

27 March 2009
(Revision 1)

Client: High Court of Australia

QUALITY MANAGEMENT

Report Prepared By:

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1 EXECUTIVE SUMMARY

Purpose

This Asbestos Survey & Management Plan (ASMP) for the High Court of Australia, Canberra was commissioned by the High Court of Australia in order to ensure the occupants receive the highest standards of occupational health and safety in relation to in situ asbestos. The implementation of this Management Plan will assist the High Court of Australia in protecting the occupants of the premises from exposure to airborne asbestos fibres and the potential consequences of asbestos related disease.

Scope

Robson Environmental Pty Ltd was contracted to conduct a non-destructive asbestos survey of the premises. The survey was commenced on 26 February 2009.

The aim of the survey was to assess the extent, location and condition of asbestos containing material (ACM) in the premises.

Materials in similar locations which were visually consistent with those which have been identified as being an ACM are to be considered as being identical.

Method

The survey involved a visual inspection and subsequent sampling and analysis of collected samples by a National Association of Testing Authorities (NATA) laboratory using polarised light microscopy and/or x-ray diffraction. Samples were a representative selection of materials suspected of containing asbestos. Materials were not sampled from all areas due to the uniformity of the materials used.

The information contained in this document will assist Property Management to fulfil their obligations under the:

- *Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC: 2018 (2005)];
- *Code of Practice for the Safe Removal of Asbestos* [NOHSC: 2002 (2005)];
- Dangerous Substances (General) Amendment Regulation 2007 (No1) SL2007-23;
- Dangerous Substances (General) Regulation 2004 SL2004 – 56;
- ACT Occupational Health & Safety Act 1989;
- ACT WorkCover requirements.

Findings

Friable Asbestos Material

- Friable ACM was identified during the survey.

Bonded Asbestos Materials

- Bonded ACM was identified during the survey.

The ACM locations and the required action to be implemented are listed in Table 1.

Table 1: ACM, locations and required actions

TYPE	ACM	Locations (refer to plans)	Action to be taken
Friable asbestos	Sheet (millboard)	Electric duct heaters	Remove as soon as practicable
	Braided Material	Level 9 Library ceiling lights	
	Rope	Level 7 air exhaust	Leave, label and maintain
Bonded asbestos	Sheet	Exterior west formwork to wall below black grille	Remove as soon as practicable
	Core sheet	plantroom 14 service hatch	
	Pipe	Ground floor service riser	Leave, label and maintain
	Gasket	Basement plant room equipment	
	Gasket	Level 6 plantroom Air handling unit equipment	
	Sheet	Level 6 ceiling sheet	
	Sheet	Level 9 – pipe riser	
	Core sheet	Fire doors (all levels)	
	Membrane	Outside main entrance – adjacent gutter grate	
	Membrane	Levels 3, 8, 9, 10 - Sections of membrane in inaccessible locations at the base of glazing and stanchions to accessible building roof areas	

Recommendations

- The braided material in the cable tracking of the lights should be removed or remediated by an ACT licensed Asbestos Removalist as per the Code of *Practice for the Safe Removal of Asbestos, 2nd Edition* [NOHSC: 2002 (2002)] as soon as practicable.

- The asbestos sheeting (millboard) to the electric duct heaters (EDH) throughout the building should be removed or remediated by an ACT licensed Asbestos Removalist as per the Code of *Practice for the Safe Removal of Asbestos, 2nd Edition* [NOHSC: 2002 (2002)] as soon as practicable.

- The exposed exterior formwork should be removed as soon as practicable.

- All other ACM, as identified in Table 1 (previous page) and the Plans (Appendix B) is in good condition and may remain in situ provided the ACM is well maintained.

- Identified ACM should be labelled with approved asbestos warning labels or signs. Where labelling is not practicable, strict administrative controls must be in place to ensure ACM is not subject to accidental damage or misuse.

- The ACM should be maintained in good condition.

- Prior to any planned demolition, refurbishment or maintenance, its effect upon any in situ asbestos must be established by reference to this document, including amendments.

2 INTRODUCTION

This ASMP is designed to address the safe control of ACM identified by Robson Environmental Pty Ltd, in the premises. It is also designed to address any future asbestos findings.

This ASMP contains sections covering the identification, evaluation and control of asbestos hazards which were identified in a survey of the premises by Robson Environmental Pty Ltd in February 2009.

2.1 Requirements for the Asbestos Survey & Management Plan

The building manager must retain a copy of this ASMP and upon request, it must be made available to tenants. Prior to any repair, maintenance or building works to the premises, all personnel undertaking the works must be provided with a copy of this ASMP.

Maintenance, trades and other personnel must be instructed not to remove or damage identified ACM. If ACM is identified in the area where work is to be undertaken the ACM must be removed prior to the work commencing.

Removal of ACM must be undertaken by an ACT licensed Asbestos Removalist in accordance with the *Code of Practice for the Safe Removal of Asbestos, 2nd Edition* [NOHSC: 2002 (2005)].

This ASMP includes the following:

- A register of all known ACM
- Extent, form, condition and risks associated with the ACM
- Labelling requirements for ACM
- Safe work methods, removal methods and training requirements
- Responsibilities of all persons involved in ACM management
- Procedures to address incidents or spillage involving ACM
- A timetable for managing risks, including priorities for removal or control of ACM according to risk and timetable for reviewing risk assessments
- A procedure for reviewing and updating the ASMP and register of ACM, including a timetable

This ASMP addresses the current requirements for asbestos management and therefore must be updated as required to reflect legislative changes.

The asbestos register and associated risk assessment within this ASMP is designed to be reviewed by a Class A Asbestos Assessor every 12 months.

Where ACM has been disturbed, removed, enclosed, encapsulated, sealed or its condition has deteriorated in the preceding 12 month period, the existing asbestos risk assessment will no longer be valid and the ASMP will need to be revised by the Class A Asbestos Assessor to reflect these changes.

2.2 Exclusions

The survey was non-destructive in nature. Therefore, sampling was limited to accessible materials. **No determination can be made regarding the possibility of concealed or inaccessible ACM without gaining access to areas that are not readily accessible to allow for inspections.**

Unless specifically noted, the survey did not cover exterior ground surfaces, sub-surfaces (e.g. infill/soil) or materials such as materials in laboratories or special purpose facilities.

When any building works are undertaken, care should be taken to determine the existence or otherwise of ACM. As a precaution, all materials that may or are likely to contain asbestos should be assumed to contain asbestos and be treated appropriately until sample and analysis confirms otherwise. If, during building works, ACM is located, those works should cease in the areas of concern and a licensed Asbestos Removalist contacted immediately to remove the material. A licensed Asbestos Assessor must issue a clearance certificate before works may recommence in the affected area.

Robson Environmental Pty Ltd recommends that prior to any works, our office be contacted. Our Asbestos Assessors can attend the site to observe the works process, advise as necessary and in the event of asbestos being located, assist with assessing the extent of ACM. Further, Robson Environmental Pty Ltd provides all occupational hygiene services in relation to asbestos removal.

2.3 Limitations

Although all reasonable care and attention is taken in compiling this report, no guarantee as to its accuracy or completeness can be given. This may be a result of:

- normal construction practices of 'building in' some ACM (i.e. during previous renovations or additions)
- the random application of asbestos materials, and
- other physical or applied constraints on our investigation.

Our report is limited by the physical constraints of the structure under investigation. Prior to any refurbishment or hazardous material removal projects, the contractor(s) carrying out the work must fully acquaint themselves with the extent of the hazardous materials, particularly in those areas which may require full or partial demolition, in order to determine the exact extent and location of these materials.

Although extensive, this ASMP must not be used as a specification or method statement for any future asbestos removal project. In these circumstances, detailed plans and quantities would be required.

3 ASBESTOS SURVEY

3.1 Survey Details

Robson Environmental Pty Ltd commenced the asbestos survey on 26 February 2009. The survey included all accessible building areas. Inaccessible areas and limitations are described in Sections 2.2 and Section 2.3 respectively.

3.2 Survey Methodology

The survey involved a visual inspection and subsequent sampling and analysis of materials in a NATA laboratory using polarised light microscopy and/or x-ray diffraction. Samples were a representative selection of materials suspected of containing asbestos. Materials were not sampled from all areas due to the uniformity of the materials used.

3.3 Sample Analysis

Table 2: Mineralogical analysis of samples for asbestos using polarising light microscopy and/ or x-ray diffraction.

Sample Reference	Sample location	Sample type	Composition/ Assessment
4426 – A1	Lift plant room No: 2 – Lift motor 3 brake pads	Pads	no asbestos detected
4426 – A2	Ground floor – Service riser adjacent lift 2 pipe in ground	Pipe	**Chrysotile & Amosite**
4426 – A3	Basement plant room No: 1, gasket to air handling unit to pump, rear of unit	Gasket	**Chrysotile**
4426 – A4	Basement – Service tunnel northern side gasket to water pipe	Gasket	**Chrysotile**
4426 – A5	Ground floor – Storeroom southern side of carpark black membrane sheets	Membrane	no asbestos detected
4426 – A6	Basement – Library store electric duct heater above entry store	Sheet Millboard	**Chrysotile & Amosite**
4426 – A7	Level 6 Plantroom No: 3 – 3rd floor Air handling unit No: 11 gasket to pump	Gasket	**Chrysotile**

Sample Reference	Sample location	Sample type	Composition/ Assessment
4426 – A8	Level 6 – Lounge area east side of building electric duct heater in ceiling	Sheet Millboard	**Chrysotile**
4426 – A9	Level 6 above court room 3 – Ceiling sheet adjacent glass ceiling	Sheet	**Chrysotile**
4426 – A10	Level 9 library – Rope lagging in ceiling lights above book shelves	Rope	**Chrysotile**
4426 – A11	Level 9 library roof access – Sheet to water pipe riser east side of building	Sheet	**Chrysotile**
4426 – A12	Level 8 – Fire door No:9 to service riser	Core	**Chrysotile & Amosite**
4426 – A13	Level 8 – Light service hatch area above courtroom No:2	Core	no asbestos detected
4426 – A14	Level 11 plantroom 14 – Service hatch adjacent to air handling unit	Core	**Chrysotile & Amosite**
4426 – A15	Level 7 – Service duct rope gasket to air exhaust	Rope	**Chrysotile**
4426 – A16	Exterior to main entrance – adjacent gutter grate	Membrane	**Chrysotile**
4426 – A17	Exterior west formwork to wall below black grille	Sheet	**Chrysotile**

NATA accredited laboratory Amdel Ltd
Accreditation number: 1526

Legend

Chrysotile	**=**	**white asbestos**
Amosite	**=**	**grey or brown asbestos**
Crocidolite	**=**	**blue asbestos**

- It should be noted that the above samples were a representative selection of materials suspected of containing asbestos.

- Samples may not have been taken from all areas due to the uniformity of the materials used throughout the premises.

- On-site inspections and an examination of the asbestos register and accompanying plans within this report should be undertaken prior to the commencement of any asbestos removal programme.

While Robson Environmental Pty Ltd has taken all care to ensure that this report includes the most accurate information available, where it uses test results prepared by third parties, it relies on the accuracy of the test results in preparing this report. In providing this report, Robson Environmental Pty Ltd does not warrant the accuracy of such third party analytical results.

4 ASBESTOS RISK ASSESSMENT

4.1 Introduction

The purpose of the risk assessment is to enable informed decisions to be made concerning the control of ACM. As per NOHSC: 2018 (2005), the risk assessment should take into account the information in the Asbestos Management Register, including:

- the type of ACM (bonded or friable)
- the condition and location of ACM
- whether the ACM is likely to be disturbed due to its condition and location and
- the likelihood of exposure.

Types of ACM

Bonded ACM	Bonded asbestos is any material that contains asbestos firmly bound into a matrix. It may consist of cement or various resins/binders and cannot be reduced to a dust by hand pressure. As such it does not present an exposure hazard unless cut, abraded, sanded or otherwise disturbed. Therefore, the exposure risk from bonded ACM is negligible during normal building occupation. *Note: if bonded ACM is damaged or otherwise deteriorated, the risk assessment must be reviewed to reflect a higher potential for exposure to asbestos fibres. When severely damaged, bonded ACM must be assessed as being friable. A Class A Asbestos Assessor must perform the risk assessment.*
Friable ACM	Friable asbestos material can be crumbled or reduced to a dust by hand pressure when dry. It can represent a significant exposure hazard as a consequence of minor disturbance. Examples of friable asbestos are hot water pipe lagging, severely damaged asbestos cement sheet, limpet spray to structural beams and electrical duct heater millboard.

ACM CONDITION RATING

1	Severe	**Friable:** Readily accessible, deteriorated surface in extremely poor condition
2	Poor	**Friable:** Unstable material that is relatively accessible **Bonded:** Readily accessible, deteriorated surface
3	Normal	**Friable:** Stable asbestos that is relatively inaccessible **Bonded:** Accessible surfaces in fair condition
4	Good	**Bonded:** Well sealed stable surfaces in accessible locations

ACM RISK RATING

A	Very High	**Friable:** Exposure to airborne asbestos as a consequence of extremely minor disturbance
B	High	**Friable:** Exposure to airborne asbestos occurs as a consequence of significant disturbance **Bonded:** Exposure to airborne asbestos likely as a consequence of significant disturbance
C	Medium	**Friable:** Exposure to airborne asbestos unlikely during normal building use **Bonded:** Exposure to airborne asbestos highly unlikely during normal building use
D	Low	**Bonded:** No exposure to airborne asbestos during normal building use

4.2 Asbestos Register

The Asbestos Register details the type, location, risk rating and action required for all identified ACM. The register should be accessed to inform all decisions made concerning the control of ACM. Action taken to control ACM must be recorded in this register in order to comply with the *Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC: 2018(2005)].

Table 3: Asbestos Register (to be updated as required)

Friable Asbestos						
Reference number	**Photo Number**	**ACM**	**Locations (Refer to plans)**	**Condition Rating**	**Risk Rating**	**Management Option – defer action (leave label and maintain), encapsulate, seal or remove**
4426 – A6	1,2	Sheet (Millboard)	Basement – Library store electric duct heater above entry store	**1**	**A**	**Remove as soon as practicable**
4426 – A8	3,4	Sheet (Millboard)	Level 6 – Lounge area east side of building electric duct heater in ceiling	**1**	**A**	**Remove as soon as practicable**
4426 – A10	5	Braided Material	Level 9 library – Rope lagging in ceiling lights above book shelves	**2**	**B**	**Remove as soon as practicable**
4426 – A15	6	Rope	Level 7 – Flexible joint to air exhaust	**3**	**B**	**leave label and maintain**

Bonded Asbestos						
Reference number	**Photo Number**	**ACM**	**Locations (Refer to plans)**	**Condition Rating**	**Risk Rating**	**Management Option – defer action (leave label and maintain), encapsulate, seal or remove**
4426 – A2	7	Sheet	Ground floor – Service riser adjacent lift 2 pipe in ground	**4**	**D**	**leave label and maintain**
4426 – A3	8	Gasket	Basement plant room No: 1, gasket to air handling unit to pump, rear of unit	**3**	**D**	**leave label and maintain**
4426 – A4	9	Gasket	Basement – Service tunnel northern side gasket to water pipe	**3**	**D**	**leave label and maintain**
4426 – A7	10	Gasket	Level 6 Plantroom No: 3 – 3rd floor Air handling unit No:11 pump gasket	**3**	**D**	**leave label and maintain**
4426 – A9	11	Sheet	Level 6 above court room 3 – Ceiling sheet adjacent glass ceiling	**3**	**D**	**leave label and maintain**
4426 – A11	12	Sheet	Level 9 library roof access – Sheet to riser eastern side of building	**3**	**D**	**leave label and maintain**

Bonded Asbestos						
Reference number	**Photo Number**	**ACM**	**Locations (Refer to plans)**	**Condition Rating**	**Risk Rating**	**Management Option – defer action (leave label and maintain), encapsulate, seal or remove**
4426 – A12	13	Core	Level 8 Fire door No: 9 to service riser	**3**	**D**	**leave label and maintain**
4426 – A14	14	Core	Level 11 plantroom 14 – Service hatch adjacent to air handling unit	**3**	**D**	**Remove as soon as practicable**
4426 – A16	15	Membrane	Exterior to main entrance – adjacent gutter grate	**4**	**D**	**leave label and maintain**
4426 – A17	16	Sheet	Exterior west formwork to wall below black grille	**2**	**D**	**Remove as soon as practicable**
As per 4426 – A16	nil	Membrane	***Levels 3, 8, 9, 10*** - Sections of membrane in inaccessible locations at the base of glazing and stanchions to accessible building roof areas	**4**	**D**	**leave label and maintain**

Bonded and Friable ACM and ACM Condition and Risk ratings are defined in Section 4.1

Presumed ACM	
ACM	**Locations**
Insulation/pipe lagging	Inaccessible ducts, risers and ceiling and wall space cavities
Asbestos millboard lining	Interior of air conditioning ductwork adjacent to heater elements
Asbestos insulation and gaskets/joints	Within mechanical equipment concealed by outer metal cladding, structure or housing
Asbestos vinyl floor tiles, floor covering and cushioning underlay	Beneath carpets and upper vinyl flooring
Asbestos cement sheeting	Backing material to ceramic tiles (floors and walls) and as packers to building construction joints
Asbestos cement sheet formwork and electrical cable/water pipe duct	Subterranean areas

Note: All areas that are presumed to contain ACM must remain so until proven otherwise.

4.3 Photograph of ACM

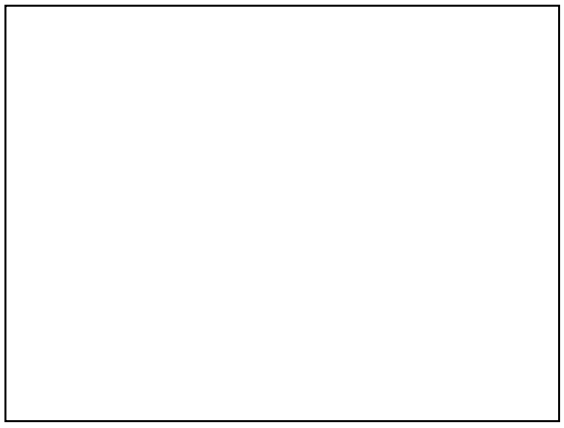


Photo 1: Basement – electric duct heater sheet (Millboard) *(ref sample:* 4426 – A6*)*

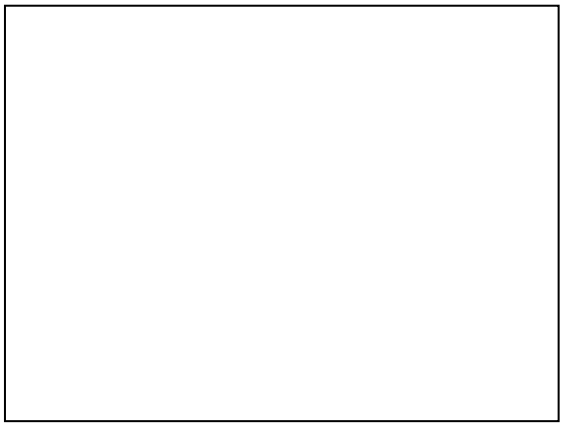


Photo 2: Basement – electric duct heater sheet (Millboard) *(ref sample:* 4426 – A6*)*

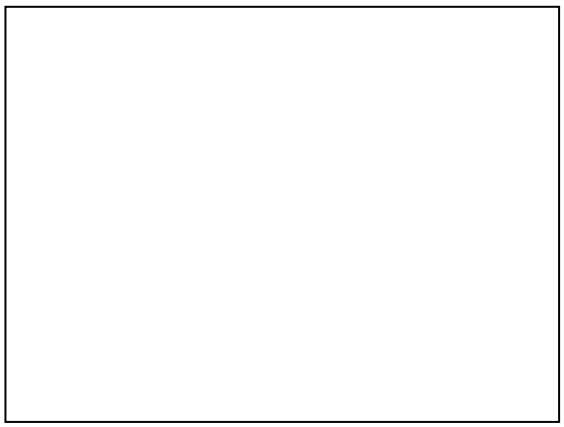


Photo 3: Level 6 – electric duct heater *(ref sample:* 4426 – A8*)*

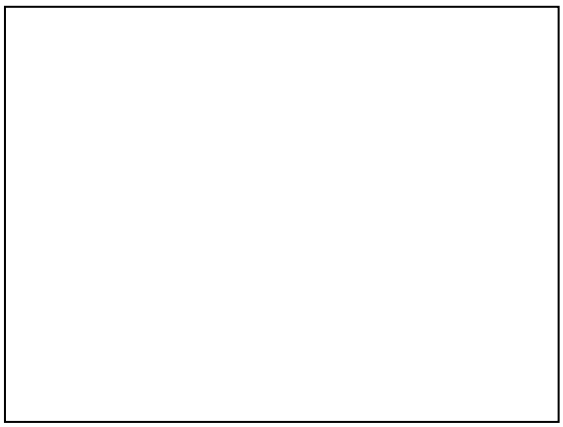


Photo 4: Level 6 – electric duct heater sheet (Millboard) *(ref sample:* 4426 – A8*)*

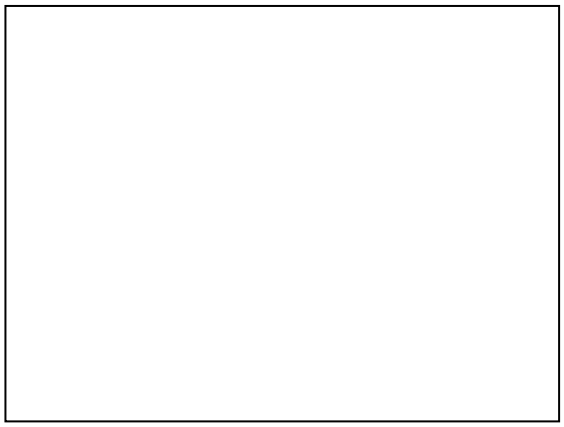


Photo 5: Level 9 Library ceiling lights - rope lagging *(ref sample:* 4426 – A10*)*

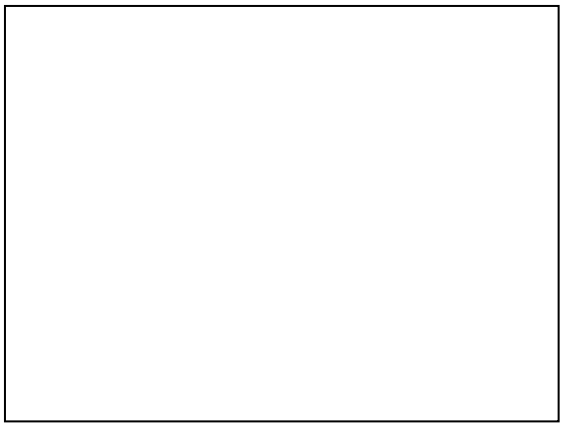


Photo 6: Level 7 – Flexible joint to air exhaust *(ref sample:* 4426 – A15*)*

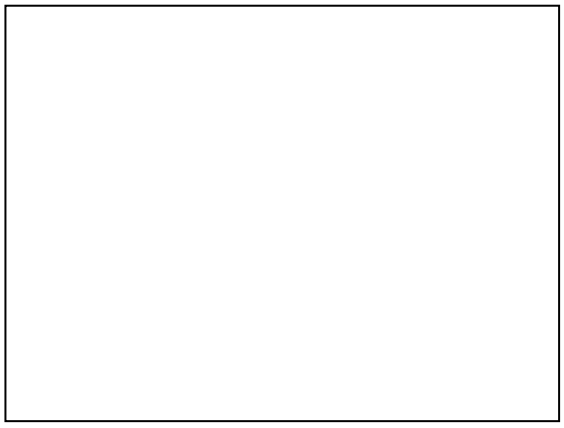


Photo 7: Ground floor – Service riser adjacent lift 2 pipe in ground *(ref sample:* 4426 – A2*)*

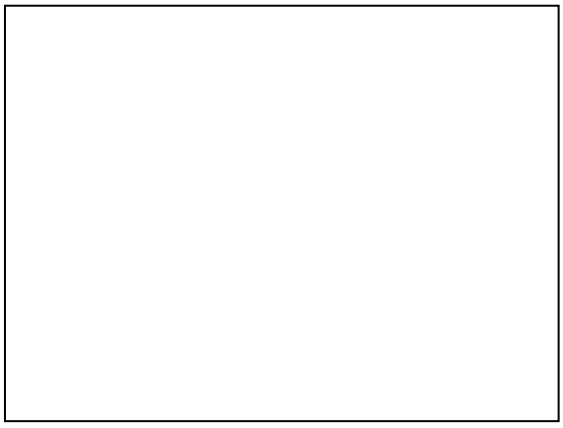


Photo 8: Basement plant room No: 1 – Air handling unit gasket to pump at rear of unit. *(ref sample:* 4426 – A3*)*

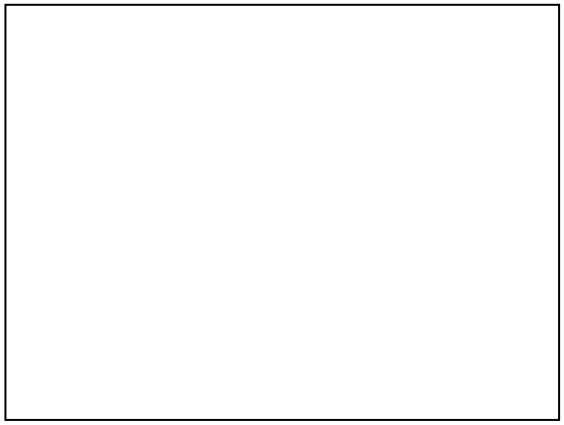


Photo 9: Basement – Service tunnel northern side gasket to water pipe *(ref sample:* 4426 – A4*)*

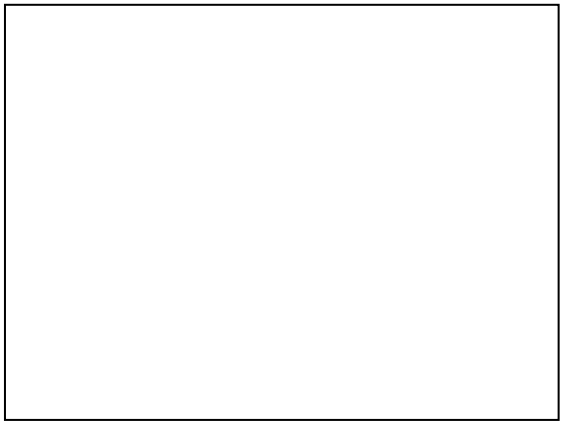


Photo 10: Level 6 Plantroom No: 3 – 3rd floor Air handling unit No: 11 gasket to pump *(ref sample:* 4426 – A7*)*

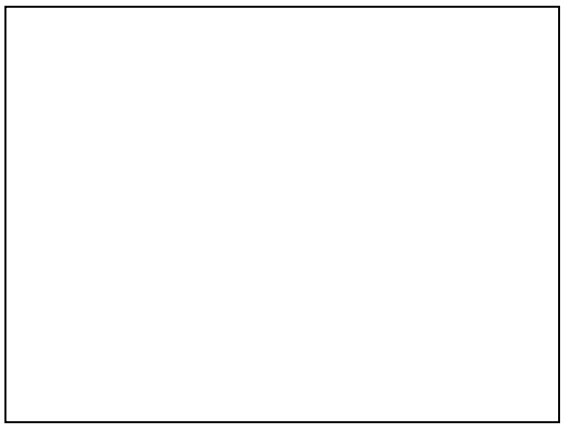


Photo 11: Level 6 above court room 3 – Ceiling sheet adjacent glass ceiling *(ref sample:* 4426 – A9*)*

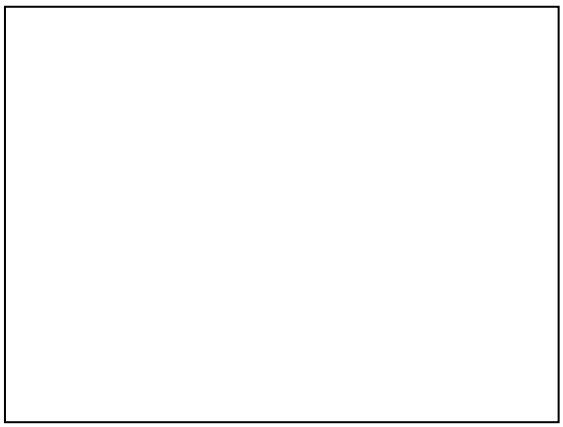


Photo 12: Level 9 library roof access – Sheet to water pipe riser east side of building *(ref sample:* 4426 – A11*)*

Photo 13: Level 8 – Fire door No: 9 to service riser *(ref sample:* 4426 – A12*)*

Photo 14: Level 11 plantroom 14 – Service hatch adjacent to air handling unit *(ref sample:* 4426 – A14*)*

Photo 15: Outside main entrance – Gutter with grate membrane in gutter *(ref sample:* 4486 – A16*)*

Photo 16: Exterior perimeter western side along wall below black grille *(ref sample:* 4486 – A17*)*

4.4 Risk Assessment

Control Measures General Requirements

- Any ACM which is not scheduled for immediate removal should be labelled and maintained in good condition.
- The details of any deterioration or removal must be entered into the ACM register.
- Maintenance and other personnel must be made aware of the location of ACM.
- The Asbestos Register must be freely available to all stakeholders.
- Unless holding a valid ACT Asbestos Removal Licence, maintenance workers or occupants shall not remove or knowingly damage identified ACM.
- Prior to any planned demolition, refurbishment or maintenance, its effect upon any in situ asbestos must be established by reference to this document, including amendments.

Recommended Control Measures for the Premises

- The braided material in the cable tracking of the lights should be removed or remediated by an ACT licensed Asbestos Removalist as per the Code of *Practice for the Safe Removal of Asbestos, 2nd Edition* [NOHSC: 2002 (2002)] as soon as practicable.
- The asbestos sheeting (millboard) to the electric duct heaters (EDH) throughout the building should be removed or remediated by an ACT licensed Asbestos Removalist as per the Code of *Practice for the Safe Removal of Asbestos, 2nd Edition* [NOHSC: 2002 (2002)] as soon as practicable.
- The exposed exterior formwork should be removed as soon as practicable.
- All other ACM is in good condition and may remain in situ provided it is well maintained.
- Identified ACM should be labelled with approved asbestos warning labels or signs. Where labelling is not practicable, strict administrative controls must be in place to ensure ACM is not subject to accidental damage or misuse.
- The ACM should be maintained in good condition.
- Prior to any planned demolition, refurbishment or maintenance, its effect upon any in situ asbestos must be established by reference to this document, including amendments.

The asbestos register and associated risk assessments within the ASMP are designed to be reviewed by a Class A Asbestos Assessor every 12 months.

Where an ACM has been disturbed, removed, enclosed, encapsulated, sealed or its condition has deteriorated in the preceding 12 month period, the existing asbestos risk assessment will no longer be valid and the ASMP will need to be revised by a Class A Asbestos Assessor to reflect these changes.

Demolition or any other works within areas where asbestos is located is not to take place until the asbestos removal works have been completed and a Clearance Certificate issued by a Class A Asbestos Assessor.

5 ASBESTOS MANAGEMENT

5.1 Control Measures

General requirements

- ACM identified as representing an exposure risk (see Table 3 Asbestos Register) should be removed or otherwise controlled.
- Any ACM that is not scheduled for immediate removal should be labelled with appropriate warnings and maintained in good condition.
- The location of ACM must be entered into the Asbestos Register.
- Maintenance and other personnel must be made aware of the location of ACM.
- The Asbestos Register must be freely available.
- Unless holding a valid ACT Asbestos Removal Licence, maintenance workers, trades or occupants shall not remove or knowingly damage identified ACM.
- Before any planned demolition, refurbishment or maintenance, its effect upon any in situ asbestos must be established by reference to this document, including amendments.

Accidental damage to ACM

If ACM is damaged or degraded through accident, ageing or misuse, the building manager should apply the following protocols.

- Determine if the damage is likely to affect nearby occupants through the release of asbestos dust (this may require advice from a licensed Class A Asbestos Assessor).
- Gently wet down the damaged section and cover with a heavy plastic sheet or equivalent to encapsulate the ACM. Close nearby windows if the ACM is located to the exterior of the premises.
- If the damage is significant (i.e. the material is shattered or abraded) the ACM should be replaced as soon as is practicable. Minor damage (E.g. small cracks or holes) may be repaired in the short term using a sealant. **All repairs or removal must be undertaken by an appropriately licensed Asbestos Removalist**.
- Register the event in the Asbestos Survey and Management Plan (ASMP).

5.2 Management of ACM

The options for short to medium-term management of ACM are outlined below.

1. Defer action

✓ Appropriate when	× Not appropriate when	✓ Advantages	× Disadvantages
Negligible risk of exposure ***and*** Asbestos inaccessible and fully contained ***or*** Asbestos stable and not liable to damage	Possibility of deterioration or damage Airborne dust exceeds recommended exposure standard	No initial cost Cost of removal deferred	Hazard remains Need for continuing assessment Asbestos management program required

2. Encapsulate or seal[1]

✓ Appropriate when	× Not appropriate when	✓ Advantages	× Disadvantages
Removal difficult or not feasible Firm bond to substrate Damage unlikely Short life of structure	Asbestos deteriorating Application of sealant may cause damage to material Water damage likely Large areas of damaged asbestos	Quick and economical for repairs to damaged areas May be an adequate technique to control release of asbestos dust	Hazard remains Cost for large areas may be near removal cost Asbestos management system required Eventual removal may be more difficult and costly

[1] **:** Seal through application of paint, lacquer or PVA spray

3. Removal

✓ Appropriate when	× Not appropriate when	✓ Advantages	× Disadvantages
Surface friable or asbestos poorly bonded to substrate Asbestos is severely water-damaged or liable to further damage or deterioration Located in air conditioning duct Airborne asbestos exceeds recommended exposure standard Other control techniques inappropriate	Located on complex and inaccessible surfaces Removal extremely difficult and other techniques offer satisfactory alternative	Hazard removed No further action required	Increases immediate risk of exposure especially to removal workers Creates major disturbance in building Often highest cost, most complex and time-consuming method Removal may increase fire risk in building; substitute required Possible contamination of whole building if removal is done poorly

Source: [NOHSC: 2018 (1988)].

5.3 Management Decision Record

Option 1: Defer action

Item no.	ACM and Location	Reason	Authorisation	Date

Option 2: Encapsulate or seal

Item no.	ACM and Location	Reason	Authorisation	Date

Option 3: Removal

Item no.	ACM and Location	Reason	Authorisation	Date

5.4 Timetable for Action

The timetable for action should be administered to ensure management has a clear plan for all works which may affect ACM in the workplace. This includes maintenance work, scheduled removal work and risk assessment reviews that may impact ACM.

Table 4: Timetable for action

ACM removal/ work	Date of scheduled works	Details	Authorisation	Date
Asbestos review/audit	**Date of scheduled review**	**Details**	**Authorisation**	**Date**

6 RESPONSIBILITIES

6.1 Management Responsibilities

The building manager must:

- ensure the ACM register and all relevant information pertaining to asbestos in the workplace is freely available upon request
- provide occupants with up-to-date information relating to the condition and relative risk of ACM in the workplace
- provide information on the control measures in place to contain ACM-related risk, and
- provide information to staff and contractors on measures to be taken to ensure there is no exposure to asbestos in the workplace, either through accident or negligence.

Management Action Record

Record all communication activities undertaken to inform staff/occupants of ACM in the workplace.

Action	Authorisation	Date

6.2 Updating the Risk Assessment

The *Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC: 2018 (2005)] requires that asbestos remaining in situ should be inspected by an Asbestos Assessor on a regular basis (usually every 1 – 3 years depending upon type, condition & location) to document any deterioration in the material which may result in a change to the hazard control requirements.

The Dangerous Substances (General) Amendment Regulation 2007 (No 1) require this review to be carried out by a **Class A Asbestos Assessor** at intervals determined by the Risk Assessment; the maximum interval being 5 years. The new requirements state that an Asbestos Management Plan and Risk Assessment are required in addition to an Asbestos Register and Survey. Class A Asbestos Assessors at Robson Environmental Pty Ltd are able to produce these documents to comply with your obligations.

Each review should critically assess all asbestos management procedures and their effectiveness in:

- preventing exposure to asbestos fibres
- controlling access to asbestos
- highlighting the need for action to maintain or remove ACM, and
- maintaining the accuracy of the ASMP.

Details of any mitigating actions must be recorded in the Asbestos Register (Refer Table 3.

6.3 Key Personnel

This section outlines the responsibilities of all persons involved in the safe management of ACM.

1. Building manager

Name:	
Contact details:	
Responsibilities:	*E.g. provision of information*

2. Occupational Health and Safety Representative

Name:	
Contact details:	
Responsibilities:	*E.g. keeping occupants informed of any changes to the status of ACM in the workplace*

3. Facilities Management (if applicable)

Name:	
Contact details:	
Responsibilities:	*E.g. arrange removal and repair works as required; maintaining the ASMP*

4. Other

Name:	
Contact details:	
Responsibilities:	

7 ASBESTOS REMOVAL WORKS

7.1 Management Responsibilities

Where it has been determined that ACM is to be removed, management or the client must ensure that a risk assessment is performed prior to the removal works, and that the removalist takes this risk assessment into account. This risk assessment must include the possibility of uncovering previously concealed ACM and ensuring concealed ACM is identified by a Class A Asbestos Assessor.

The client should provide a detailed scope of works for the Asbestos Removalist, including potential hazards, details about areas which may contain asbestos and arrangements for clearance inspections and air monitoring.

7.2 Removalist Responsibilities

Prior to the commencement of removal works, the licensed asbestos removal contractor must:

- provide a site-specific Asbestos Removal Control Plan (ARCP)
- ensure the removal is adequately supervised and carried out in a safe manner
- ensure all persons carrying out the removal are competent and trained for the type of work being carried out
- demonstrate that they have a health surveillance program in accordance with the requirements of NOHSC: 2002 (2005).

7.3 Licensing Requirements

All Asbestos Removalists in the ACT are licensed by the ACT Planning and Land Authority (ACTPLA).

As a minimum, the holder of an ACT Asbestos Licence (Class D) is required to demonstrate practical experience in the industry for at least three years and possess a full and complete understanding of the requirements of the:

- *Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC: 2018 (2005)]
- *Code of Practice for the Safe Removal of Asbestos* [NOHSC: 2002 (2005)]
- ACT Occupational Health & Safety Act 1989
- ACT WorkCover requirements

- ACT Dangerous Substances Act A2004-7.

ACTPLA specify requirements for authorising certifiers and builders as well as the respective requirements of ACT WorkCover and ACT NOWaste for the removal and transport of ACM.

7.4 Approval to Begin Asbestos Removal Works

i. All removal methods and procedures are required to be undertaken in accordance with NOHSC: 2002 (2005).

ii. Building management in conjunction with an Asbestos Assessor will inform the Asbestos Removalist of the Scope of Work.

iii. The Class A Asbestos Assessor will be required to provide a clearance certificate on satisfactory completion of the works.

7.5 Work in Areas Containing Asbestos – Trades Personnel

Prior to commencement of works the following undertakings, procedures and awareness must be observed:

i. **Work must not proceed under any circumstance without first contacting the Building Manager or Authorised Person.**

ii. Refer to this ASMP (including amendments) to determine if asbestos materials are likely to be encountered in the general work area. If no asbestos is located in the area of intended work, the area may be entered by all relevant personnel on an unrestricted basis.

iii. Work in areas where asbestos will or is likely to be disturbed will only be given to ACT licensed Asbestos Removalists and all access and works will be in accordance with the requirements of [NOHSC: 2002 (2005)].

7.6 Emergency Work in Areas Containing Asbestos

i. If emergency access is required, contact the Building Manager.

ii. If the Building Manager determines that asbestos is likely to be disturbed all works must be in accordance with the requirements of [NOHSC: 2002 (2005)] (i.e. a licensed Asbestos Removalists must be contacted to undertake any asbestos removal works).

iii. A Class A Asbestos Assessor will be required to provide a clearance

certificate on satisfactory completion of the works.

7.7 Monitoring Arrangements

To ensure control measures are effective, air monitoring should be performed whenever friable ACM is being removed from buildings. A Risk Assessment may also require that air monitoring is undertaken during or at the completion of the removal of Bonded ACM.

All air monitoring must be performed by a competent person accredited by NATA to perform air sampling for asbestos. Sampling should be performed in accordance with the '*Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003 (2005)].

It is the Asbestos Removalist's responsibility to ensure that the maximum fibre levels throughout asbestos removal and associated works do not equal or exceed the minimum practical detection limit of 0.01 fibres per millilitre of air (f/mL). The consequences of airborne fibre levels observed at or exceeding those specified below will result in the Class A Asbestos Assessor instructing the contractor to take the appropriate 'Control /Action' as listed below from [NOHSC: 2002 (2005)]:

Control Level (airborne asbestos fibres/mL)	**Control / Action**
< 0.01	Continue with control measures
≥ 0.01	Review control measures
≥ 0.02	Stop removal work and find the cause

7.8 Clearance Inspections Prior To Re-Occupation

Following removal work, a clearance inspection must be undertaken prior to re-occupation of an asbestos work area. This shall be conducted by a Class A Asbestos Assessor.

All barriers and warning signs should remain in place until the area has been cleared.

7.9 ACM removal/maintenance record

The Asbestos Register, Section 4.2, Table 3, is to be completed by the building manager after receiving appropriate clearance certification from a licensed Class A Asbestos Assessor.

The 'Work Performed' and 'Asbestos Control Measure' Tables on the following page are required to be completed by the building manager.

1. Work Performed

Company name	Contact details	Date of work + job no.	Scope of work

2. Asbestos Control Measures

Work performed	Air monitoring/ decontamination	Clearance certificate issued	Other

3. Additional Information

8 SAFE ASBESTOS REMOVAL PROCEDURES

Friable ACM:

The licensed Asbestos Removalist must provide a safe work method statement and an Asbestos Removal Control Plan (ARCP). However, an overview of basic requirements for removal of friable asbestos products is as follows:

i. Obtain approval from the Building Manager to begin asbestos removal works.

ii. Inform the building occupants of intended asbestos removal works.

iii. Re-locate all occupants in immediate area and adjacent areas.

iv. Rope or barricade the area adjacent to the removal area and place appropriate signage at the perimeter of the area for the removal of friable asbestos materials.

v. Set up the removal area with appropriate materials (plastic, tape etc.) and the decontamination area to facilitate effective control of airborne fibres that may be generated during the removal of the friable asbestos (i.e. negative air units and wet decontamination facilities would be required for this type of removal).

vi. Using protective clothing and a full face Power Air Purifying Respirator (PAPR) with a fitted P3 particulate filter (cartridge) respirator conforming to AS/NZS 1716:1994.

vii. The ACM must be kept moist with a water mist spray during the removal of the material except where an electrical hazard exists.

viii. Hand tools are preferred over power tools, and high-speed abrasive power tools should not be used. If low-speed power tools are used they should be fitted with local exhaust ventilation dust control. The ARCP must detail the proposed decontamination method when power tools are to be used within the removal area.

ix. Removed asbestos and other materials are to be packed into plastic bags or containers marked as asbestos waste.

x. Asbestos products must not be re-used.

xi. All surfaces within the removal area to be thoroughly vacuumed to remove any asbestos residue.

xii. All surfaces must be Polyvinyl Acetate (PVA) sprayed to seal any microscopic asbestos fibres or wet-wiped (oil/solvent or water-soaked rag) to remove asbestos fibres.

xiii. Remove all asbestos containing material and all asbestos contaminated material from site for disposal in the approved manner.

xiv. Obtain a visual Clearance Certificate from a Class A Asbestos Assessor.

Note: Air monitoring is required during the removal of friable ACM according to

specific removal locations. The locations and frequency of all air monitoring must be determined and performed by NATA accredited personnel (refer Section 7.7).

Bonded ACM

The licensed Asbestos Removalist must provide a safe work method statement and an ARCP. However, an overview of basic requirements for removal of bonded ACM is as follows:

i. Obtain approval from the Building Manager to begin asbestos removal works.

ii. Inform the building occupants of intended asbestos removal works.

iii. Re-locate all occupants in immediate and adjacent areas.

iv. Rope or barricade adjacent to the removal area and place appropriate signage at the perimeter.

v. Set up the removal and decontamination areas with appropriate materials (plastic, tape, etc.) to facilitate effective control of airborne fibres that may be generated during the removal of bonded ACM.

vi. Using protective clothing and a half face particulate filter (cartridge) respirator conforming to AS/NZS 1716:1994.

vii. Hand tools are preferred over power tools, and high-speed abrasive power tools should not be used. If low-speed power tools are used they should be fitted with local exhaust ventilation dust control. Asbestos cement sheeting should be wetted during removal where safe.

viii. Removed contaminated materials are to be packed into disposal crates or wrapped in plastic sheeting.

ix. Asbestos products must not be re-used.

x. All surfaces within the removal area to be thoroughly vacuumed to remove any asbestos residue.

xi. All surfaces must be Polyvinyl Acetate (PVA) sprayed (to seal any asbestos fibres) or wet-wiped (oil/solvent or water-soaked rag) (to remove asbestos fibres).

xii. Remove all asbestos containing material and all asbestos contaminated material from site for disposal in the approved manner.

xiii. Obtain a visual Clearance from a Class A Asbestos Assessor.

Note: Air monitoring *may* be required during the removal of bonded ACM. The locations and frequency of all air monitoring must be determined and performed by NATA accredited personnel (refer Section 7.7).

9 UPDATING THE ASMP

Where an ACM has been disturbed, removed, enclosed, encapsulated, sealed or its condition has deteriorated in the preceding 12 month period, the existing asbestos risk assessment will no longer be valid and the ASMP will need to be revised by a Class A Asbestos Assessor to reflect these changes.

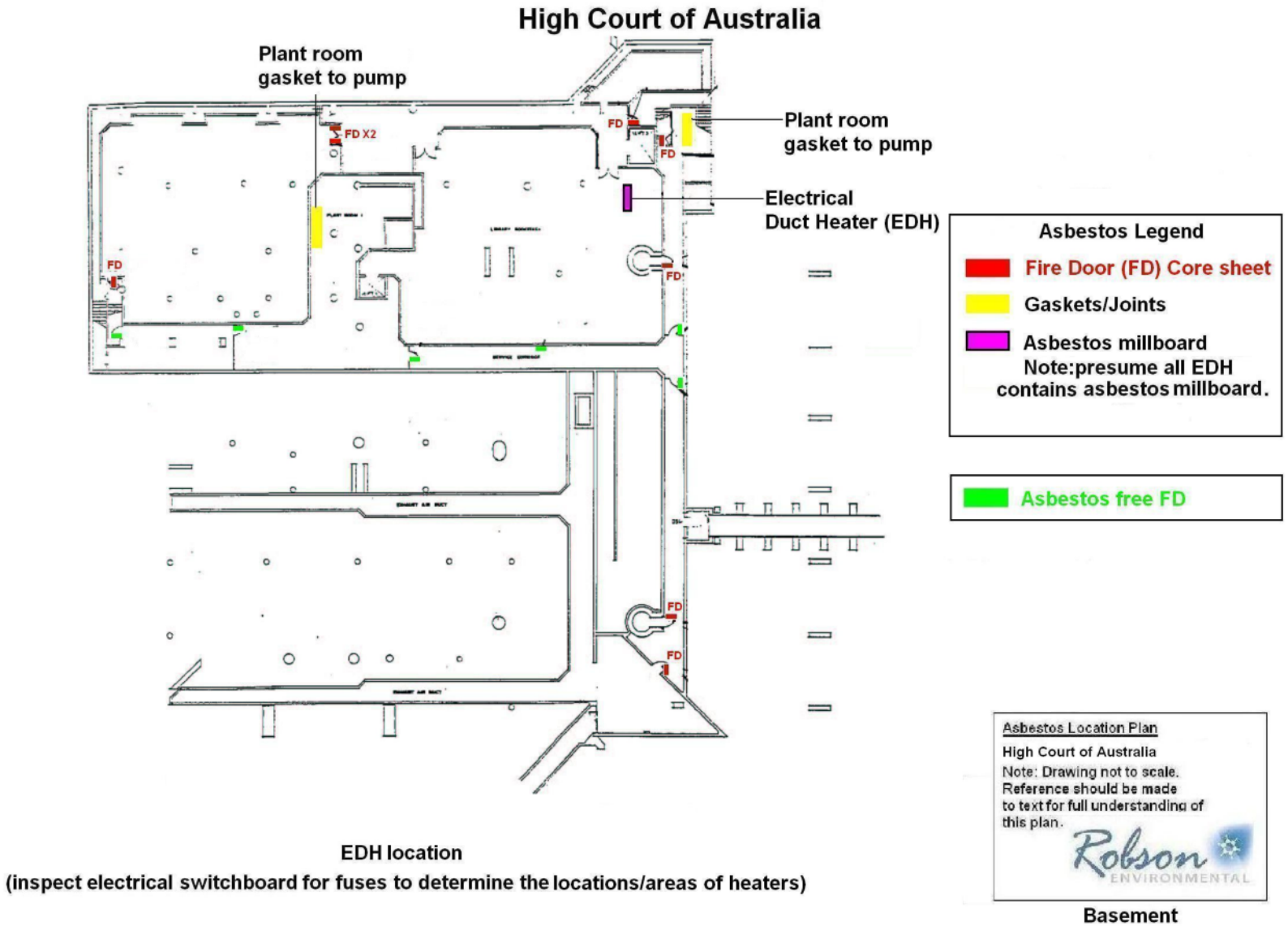
The reviews should critically assess all asbestos management procedures and their effectiveness in:

- preventing exposure to asbestos fibres
- controlling access to asbestos
- highlighting the need for action to maintain or remove ACM, and
- maintaining the accuracy of the ASMP.

10 APPENDICES

APPENDIX A – Laboratory Results

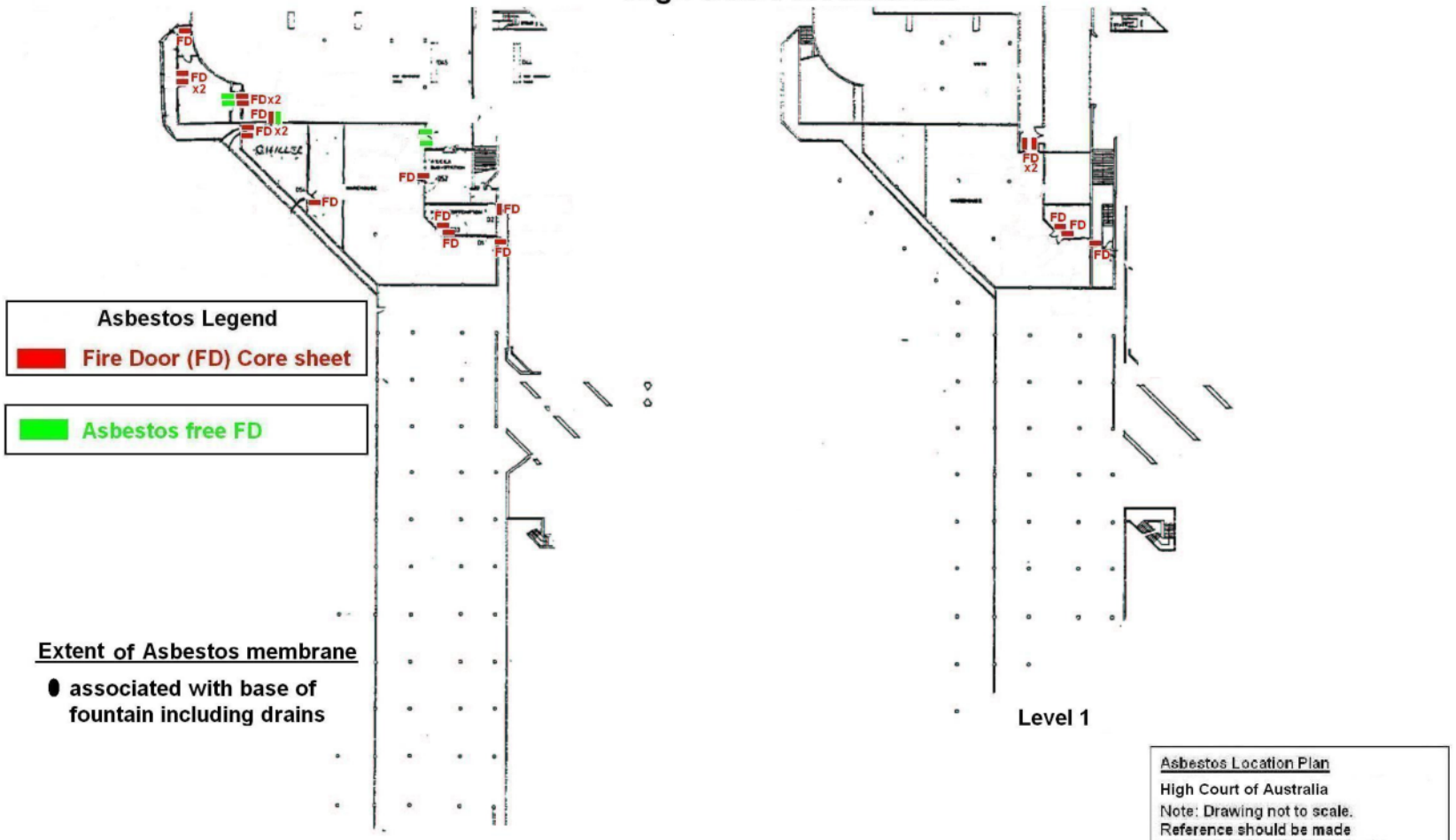
APPENDIX B – Plans



EDH location

(inspect electrical switchboard for fuses to determine the locations/areas of heaters)

High Court of Australia



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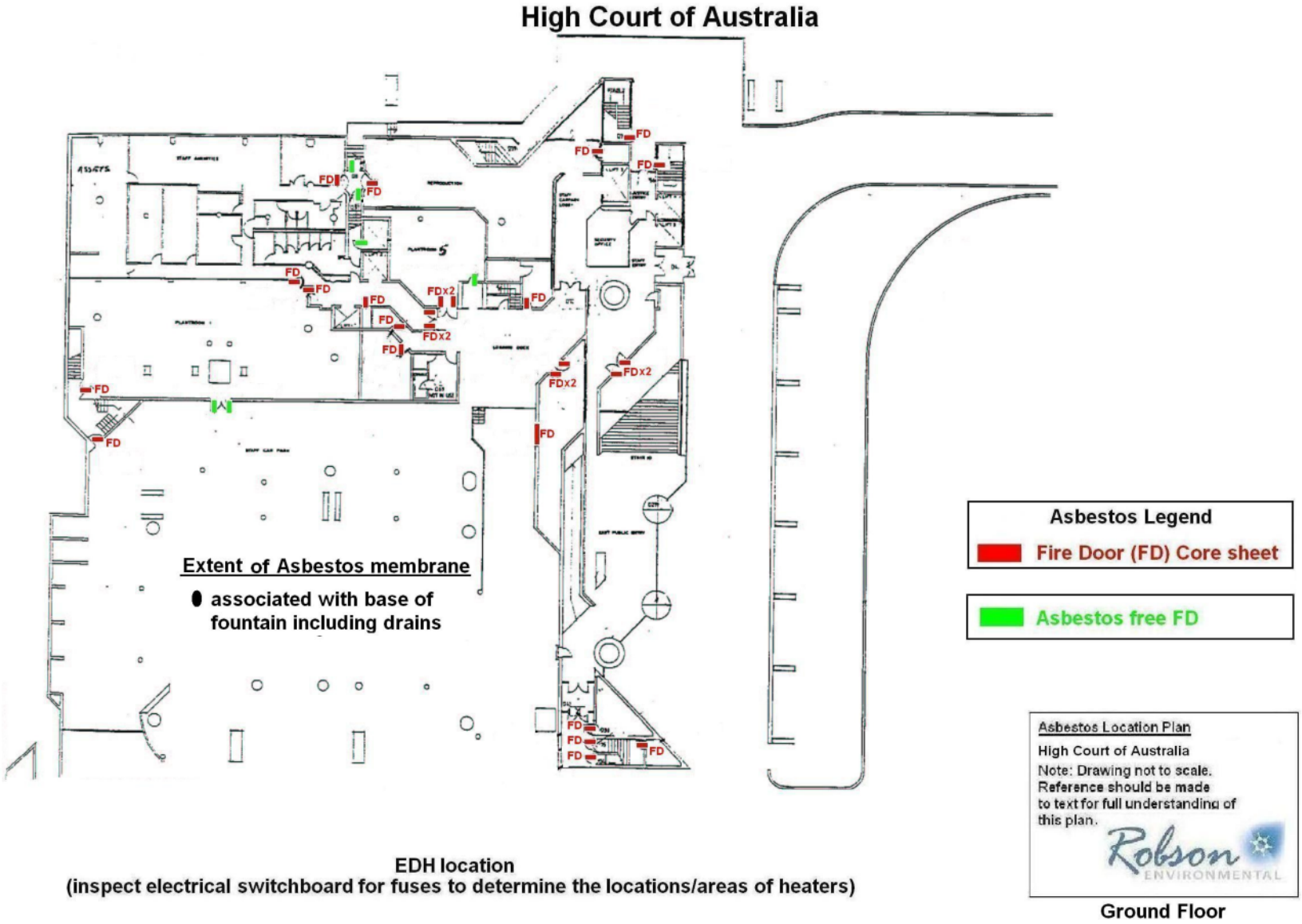
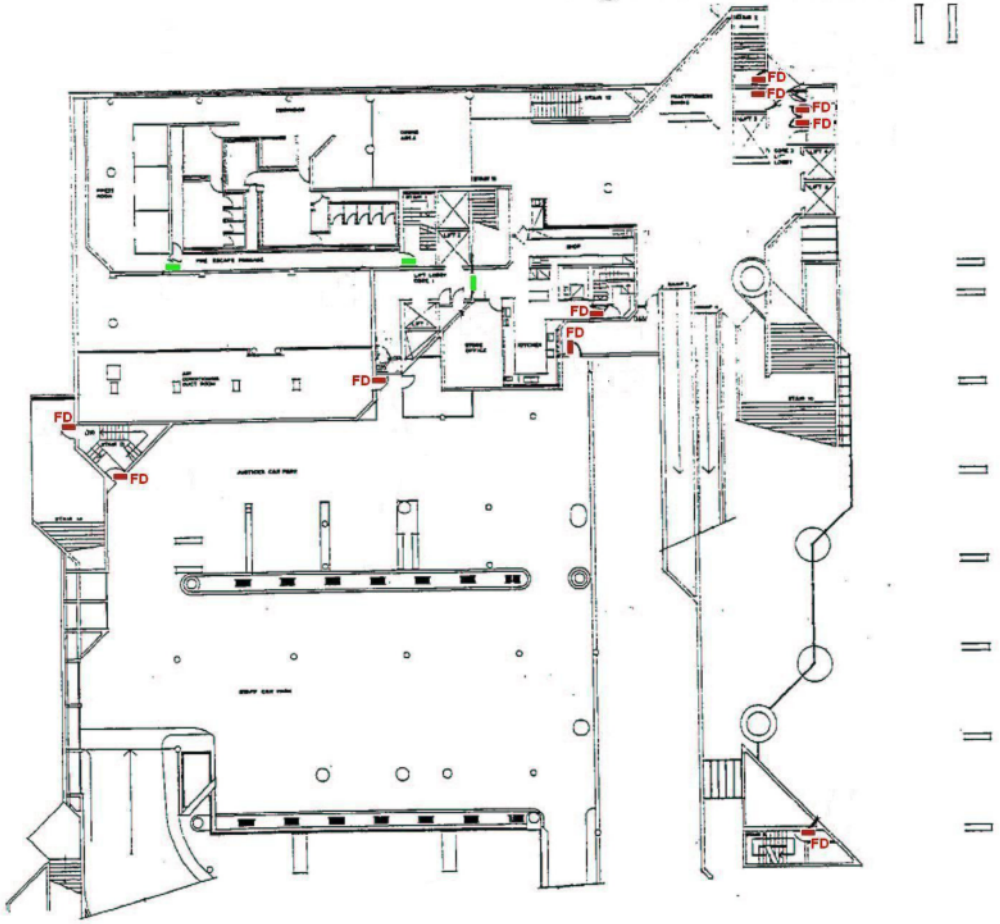

High Court of Australia
FD
FDx2
Extent of Asbestos membrane
associated with base of fountain including drains
Asbestos Legend
Fire Door (FD) Core sheet
Asbestos free FD
Asbestos Location Plan
High Court of Australia
Note: Drawing not to scale. Reference should be made to text for full understanding of this plan.
Robson ENVIRONMENTAL
EDH location
(inspect electrical switchboard for fuses to determine the locations/areas of heaters)
Ground Floor

High Court of Australia



Asbestos Legend

Fire Door (FD) Core sheet

Asbestos free FD

Asbestos Location Plan

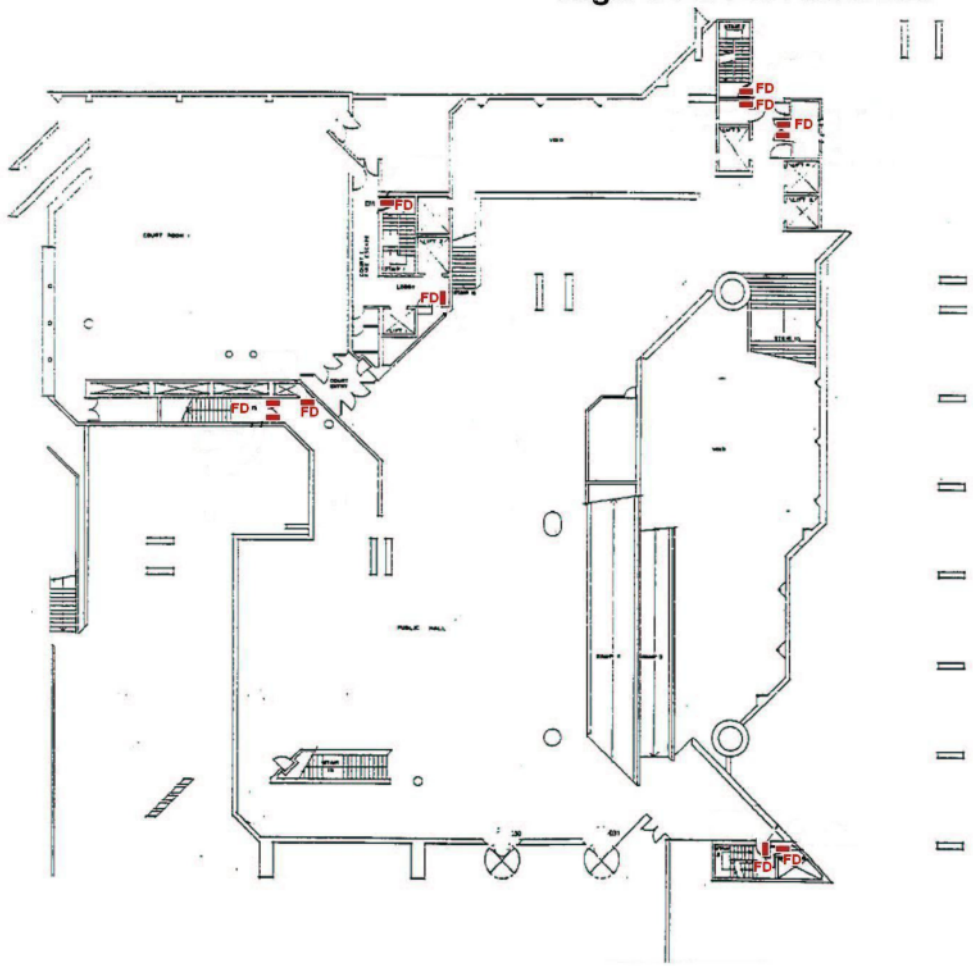
High Court of Australia

Note: Drawing not to scale. Reference should be made to text for full understanding of this plan.

EDH location
(inspect electrical switchboard for fuses to determine the locations/areas of heaters)

Level 1

High Court of Australia



Asbestos Legend

Fire Door (FD) Core sheet

Asbestos Location Plan

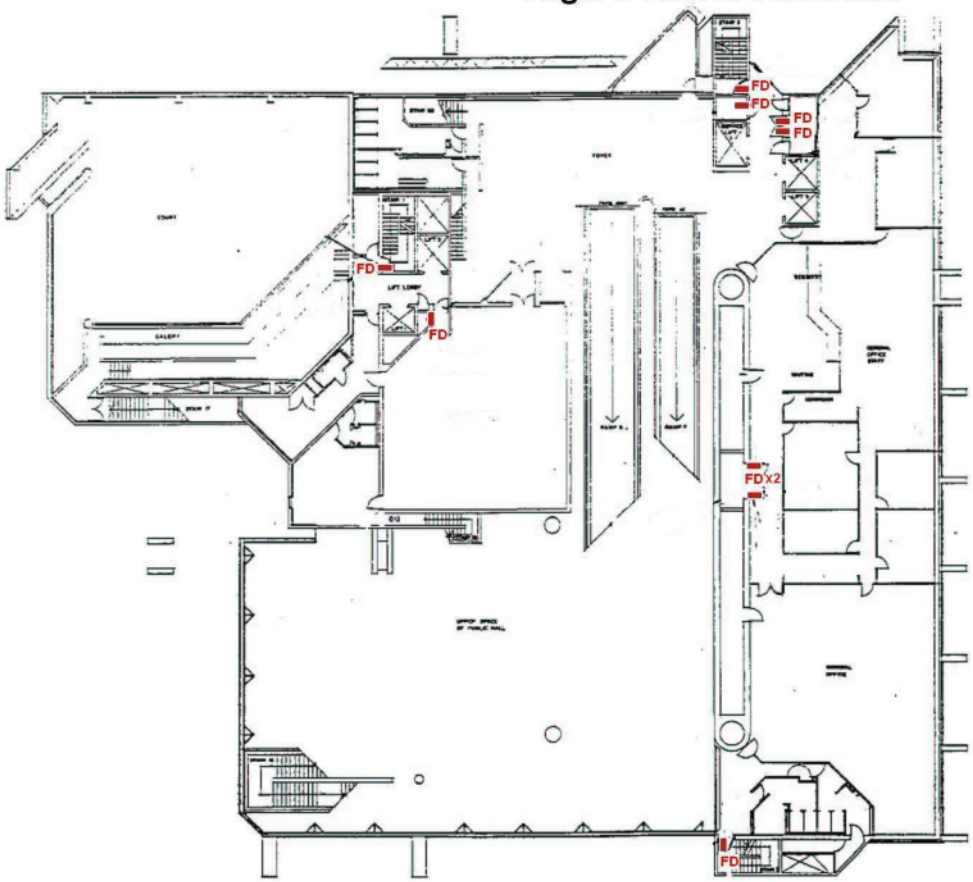
High Court of Australia

Note: Drawing not to scale. Reference should be made to text for full understanding of this plan.

EDH location
(inspect electrical switchboard for fuses to determine the locations/areas of heaters)

Level 2

High Court of Australia



Asbestos Legend

Fire Door (FD) Core sheet

Asbestos Location Plan

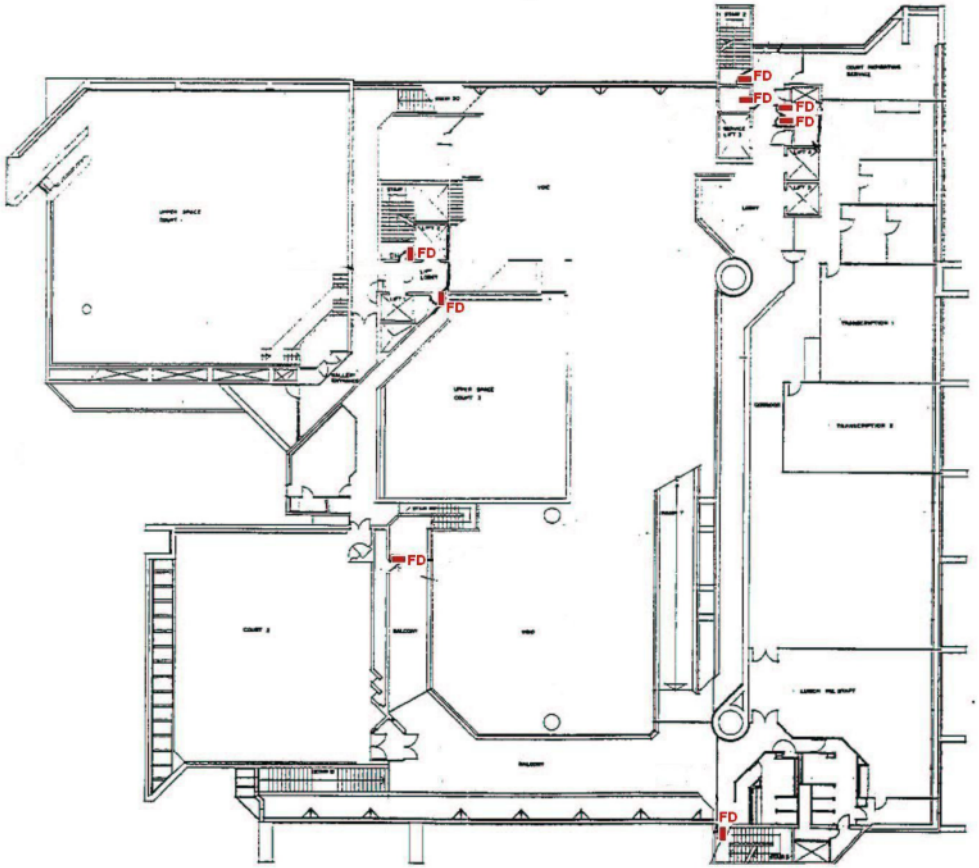
High Court of Australia

Note: Drawing not to scale. Reference should be made to text for full understanding of this plan.

EDH location
(inspect electrical switchboard for fuses to determine the locations/areas of heaters)

Level 3

High Court of Australia



Asbestos Legend

Fire Door (FD) Core sheet

Asbestos Location Plan

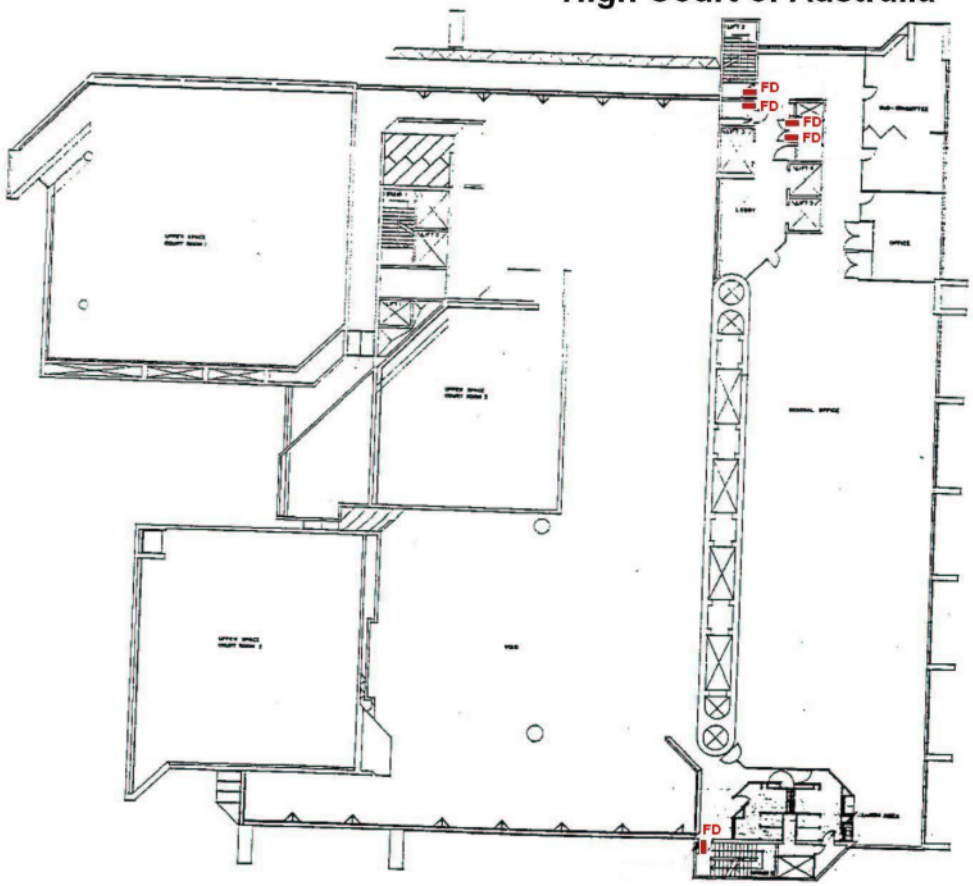
High Court of Australia

Note: Drawing not to scale. Reference should be made to text for full understanding of this plan.

EDH location
(inspect electrical switchboard for fuses to determine the locations/areas of heaters)

Level 4

High Court of Australia



Asbestos Legend

Fire Door (FD) Core sheet

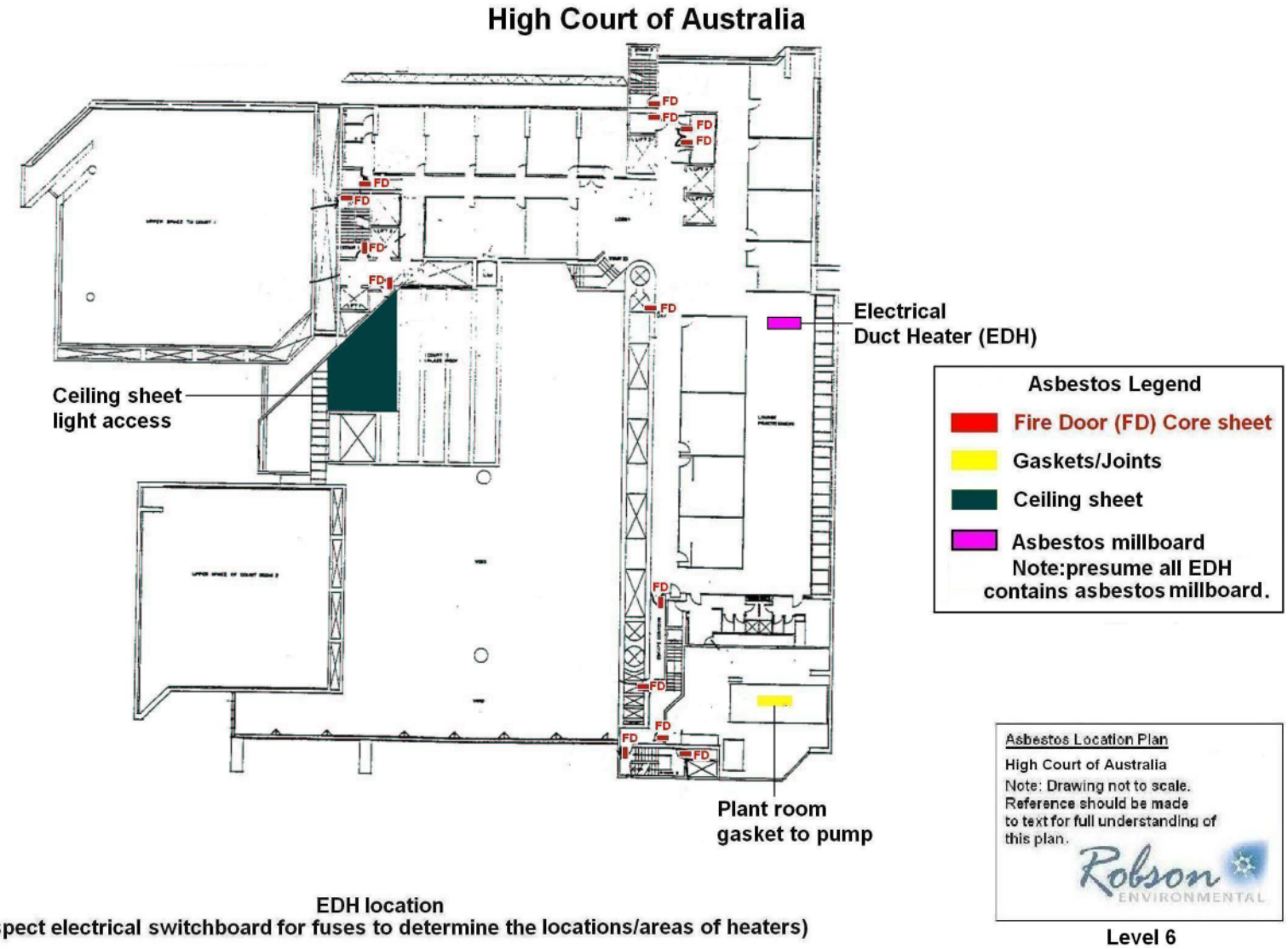
Asbestos Location Plan

High Court of Australia

Note: Drawing not to scale. Reference should be made to text for full understanding of this plan.

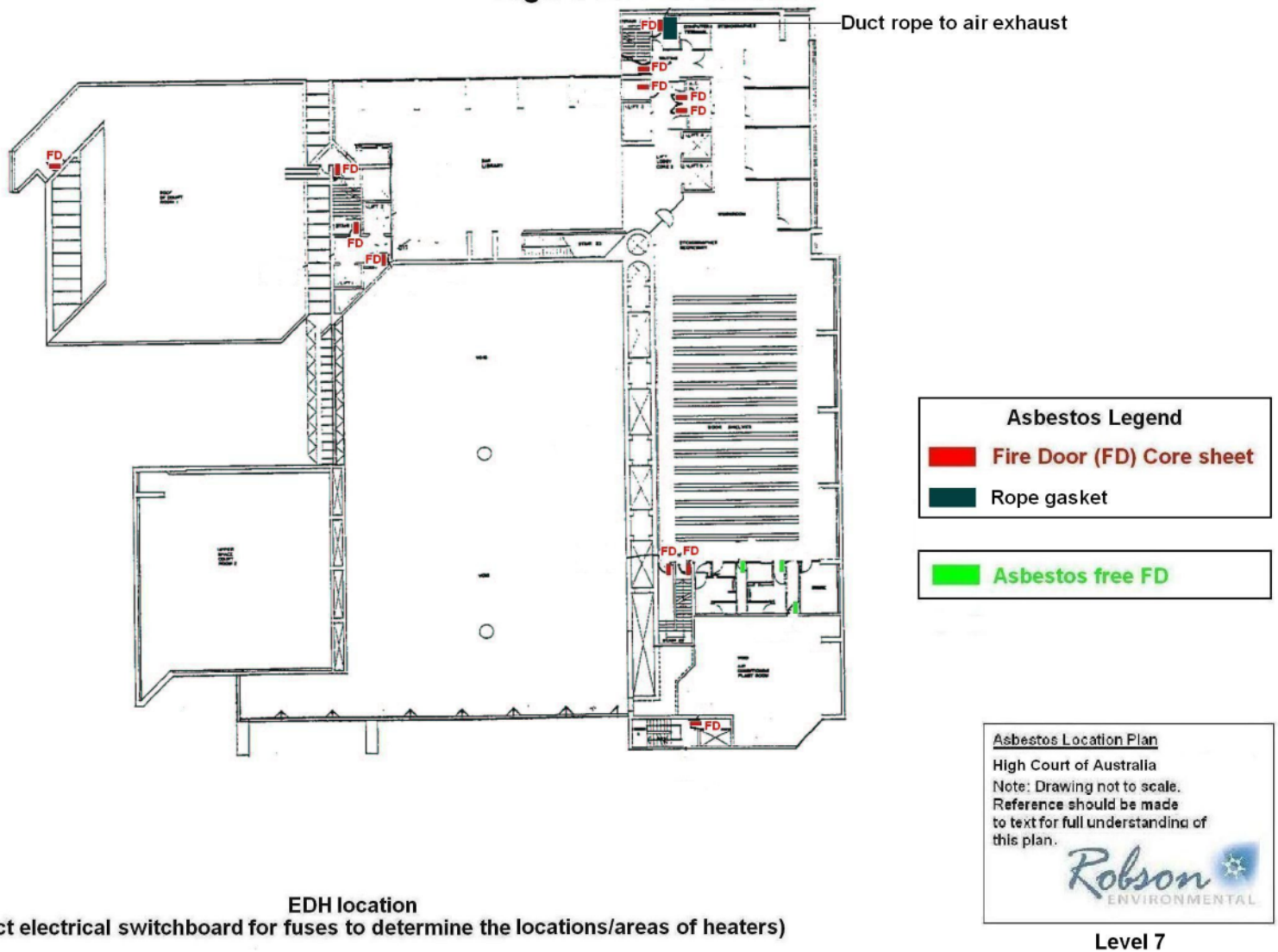
EDH location
(inspect electrical switchboard for fuses to determine the locations/areas of heaters)

Level 5



EDH location
(inspect electrical switchboard for fuses to determine the locations/areas of heaters)

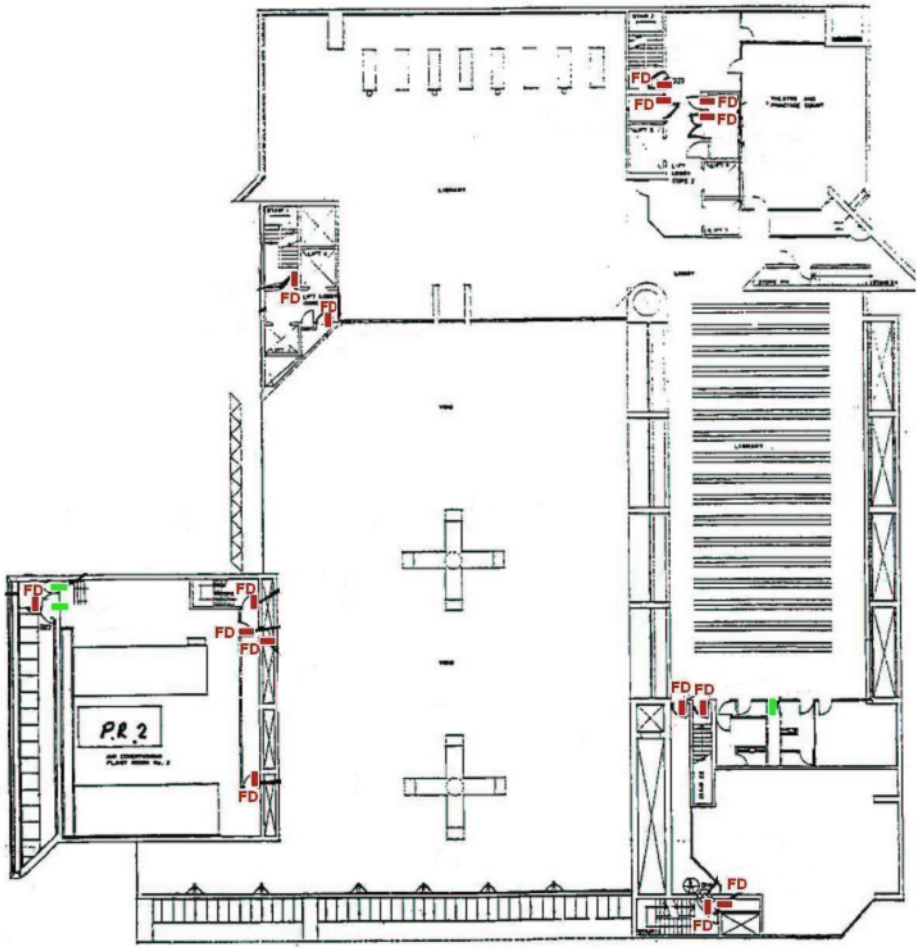
High Court of Australia



EDH location
(inspect electrical switchboard for fuses to determine the locations/areas of heaters)

Level 7

High Court of Australia



Asbestos Legend

Fire Door (FD) Core sheet

Asbestos free FD

Asbestos Location Plan

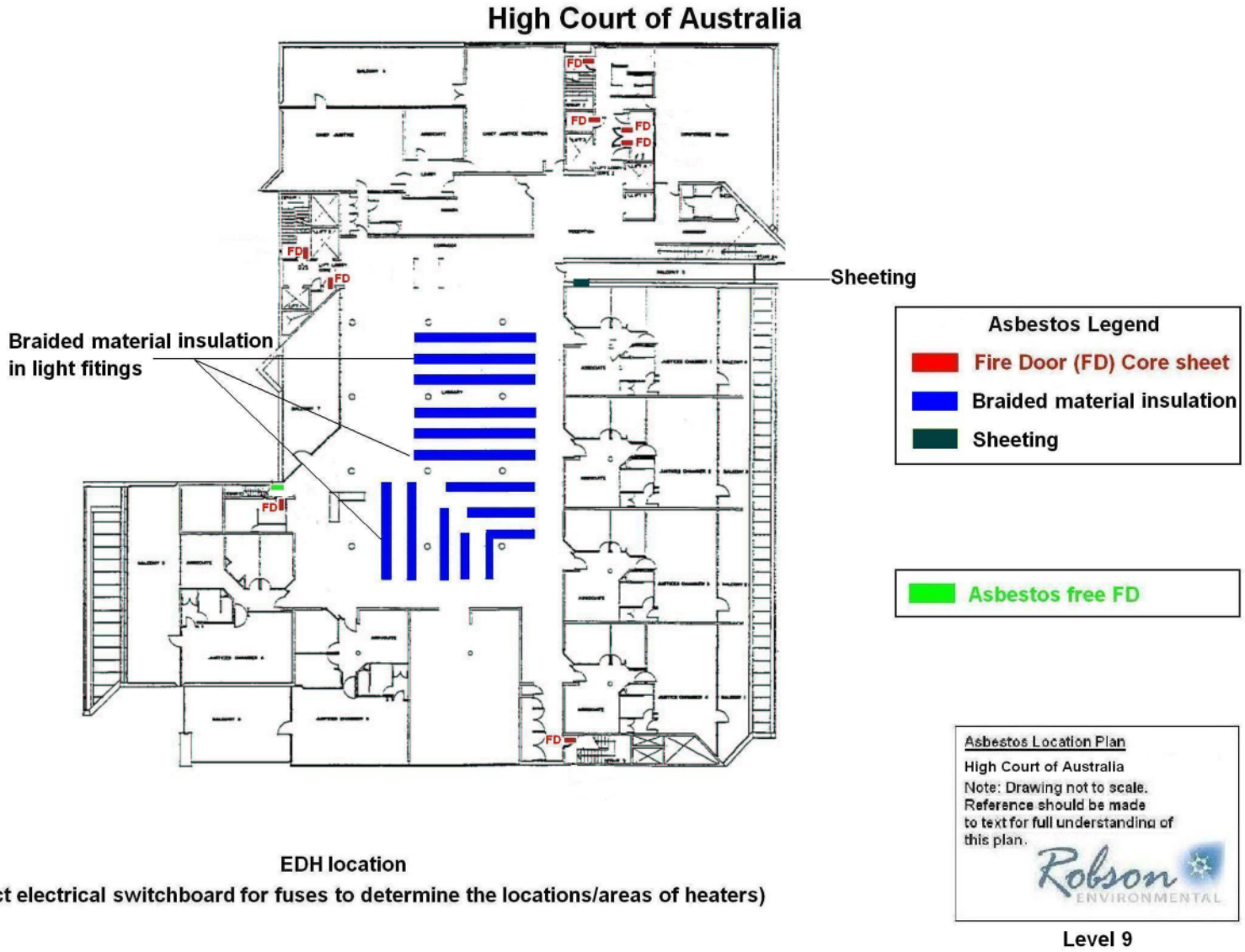
High Court of Australia

Note: Drawing not to scale. Reference should be made to text for full understanding of this plan.

Robson ENVIRONMENTAL

EDH location
(inspect electrical switchboard for fuses to determine the locations/areas of heaters)

Level 8



EDH location

(inspect electrical switchboard for fuses to determine the locations/areas of heaters)

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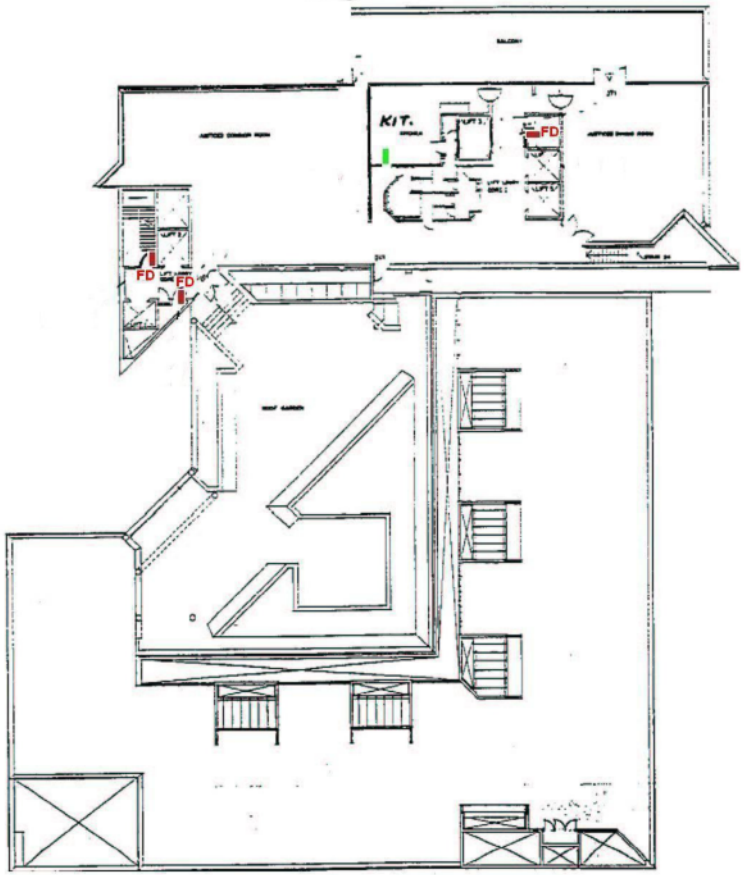


Asbestos Legend

Fire Door (FD) Core sheet

Asbestos free FD

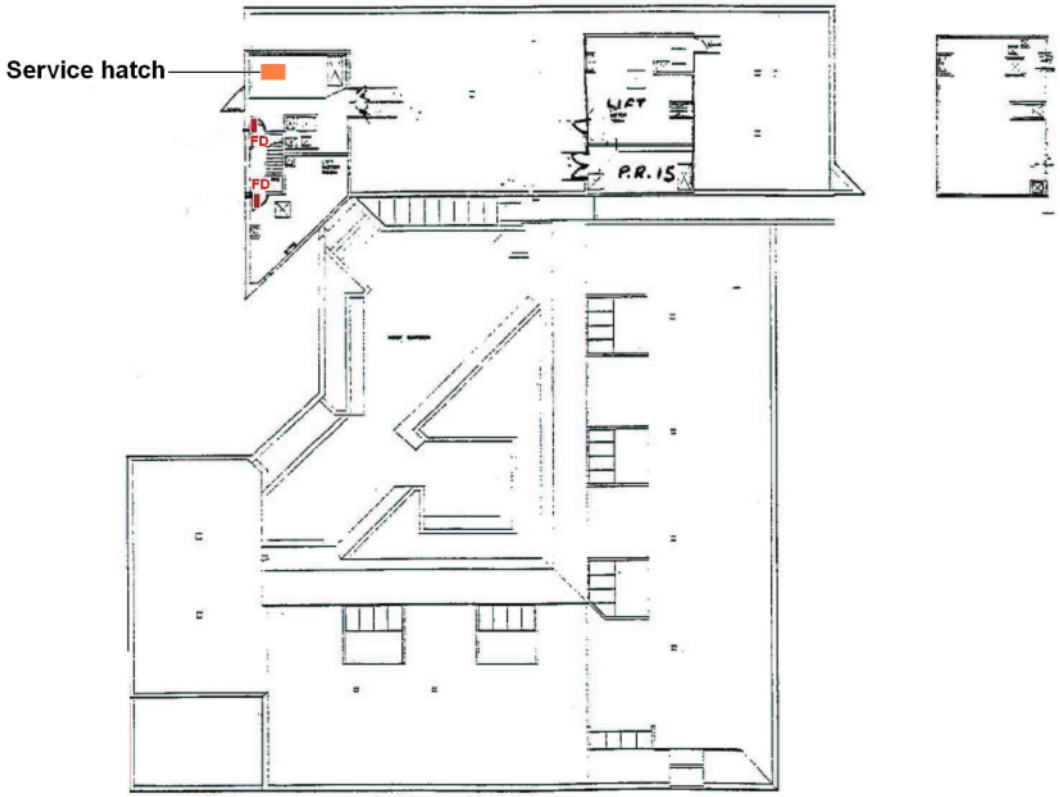
Asbestos Location Plan
High Court of Australia
Note: Drawing not to scale.
Reference should be made
to text for full understanding of
this plan.

EDH location

(inspect electrical switchboard for fuses to determine the locations/areas of heaters)

Level 10

High Court of Australia



Asbestos Legend

- Fire Door (FD) Core sheet
- Service hatch

Asbestos Location Plan
High Court of Australia
Note: Drawing not to scale.
Reference should be made to text for full understanding of this plan.

EDH location
(inspect electrical switchboard for fuses to determine the locations/areas of heaters)

Level 11

APPENDIX C – Glossary

ACM	*See asbestos containing material*
Air monitoring[1]	Air Monitoring means airborne asbestos fibre sampling to assist in assessing exposures and the effectiveness of control measures. Air monitoring includes exposure monitoring, control monitoring and clearance monitoring. *Note: Air monitoring should be undertaken in accordance with the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [NOHSC: 2003 (2005)]*
Airborne asbestos fibres[2]	Any fibres of asbestos small enough to be made airborne. For the purposes of monitoring airborne asbestos fibres, only respirable asbestos fibres (those less than 3µm wide, more than 5µm long and with a length to width ratio of more than 3 to 1) are counted.
Amosite	Grey or brown asbestos
AMP	*See asbestos survey and management plan*
AR	*See Asbestos Register*
Asbestos Containing Material (ACM)	Any material, object, product or debris that contains asbestos.
Asbestos Register	Inventory of ACM by type, form, location, risk and required action.
Asbestos Removalist[2]	A competent person who performs asbestos removal work. *Note: an asbestos removal licence is required in all State and Territory jurisdictions for friable ACM.*
Asbestos Survey and Management Plan (ASMP)	Document covering the identification, risk evaluation, control and management of identified asbestos hazards, developed in accordance with NOHSC: 2018(2005).
Asbestos[2]	The fibrous form of mineral silicates belonging to the serpentine and amphibole groups of rock-forming minerals, including actinolite, amosite, anthrophyllite, chrysotile, crocidolite, tremolite or any mixture containing one or more of the mineral silicates belonging to the serpentine and amphibole groups.
Asbestos–cement (AC)[2]	Products consisting of sand aggregate and cement reinforced with asbestos fibres (E.g. asbestos cement pipes and flat or corrugated asbestos cement sheets).
ASCC	*See Australian Safety and Compensation Council*
Australian Safety and Compensation Council	A council that provides a national forum for State and Territory governments, employers and employees to consult and participate in the development of policies relating to OHS and workers' compensation matters, and promote national consistency in the OHS and workers' compensation regulatory framework.
Bonded asbestos	ACM that is bonded into a stable matrix and cannot be reduced to a dust by hand pressure.
Chrysotile	White asbestos

Clearance inspection[2]	An inspection, carried out by a competent person, to verify that an asbestos work area is safe to be returned to normal use after work involving the disturbance of ACM has taken place. A clearance inspection must include a visual inspection, and may also include clearance monitoring and/or settled dust sampling.
Clearance monitoring[2]	Air monitoring using static or positional samples to measure the level of airborne asbestos fibres in an area following work on ACM. An area is 'cleared' when the level of airborne asbestos fibres is measured as being below 0.01 fibres/mL.
Competent person[2]	A person possessing adequate qualifications, such as suitable training and sufficient knowledge, experience and skill, for the safe performance of the specific work.
Control monitoring[2]	Air monitoring, using static or positional to measure the level of airborne asbestos fibres in an area during work on ACM. Control monitoring is designed to assist in assessing the effectiveness of control measures. Its results are not representative of actual occupational exposures, and should not be used for that purpose.
Crocidolite	Blue asbestos
Exposure monitoring	Air monitoring in the breathing zone to determine a person's likely exposure to a hazardous substance. Exposure monitoring is designed to reliably estimate the person's exposure, so that it may be compared with the National Exposure Standard.
Friable asbestos[2]	Asbestos containing material which when dry is or may become crumbled, pulverised or reduced to powder by hand pressure.
In situ[2]	Fixed or installed in its original position, not having been removed.
Inaccessible areas	Areas which are difficult to access, such as wall cavities and the interiors of plant and equipment.
Licensed Class A Asbestos Assessor	Person who is qualified to undertake the identification and assessment of asbestos and provide recommendations on its safe management.
Licensed Class B Asbestos Assessor	Person who is qualified to undertake the identification of asbestos.
Membrane	A flexible or semi-flexible material, which functions as the waterproofing component in a roofing or waterproofing assembly.
NATA	National Association of Testing Authorities (NATA)
NOHSC *(now ASCC)*	National Occupational Health and Safety Commission (*now known as Australian Safety and Compensation Council)*
PCBs	Polychlorinated Biphenyls
SWMS	Safe Work Method Statement
UST	Underground Storage Tank (fuel)

1. Definition sourced from: NOHSC: 2018(2005).
2. Definition sourced from: NOHSC: 2002(2005).