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Hazardous Materials Building Survey prior to Building Refurbishment at:

ANZAC Park West and Cafeteria

July 2004

Client: Gutteridge Haskins & Davey Pty Ltd
59 Cameron Avenue
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1 EXECUTIVE SUMMARY

Robson Laboratories Pty Ltd was contracted by Gutteridge Haskins & Davey Pty Ltd to conduct a Hazardous Materials Survey of ANZAC Park West and Cafeteria.

The aim was to assess the extent and location of:

- Asbestos building/construction materials;
- Lead-base paint;
- Synthetic Mineral Fibre (SMF);and
- PCBs to fluorescent light capacitors;

The survey was conducted from the 14 - 23 July 2004 and incorporates the findings of the preliminary Asbestos Materials Survey undertaken in January/ February 2004.

1.1 RESULTS

Table 1: Hazardous Material Summary Table

Hazardous Material	Location and details	Pages	Comments
Asbestos	**Cafeteria** **Friable:** Pipe Lagging **Non Friable:** - Exterior Caulking - Electrical Switchboard - Mastic **ANZAC Park West** **Friable: Ceiling and Pillar Limpet Spray** **Non Friable:** - Cement Sheeting - Electrical Switchboard - Arc shields, Brake Pads, rope on cables:generator-lift motor room - Fire door core - Pipe Flange Joints - Flexible Join to ducts - Cement Pipes - **Cement Pipe Debris**	11	**Remove Pipe Lagging Limpet Spray and Cement Pipe Debris as soon as Practicable** All Remaining materials are in good condition but must be removed if refurbishment works is likely to disturb these materials Label and maintain Asbestos material that are to remain in situ
Lead Paints	Lead and 1st Schedule Paints were identified in the Cafeteria and 1st Schedule Paints were identified in ANZAC Park West. These paints were found to be in a poor to fair condition. However due to the low volume of use the paint would not be expected to cause significant lead contamination.	25	These paints should be stabilized or removed to prevent personal exposure or lead contamination of the environment. If these paints are to remain it is recommended the surface is stabilised or monitored regularly for deterioration.

Hazardous Material	Location and details	Pages	Comments
Synthetic Mineral Fibre (SMF)	**Cafeteria** Ceiling and Hotwater Pipe insulation **ANZAC Park West** Within square plaster ceiling tile Between perimeter and some interior walls Insulation to Pipe Work and Plant Equipment	30	Good condition If these materials are to be disturbed during refurbishment appropriate PPE should be worn
PCB Capacitors	PCB Capacitors of Various Types identified in the Cafeteria and in ANZAC Park West	32	Good Condition If these materials are to be removed during refurbishment appropriate PPE should be worn

1.2 EXCLUSIONS

The survey was a semi – destructive in nature and sampling was therefore limited to accessible materials. No determination can be made regarding the possibility of concealed asbestos in the following areas without gaining access to allow for inspections:

- **Electrical duct heater units – asbestos millboard lining ducting adjacent heater elements**
- **Walls and cavities – asbestos insulation**
- **Vinyl floor tiles & floor covering – beneath carpets**
- **Sub-ground floor slab – asbestos cement sheet formwork and electrical cable/water pipe duct**

It is possible that asbestos insulation, fibro sheet formwork, electrical cable or water pipe duct may be concealed behind walls or hidden areas, as part of or under the floor slab and subterranean areas. It should similarly be assumed that the insulation lining the inner surface of the airconditioning ducting adjacent the heater elements contains asbestos.

Care should be taken when demolishing or excavating in these areas to determine the existence or otherwise of asbestos. If asbestos is located all demolition or excavation work must cease and a licensed asbestos removalist contacted immediately to remove this material prior to completion of the demolition.

2 INTRODUCTION & SCOPE

Robson Laboratories Pty Ltd was contracted by Gutteridge Haskins & Davey Pty Ltd to conduct a Hazardous Materials Survey of ANZAC Park West and Cafeteria.

The aim was to assess the extent and location of:

- Asbestos building/construction materials;
- Lead-base paint;
- Synthetic Mineral Fibre (SMF); and
- PCBs to fluorescent light capacitors.

Materials visually consistent with that which is positively identified as consisting of or containing asbestos, SMF, lead-base paint or PCBs in similar locations were to be considered as being identical.

The extent and likelihood of hazardous materials as described above are to be documented with reference to Commonwealth and State regulations and guidelines, including recommendations for the remediation or control of hazardous substances.

Note: The purpose of this report is to compile a Register of Hazardous Building Materials. It may be used as a general guide for asbestos removal planning, for stakeholder management of hazardous materials, or as reference for maintenance and sub-contractors. *This Report must not be used as a Specification for asbestos removal*. Prior to removal works, a destructive survey must be carried out in the areas undergoing refurbishment to determine to extent of concealed asbestos.

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

- difficulty in gaining access to all areas, particularly given the semi-destructive nature of the survey;
- the normal construction practice of 'building in' some of the works;
- the random application of asbestos and other hazardous materials

Prior to demolition the contractor(s) carrying out the work must fully acquaint themselves with the extent of the hazardous material/s, particularly in those areas which may require full or partial demolition in order to determine the exact extent and location of such material.

2.1 Code Compliance Determination

All recommendations and Code Compliance are determined with reference to:-

- Worksafe Australia, Sydney 1988, *Asbestos: Code of Practice and Guidance Notes*.
- ACT WorkCover;
- ACT BEPCON Requirements & Regulations.
- Worksafe Australia, Sydney 1990, *Synthetic Mineral Fibres: National Standard and National Code of Practice.*
- Worksafe Australia, *Technical Report on Synthetic Mineral Fibres and Guidance Note on the Membrane Filter Method for the Estimation of Airborne Synthetic Mineral Fibres*, June 1989.
- Standards Australia, AS 4361.2 - 1998 *Guide to lead paint management, Part 2: Residential and Commercial Buildings,* Homebush, NSW.
- ANZECC 1997, *Identification of PCB-Containing Capacitors; An information Booklet for Electricians and Electrical Contractors.*

and are referred to in this report as The Code.

3 METHOD

The specified premises were visually inspected from the 14 - 23 July 2004 and incorporates the findings of the preliminary Asbestos Materials Survey undertaken in January/ February 2004. The Determination of hazardous materials internal and external to the building was undertaken in accordance with the following methodologies:

Asbestos: The nature of building materials found was assessed visually and through sampling. Samples suspected of containing asbestos were verified by NATA (National Association of Testing Authorities) accredited laboratory analysis.

Lead(Pb)-base paints: paint samples were taken as scrapings from different surfaces to assess the majority of paint types. The percentage lead composition of these samples was established by NATA accredited analysis.

SMF: The extent and location of Synthetic Mineral Fibre (SMF) in wall cavities and ceiling spaces if present was documented.

PCBs: Capacitors to fluorescent lights were compared to a list of capacitors known to contain PCB's. It has been assumed that capacitors known to contain PCBs in one location *may* reoccur in similar fluorescent lights.

4 ASBESTOS SURVEY - EXCLUSIONS

The survey was a semi – destructive in nature and sampling was therefore limited to accessible materials. No determination can be made regarding the possibility of concealed asbestos in the following areas without gaining access to allow for inspections:

- **Electrical duct heater units – asbestos millboard lining ducting adjacent heater elements**
- **Walls and cavities – asbestos insulation**
- **Vinyl floor tiles & floor covering – beneath carpets**
- **Sub-ground floor slab – asbestos cement sheet formwork and electrical cable/water pipe duct**

It is possible that asbestos insulation, fibro sheet formwork, electrical cable or water pipe duct may be concealed behind walls or hidden areas, as part of or under the floor slab and subterranean areas. It should similarly be assumed that the insulation lining the inner surface of the airconditioning ducting adjacent the heater elements contains asbestos.

Care should be taken when demolishing or excavating in these areas to determine the existence or otherwise of asbestos. If asbestos is located all demolition or excavation work must cease and a licensed asbestos removalist contacted immediately to remove this material prior to completion of the demolition.

5 ASBESTOS REMOVAL

Any asbestos removal works and disposal is to be carried out in accordance with *Worksafe Australia: Asbestos Code of Practice and Guidance Notes 1988,* the requirements of the ACT WorkCover and ACT BEPCON.

One (1) class of licence may be applied for to ACT WorkCover.

- **Class D Licence**: allows the holder to remove friable asbestos-containing material and non-friable asbestos-containing material as specified in the licence.

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 qualified Industrial Hygienist.

6 ASBESTOS MATERIALS

6.1 Results

Table 2: Mineralogical analysis of samples for asbestos using polarising light microscopy

Sample No.	Material Type & Location	Composition
Preliminary Asbestos Survey Results – March 2004		
Anzac Park West – Block 1, 2nd Floor		
2070 – 13	Electrical cable sheath	No asbestos detected
Anzac Park West – Block 1, Lower Ground		
2070 – 14	Flexible Join – Ventilation Unit 1 air intake	**Chrysotile asbestos**
Anzac Park West – Block 1 Roof Plant Room		
2070 – 19	Insulation – Ceiling Spray	**Chrysotile asbestos**
2070 – 20	Lift Door Core – Level 5	Insufficient Sample
2070 – 21	Brake Pad – Lift Motor Room	**Chrysotile asbestos**
2070 – 22	Sheeting – Control backing sheet	**Chrysotile asbestos**
2070 – 23	Flex Join – Fan in Plant water tank room	**Chrysotile asbestos**
2070 – 24	Insulation – Perimeter Pillars	**Chrysotile asbestos**
2070 – 25	Mastic – on cooling tower	no asbestos detected
2070 – 26	Insulation – Generator cables in Lift Motor Room	**Chrysotile asbestos**
2070 – 27	Fire Door Core – Level 5 to Plant Rm	**Chrysotile asbestos**
Asbestos Survey Results – July 2004		
2199-1	Expansion Joint Caulking - Cafeteria Verandah East	**Chrysotile asbestos**
2199-2	Vinyl Floor Tile – Block 1 5th Floor	no asbestos detected
2199-3	Fire Door Core – Block 1 5th Floor North Stairwell	**Chrysotile & Amosite asbestos**
2199-4	Mastic –Block 1 5th Floor Duct in riser adjacent Male Toilet	**Chrysotile asbestos**

Sample No.	Material Type & Location	Composition
2199-5	Vinyl Floor Tile – Block 1 5th Floor South WC	no asbestos detected
2199-6	Fire Door Core – Block 1 4th Floor North Stairwell	**Chrysotile & Amosite asbestos**
2199-7	Sheeting – Block 1 2nd Floor Female WC	**Chrysotile asbestos**
2199-8	Sheeting – Block 1 3rd Floor Staff WC	**Chrysotile asbestos**
2199-9	Sheeting – Block 1 Ground Floor Disabled Toilet	no asbestos detected
2199-10	Sheeting – Block 1 Ground Floor Female WC	**Chrysotile asbestos**
2199-11	Window Caulking – Block 1 Ground Floor Entrance Window	**Chrysotile asbestos**
2199-12	Sheeting – Block 2 4th Floor Male WC	**Chrysotile asbestos**
2199-13	Sheeting - Block 2 3rd Floor behind lift panel	**Chrysotile & Amosite asbestos**
2199-14	Vinyl Floor Tile – Cafeteria Office North	no asbestos detected
2199-15	Backing Board - Cafeteria Distribution Board North	**Chrysotile asbestos**
2199-16	Pipe Lagging - Cafeteria Hot Water Tank Plant Room	**Amosite asbestos**
2199-17	Mastic - Cafeteria Roof – Air Handling Unit Plant Room	**Chrysotile asbestos**
2199-18	Mastic – Block 2 – Plant Room	no asbestos detected
2199-19	Decorative Spray – Breeze way ceiling to Blocks 1 and 2	no asbestos detected

- It should be noted that the above samples were a representative selection of materials suspected of containing asbestos.
- Materials were not sampled from all areas due to the consistency of the materials used throughout the buildings.
- On-site inspections and an examination of the accompanying plan within this report should be undertaken prior to the commencement of any asbestos removal programme.

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

6.2 Asbestos Summary

Materials containing asbestos have been found in the following locations

Table 3: Summary of asbestos materials found at ANZAC Park West and Cafeteria

ANZAC PARK WEST			
Asbestos Material	**Asbestos type(s) & Sample No.**	**Material Location**	**Comments**
Asbestos cement sheeting	Chrysotile Amosite Crocidolite As per 2070 –12 Chrysotile Amosite 2199 –13 Chrysotile 2199 –7 Chrysotile 2199 –12	- Blocks 1 & 2 - roof plant perimeter sheeting. - Block 1 - roof plant – Tylex Sheeting in WC. - Blocks 1 & 2 – panel behind lift indication board all levels - Block 1 Levels Ground to 5th Floor – Female Toilet: Behind tile wall to riser; Level 3 Staff Toilet Walls(refurbished section) - Block 2 Levels Lower Ground to 4th Floor – Male Toilet Entry: wall to riser.	Leave, label and maintain
Asbestos ceiling and pillar limpet spray	Chrysotile 2070 -19, 24	- Block 1 and 2 – roof plant room ceiling and pillars and Lift Motor Room ceiling.	To be removed by an ACT licensed asbestos removalist.

ANZAC PARK WEST			
Asbestos Material	**Asbestos type(s) & Sample No.**	**Material Location**	**Comments**
Electrical switchboard backing sheet	Chrysotile as per 2070 - 7	- Block 1 – Lwr Grnd Fl. Fan Rm opp. Plant Room with boilers **(1).** - Block 2 – Lwr Grnd Fl. East Plant Ventilation Unit 1 **(1).** - Block 2 – Lwr Grnd Fl. Air Handling Unit Rm East End, adj lifts **(1).** - Block 2 – Lwr Grnd Fl. High velocity air duct room 1 **(1).** - Block 2 – Roof Plant room – Distribution Board **(2).** - Block 1 – Roof Plant Room – to AC Control panel **(1).** - Block 1 – Roof Plant Room – to tank room **(1).** - Block 1 – Lift Motor Room control backing sheet **(3).**	Leave, label and maintain
Arc Shields, Brake Pads, rope on generator cables	Chrysotile 2070-21, 26	- Block 1 – Lift Motor Room - Block 2 Lift motor (assumed positive)	Leave, label and maintain

ANZAC PARK WEST			
Asbestos Material	**Asbestos type(s) & Sample No.**	**Material Location**	**Comments**
Fire Door core	Chrysotile 2070-27 Chrysotile 2199-3 and 6 Chrysotile As per 2199-3 and 6	- Block 1 – Basement to plant rooms **(13).** - Block 2 – Lwr Grnd Fl. to plant rooms and stairwell to basement **(8).** - Block 1 – Roof plant room and stairwell to Level 5 **(2).** - Block 2 – Roof plant room east and west **(2).** - Block 1 – Lift Motor Room floor access hatch (assumed positive). - Block 1 Level 5 to Ground Floor – Stairwells North and South **(12)** - Block 2 Ground Floor to Level 4 – Hallway Door to riser cupboard **(10)** - Block 2 Ground Floor – Smoke Doors to Block 1 and West Stairwell **(3)** - Block 2 1st Floor Floor – East and West Stairwell **(2)** - Block 2 3rd and 4th Floor – West Stairwell **(2)**	Leave, label and maintain

ANZAC PARK WEST			
Asbestos Material	**Asbestos type(s) & Sample No.**	**Material Location**	**Comments**
Pipe flange joints	Chrysotile as per 2070-11	- Block 1 Lower Ground Floor Plant Rooms – Return Header Pipes, HW circuit pumps, main chilled water pumps - Block 1 Roof Plant – Gaskets on Chiller and in Tank Room	Leave, label and maintain
Flexible join	Chrysotile as per 2070-14	- Block 2 – Lwr Grnd Fl. East Plant – ventilation unit # 1 (air intake) - Block 1 – Roof Plant Room on Fan Unit North	Leave, label and maintain
Asbestos cement pipes	Chrysotile Amosite as per 2070-6	- Block 1 Basement Switch Room (South end) (4 pipes) - Block 1 Basement – Plant Room (2 pipes Nth Cnr of Plant Rm – May continue up into the Building. - Block1Basement, South Delivery Room: Pipes in Wall (4) and **Debris** - Block 1 Exterior Northeast Corner (1) and **Debris**	Leave, label and maintain **Debris** to be removed by an ACT licensed asbestos removalist.
Cafeteria			
Caulking	Chrysotile Asbestos 2199 - 1	Expansion Joint in Masonry to Cafeteria Verandah	Leave, Label and Maintain

ANZAC PARK WEST			
Asbestos Material	**Asbestos type(s) & Sample No.**	**Material Location**	**Comments**
Electrical Backing Board	Chrysotile Asbestos 2199 - 15	Cafeteria Distribution Board North	Leave, Label and Maintain
Cafeteria			
Pipe Lagging	Amosite asbestos 2199 - 16	Cafeteria Hot Water Tank Plant Room	To be removed by an ACT licensed asbestos removalist.
Mastic	Chrysotile Asbestos 2199 - 17	Cafeteria Roof – Air Handling Unit Plant Room	Leave, Label and Maintain

DISCUSSION

The asbestos materials identified on site have been categorised based on their type and their management is discussed in accordance with Worksafe Australia A*sbestos: Code of Practice and Guidance Notes* 1988.

ELEMENT:

- **Asbestos Ceiling and Pillar Limpet Spray – Roof Plant Rooms**

Asbestos Positive Findings:

Refer to Table 3 & Site Plans for specific locations (Refer Appendix C)
Refer Page 20 for Photographs

Implications:

Spray on Insulation

The results of the analysis of the insulation material sampled from the Anzac Park West, Block 1 - Roof Plant Room ceiling and pillars confirms that Chrysotile Asbestos is present. This material is in fair condition however the material is deteriorating and was found on the floor of the plant room. The asbestos is bound in a soft compressed matrix and has the potential to release fibres if disturbed.

Recommendations:

The Code requires the immediate clean up of the insulation material on the floor of the plant rooms (ANZAC Park West Blocks 1 and 2).

Further the removal of the insulation material in the plant rooms (ANZAC Park West - Blocks 1 and 2 Roof Plantrooms) must be undertaken as soon as practicable.

All Asbestos removal work must be undertaken by an ACT licensed Asbestos Removalist.

Additionally all maintenance personnel working in the plantrooms must ensure that the insulation debris is not disturbed until the cleanup has been undertaken.

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

If the immediate cleanup of the insulation and sheet debris cannot be scheduled the plantrooms must be labelled appropriately and an Asbestos Management Plan is required (Refer *Asbestos Code of Practice - Section 3.1* & 3.6 *& Section 8 Table 1* - Appendix A).

Plates 1 and 2 : Plant Room limpet spray insulation on ceiling and wall pillars

ELEMENT:

- **Asbestos pipe lagging and debris – Cafeteria Hot Water Plant Room**
- **Asbestos cement pipe debris – Block 1 Basement South Delivery Room and outside on the Northeast corner**

Asbestos Positive Findings:

Refer to Table 3 and Site Plans for specific locations (Refer Appendix C).
Refer to page 22 for Photographs

Pipe Lagging

The pipe lagging located in the Cafeteria Hot Water Plant Room is of major concern as it may be disturbed by demolition and maintenance personnel.

Implications:

- The pipe lagging is generally in poor condition and will further deteriorate with age and impact damage.
- The pipe lagging and lagging debris in the plant room is likely to be disturbed by demolition and maintenance personnel during routine maintenance which may cause elevated fibre levels.
- The asbestos cement pipe debris in the Block 1 Basement South Delivery Room and outside on the Exterior Northeast corner of the builidng may be disturbed by demolition and maintenance personnel during routine maintenance which may cause elevated fibre levels.

Recommendations:

- The asbestos pipe debris is of less concern as it is a non-friable material. However due to the fact that it could be easily disturbed it should also be removed as soon as practicable.
- The asbestos pipe lagging should be removed as per The Code by an ACT licensed asbestos removalist as a matter of priority.

- Where practicable without causing undue concern to future personnel who occupy the premises during normal building usage, all asbestos material remaining in situ should be clearly labelled i.e. risers and plantrooms must be labelled. Regular inspections are required to assess for deterioration (Refer *Asbestos Code of Practice - Section 3.1 & 3.6* - Appendix A).

- 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.

- If immediate removal of all asbestos is not planned an Asbestos Management Plan is required (Refer *Asbestos Code of Practice - Section 8 Table 1* - Appendix A).

Plates 3 & 4: Pipe Lagging to Hot Water Pipes in Cafeteria Plant Room

ELEMENT:

- **Asbestos cement sheeting**
- **Fire Door Core**
- **Caulking to windows**
- **Caulking to masonry on the exterior of the Cafeteria verandah**
- **Mastic to ANZAC WEST and Cafeteria Duct work**
- **Gaskets**
- **Flange Joints**
- **Asbestos cement pipes**
- **Switchboard backing sheets**
- **Electrical cable sheath**
- **Lift Brake Pads**
- **Lift door core (requires further investigation at time of removal)**

Asbestos Positive Findings:

Refer to Table 3 & Site Plans for specific locations (Refer Appendix C).
Refer Page 24 for Photographs.

Implications:

These materials may remain in-situ providing they remain in good condition until removed during refurbishment by a licensed asbestos removalist.

Material remaining in situ must be labelled (Refer *Asbestos Code of Practice - Section 3.1* - Appendix A).

This material contains asbestos firmly bound into a stable matrix. Providing it is not damaged, cut, drilled, sanded or abraded no significant fibre release would occur.

Recommendations:

Maintenance and other personnel should be instructed not to remove or damage the material. Replacement or removal must only be undertaken by an ACT licensed asbestos removalist.

All asbestos material remaining in situ must be clearly labelled and regularly inspected for deterioration (Refer *Asbestos Code of Practice - Section 3.6* - Appendix A).

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.

If immediate removal is not planned an Asbestos Management Plan is required (Refer *Asbestos Code of Practice - Section 8 Table 1* - Appendix A).

Plates 5: Damaged Asbestos Cement Pipe – Block 1 Basement; Delivery Room South.

Plate 6: Asbestos cement sheet - Block 2 3rd Floor sheet behind lift indicator panel.

Plates 7: Asbestos Cement Sheet – Block 2 Exterior Plant Room.

Plate 8: Asbestos Electrical Board - Cafeteria Air Handling Unit Plant Room.

7 ANALYSIS OF PAINT SAMPLES FOR LEAD CONTENT

7.1 INTRODUCTION

Lead in paint (as lead carbonate) is found extensively in homes and commercial and industrial buildings built pre-1970. Although Australian industry has generally phased out lead content in paint, levels of below 1 percent are still permitted and industrial application of high-lead paint to residential/commercial dwellings may still continue.

Lead-base paint may be a health issue if ingested or becomes mobile in the environment. For this reason sealing or safe removal of paint is strongly recommended particularly where it is flaking or exposed to the elements.

NATA accredited laboratory analysis of ten (10) samples of paint taken from representative areas of ANZAC West and the Cafeteria has shown a low to high percentage of lead in the samples. The results of the analysis are as follows.

Table 4: Percentage of Lead in Paint determined by Inductively-Coupled Plasma Spectroscopy

Sample no.	Location and colour of paint sample	Lead in paint %
2199 – Pb 1	Block 1 – 5th Floor – Masonry wall to stairwell North – White	0.044
2199 – Pb 2	Block 1 – 5th Floor Heater – yellow	0.064
2199 – Pb 3	**Block 1 – 5th Floor- Door Frame to Kitchenette – blue**	**0.41**
2199 – Pb 4	Block 1 – Ground Floor – South Stairwell - yellow	0.088
2199 – Pb 5	Block 1 – Ground Floor – North Stairwell – yellow	0.060
2199 – Pb 6	**Cafeteria – Female Toilet (Dining Area) – White**	**0.33**
1902 – Pb 7	**Cafeteria – Kitchen Cooking Hood – Pink**	**1.1**
1902 – Pb 8	**Cafeteria – External North Door to Distribution Board Plant – Grey**	**0.29**
1902 – Pb 9	**Cafeteria – Air Handling Unit – Roof Plant Room – Blue Green**	**3.3**
1902 – Pb 10	Block 2 – Roof Paint – Yellow	0.010

Table 4 Notes:

Lead Paint	**(> 1.0% Pb)**
First Schedule Paint	**(> 0.25% Pb)**
Third Schedule Paint	(> 0.1% Pb)
Lead-free Paint	(≤ 0.1% Pb)

7.2 DISCUSSION

The analytical results of paint samples taken from ANZAC West and the Cafeteria indicate that Lead Paints (>1%) and First Schedule paints (>0.25%) are present.

The Lead Paint is restricted to the Cafeteria and was found on the kitchen cooking hoods (pink) and on the air handling unit in the ceiling space plant room.

The First Schedule paint was found to be present on the Cafeteria external wood doors (grey) to the building and to the white wall paint in the Toilet Areas. First Schedule paint was also identified on the internal door frames and doors (blue) in Block 1 and based on this information it is assumed to be present in similar locations in Block 2.

All other paints tested returned results below the lead paint threshold (<0.1%).

The Standard for the Uniform Scheduling of Drugs and Poisons (National Drugs and Poisons Schedule Committee July 2000) classifies paints having more than 0.1% lead as a Third Schedule Paint or First Schedule Paint (>0.25%) and prohibits their manufacture, supply or use. The most hazardous of these paints are those with lead content equal to or in excess of 1.0%.

The paint types used throughout ANZAC West and the Cafeteria are classified as Lead-free, First Schedule and Lead Paints.

7.2.1 Lead Paint Management and Recommendations

The following information uses Australian Standard (AS 4361.2 – 1998) as the primary reference. Management of Lead Paint and Third and First Schedule Paint in residential and commercial premises may be managed in one of four ways.

- leave undisturbed
- stabilised (i.e. over painting or encapsulation)
- abated (i.e. removed) or
- a combination of the three management options may be required.

The other First Schedule and Lead paints identified in the survey are in poor to fair condition and due to their low volume of use would not be expected to cause significant lead contamination. If these paints are to remain it is recommended the surface is stabilised and monitored regularly for deterioration.

Should removal be chosen a high degree of skill, preparation and risk minimisation is required to avoid lead exposure, as dry sanding of lead levels as low as 0.25% can generate high lead dust. Therefore the Wet Scraping and Wet Sanding methods are amongst the safest methods available.

Strict adherence to the guidelines described in AS 4361.2 – 1998 will best ensure minimisation of risk. During this process personal protective equipment and waste containment equipment is essential and children, pregnant women and persons not directly engaged in the process should not be present. This process may be undertaken by general workers providing they adhere strictly to the guidelines, however a specialist lead paint removal contractor is recommended for extensive paint removal works.

7.2.2 Lead Paint Removal and Containment

- Avoid dry sanding or any actions which create dust.
- Place ground sheets around the work area, ensuring all paint debris is contained. Remove accumulated debris frequently to prevent its spread into surrounding area using a vacuum cleaner fitted with a HEPA filter.
- Minimise the spread of debris, dust and fumes by avoiding dust generating activities during windy conditions. Seal all windows and heating/cooling system duct registers to prevent dust or fumes from contaminating adjacent areas. Use negative air pressure for interior work.
- Use personal respirators according to AS/NZS 1715.

- Use disposable clothing.
- Wipe down all surfaces using a wet cloth and dispose of all clothing, equipment and plastic used during paint removal as Hazardous Waste.

7.2.3 Responsibilities of Owners and Contractors

According to AS 4361.2 – 1998 owners of residences or commercial buildings that may contain lead should:

- manage the property in such a manner as to effectively control any health risk to occupants, contractors or others.
- ensure occupants are sufficiently informed about and protected from the hazards associated with lead paint.
- if management work is to be undertaken, inform immediate neighbours about the nature of the work.

Contractors should:

- obtain appropriate accreditation to undertake the proposed level of remedial work involving lead paint and have the required level of specialized training.
- undertake the contracted work in such a way as to protect the health and safety of employees, tenants and the general public.

7.3 CONCLUSION

Lead and 1st Schedule Paints were identified in the Cafeteria and 1st Schedule Paints were identified in ANZAC Park West.

Due to the low volume of use the paint would not be expected to cause significant lead contamination.

However, the First Schedule paint identified on the external wood doors(grey) to the cafeteria is a poor condition and should be either removed or the surface stabilised.

All other Lead paint and First Schedule paint in the Cafeteria toilet areas and on the doors and door frames in ANZAC Park West is in fair condition and should be

stabilized or removed to prevent personal exposure or lead contamination of the environment.

Removal of the paint should employ the wet scraping and/ or sanding method to avoid a potential risk to workers and the environment. Owners and contractors have a Duty of Care to ensure the health and safety of people working in or occupying areas where lead based paints are present.

8 SYNTHETIC MINERAL FIBRE (SMF) SURVEY

SMF refers to man-made mineral fibrous materials commonly used for their insulating and reinforcing properties. The amorphous (non-crystalline) materials include glass fibre, mineral wool and ceramic fibre products.

A visual inspection was used to determine the extent and location of SMF material throughout the ANZAC WEST and the Cafeteria.

8.1 RESULTS

Cafeteria

- Loose Synthetic Mineral Fibre as ceiling insulation and to all pipe work in the roof space (Note Asbestos Pipe Lagging was identified in the Hot Water Tank Plant Room).
- Internal partition walls may contain fibreglass insulation.

ANZAC Park West

- Fibreglass insulation above all square plaster ceiling tiles. Fibreglass insulation is on all hot water pipe work and is also present within perimeter and some interior wall cavities.
- Fibreglass insulation is also present on plant equipment ie. boilers

8.2 DISCUSSION

Although glass fibre is classified as an irritant levels of airborne fibreglass during routine occupation of the premises would be insignificant. During any large scale installation or removal of fibreglass insulation, providing SMF fibre suppression measures as defined below are employed exposure standards for SMF fibre would not normally be exceeded.

The following Risk Assessment is based on the requirements of the documents:

- ⇨ Worksafe Australia, Worksafe Australia, Sydney 1990, *Synthetic Mineral Fibres: National Standard and National Code of Practice.*
- ⇨ Worksafe Australia, *Technical Report on Synthetic Mineral Fibres and Guidance Note on the Membrane Filer Method for the Estimation of Airborne Synthetic Mineral Fibres*, June 1989.

SMF Risk Assessment

According to Worksafe Australia 1989 (p 9) health risks associated with SMF are ”significantly less potent … than white asbestos (chrysotile) fibres” and that "...the possibility of lung cancer is eliminated at an exposure standard (time weighted average) of 0.5 respirable fibres per millilitre of air for all types of synthetic mineral fibres...." (p V).

To reduce the possibility of skin, eye and upper respiratory tract irritation a maximum exposure standard of 2 milligrams per cubic metre of inspirable dust is recommended. These two standards are designed principally for the manufacture and end user industries in which significant dust clouds would be generated.

The same document also states: "The overall conclusion based on available animal experiments and epidemiology is that provided work is carried out in accordance with (NOHSC 1990), and compliance is maintained with the exposure standards, then there is a negligible health risk associated with exposure to SMF under present-day manufacturing and usage patterns."

8.2.1 Recommendations

Although of negligible health risk if undisturbed, it is strongly recommended that if the fibreglass insulation in the ceiling of the Cafeteria, the ceiling tiles and in the wall cavities of ANZAC Park West is to be removed or otherwise disturbed the following procedures and safety measures should be adopted.

- Workers wear personal protective equipment to minimise dust inhalation and irritation to eyes and skin. The correct use of filter masks, goggles, gloves and disposable coveralls should prevent significant irritation.
- Care should be taken to ensure minimal SMF or nuisance dust enters the occupied areas below the work area.
- If significant contamination of the occupied areas is likely dust control measures such as the use of plastic screens and an effective extraction fan should be positioned to prevent such an occurrence.
- Disposable suits and any removed insulation are to be appropriately bagged and disposed of as general waste.

9 PCB SURVEY

9.1 INTRODUCTION

Robson Laboratories undertook to visually inspect the Cafeteria and ANZAC Park West to determine the extent of fluorescent lights containing polychlorinated biphenyl (PCB) capacitors.

PCBs are very stable compounds which are fire resistant and very good insulators. They are used in capacitors in a range of electrical equipment, including fluorescent lights, to provide increased efficiency of electrical energy.

Under normal conditions PCB light capacitors would not be expected to cause health effects. However on occasion capacitors may leak, leading to an exposure risk. In addition PCB capacitors are classified as Intractable Waste and must be disposed of accordingly to avoid environmental contamination.

Health effects: Prolonged exposure to PCBs may cause serious health effects, including carcinoma (cancer). Workers manufacturing PCBs or assembling components containing PCBs are most at risk. PCBs enter the body through the skin, ingestion via contaminated food or drink or inhalation of vapour. At room temperature vapour concentrations are insignificant and minor skin contact is not likely to cause health problems providing the fluid is immediately washed off the skin using soap and water.

9.2 METHOD

Fluorescent lights were accessed to determine the type of capacitor used. Capacitor types were assessed using ANZECC 1997, *Identification of PCB-Containing Capacitors; An information Booklet for Electricians and Electrical Contractors.*

9.3 RESULTS

PCB capacitors were identified in the fluorescent light fittings in both the Cafeteria and in ANZAC Park West and the types are presented in the Table below.

Table 5: PCB Location Summary Table

Location of PCB Light Fitting	Capacitor Type	Result and estimated number if Positive
Cafeteria		
Female Dining Toilet	AEE Type FW 3uF(Metal)	Positive (1)
Kitchen Area	DUCON Type APD290C 9uF (Metal)	Positive (26)
ANZAC Park West – Block 1		
Basement – Office Area North and Hallway	Rifa 6.5uF Type PHN 453 (Plastic)	Negative
Basement - Storeroom above dropped ceiling	UCC 5.5uF Type PCE (Metal)	Positive (12)
Basement – Toilet Areas	RIC 5uF Type LBIEB (Plastic)	Negative
Basement – Mechanical Equipment Room	DUCON 5.5uF Type APB255W (Metal)	Positive (24)
Groundfloor – Stairwell South	Rifa Type PHN 453 (Plastic)	Negative
Third floor – Upgraded office area North	Rifa Type PHN 453 (Plastic)	Negative
Fifth floor – Office Area North(Refer to Plate 9)	AEE 6.5uF Type FW (Metal)	Positive (190)
Roof Plant Room	Rifa 3.2uF Type PHN (Plastic)	Negative
Roof Plant Room – Lift Motor Room	Ducon 3.2uF Type APD (Metal)	Positive (8)
Roof Plant Room – Lift Motor Room Equipment	Ducon 500uF Type ENP890 (Metal) Ducon 200uF Type ENP874 (Metal) Ducon 100uF Type ENP910 (Metal) UCC 500uF Type EJC/M456 (Metal) Mallory 1000uF Type CG (Metal)	Negative Negative Negative Unknown Unknown

Location of PCB Light Fitting	Capacitor Type	Result and estimated number if Positive
ANZAC Park West – Block 2		
Basement	Plessy 6.5uF Type P102 (Plastic)	Negative (Throughout)
Lower Ground Floor	Rifa 6.5uF Type PHN 453 (Plastic)	Negative
ANZAC Park West – Block 2		
Lower Ground Floor (Pipe Room West)	Ducon 6.5uF Type APD265C (Metal)	Positive(7)
Second Floor	Ducon 6.5uF Type APD265C (Metal) & AEE 6.5uF Type FW (Metal)	Positive (200)
Plant Room	Rifa 3.25uF Type PHN (Plastic)	Negative
Plant Room – Lift Motor Room	Ducon 3.2uF Type APD232AC (Metal) & AEE Type FW (Metal)	Positive (7)

An example of the style of fluorescent light fitting that contains PCB positive capacitor in the ANZAC Park West is presented below.

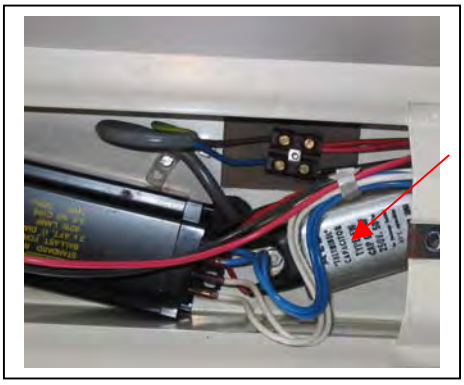

Plate 9 : ANZAC Park West PCB Containing Capacitor

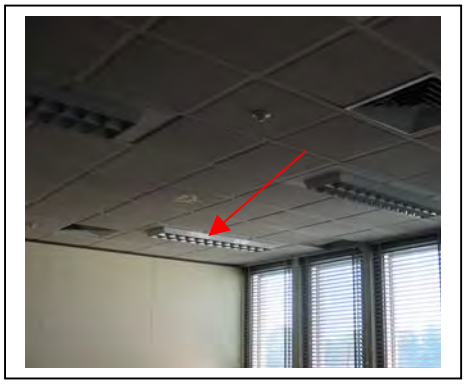

Plate 10 : ANZAC Park West Typical Office Floor PCB Light Fittings

9.4 CONCLUSIONS

Based on the survey results the PCB containing capacitors were identified in the Toilet, Kitchen and plant areas of the Cafeteria and on all levels and plant areas of ANZAC Park West apart from the Basement Block 2, Roof Plant Rooms (excluding lift motor rooms) and upgraded sections and stairwells of ANZAC Park West.

It is recommended that if these capacitors are to be removed appropriate PPE should be worn and they should be disposed of as PCB waste in accordance with local requirements.

10 APPENDIX A: ASBESTOS CODE OF PRACTICE & GUIDANCE NOTES

INCLUSIONS

Worksafe Australia, Sydney 1988, "Asbestos: Code of Practice and Guidance Notes" Section 3.1 summarizes the current requirements which have been adopted;

"3.1 GENERAL PRINCIPLES

- The ultimate goal is for Australian workplaces to be free of asbestos.
- Asbestos removal may not be immediately necessary, but must be completed before a structure or part of a structure is demolished.
- Removal of such asbestos should be subject to priority setting, determined by the condition and location of asbestos.
- Asbestos presents a risk only when it is airborne. The risk to health increases as the number of fibres inhaled increases.
- Wherever practicable, substitutes shall be found for asbestos products. Such substitutes for asbestos products should be thoroughly evaluated before use, to ensure that they do not constitute a health hazard. Ultimately, all asbestos products should be eliminated.
- Asbestos which has been incorporated into a stable matrix can be found in many working environments. Provided the matrix remains stable and no airborne dust is produced, it presents no health risk.
- The presence of asbestos should be identified.
- No person shall be exposed to risk of inhalation of asbestos in the course of employment without being provided with full information of the occupational health and safety consequences of exposure and appropriate control strategies.
- At present it is not possible to assess whether there is a level of exposure in humans below which an increased risk of cancer would not occur. Accordingly, exposure should always be limited to the minimum level feasible.

- Asbestos removalists and maintenance workers in an asbestos environment must be suitable protected.

- The recognised occupational exposure standard is that adopted by the National Occupational Health and Safety Commission. The method used to measure exposure is the Membrane Filter Method as endorsed by the National Commission.

- Products containing asbestos shall be labelled accordingly.

- The spraying of asbestos shall be prohibited. All future use of asbestos for insulation shall be prohibited."

It is recommended that where the presence of asbestos building products have been identified property owners, managers, occupiers and the relevant employer and employee organisations become fully aware of their obligations described in the Worksafe Code. Sections which are referred to in this Survey are reproduced below.

Worksafe Australia, August 1988 "Asbestos: Code of Practice and Guidance Notes"

"3.5 REGISTER

. Owners, or their agents, shall institute an inspection of each structure owned. A register shall be maintained, with regular updating of the results of these inspections. The register will contain details of the site, type and condition of any asbestos products found, and shall be made available for inspection by tenants (employers), employees, union representatives, government representatives, contractors and maintenance personnel. Where no asbestos is found, a record of such a finding shall be kept."

" 3.6 CONTROL

- Not withstanding the ultimate goal of an asbestos free workplace, priorities should be set for control in the short term.
- Asbestos products, if stable and inaccessible, should be left *in situ* until demolition, partial demolition or renovation.
- Where *in situ* asbestos is in a stable condition, but accessible, it should be appropriately controlled by a range of options canvassed later in this document.
- Asbestos which is not in a stable condition, or is determined to constitute an unacceptable health risk, shall be removed by a registered removalist.
- Any asbestos left *in situ* shall be clearly labelled and regularly inspected to ensure that it is not deteriorating or contributing to an elevated health risk.
- Property owners in conjunction with agents or employers shall establish procedures to ensure that persons entering the area where asbestos is present shall, unless assessment of the risk indicates that it is unnecessary, wear appropriate protective equipment an, in all cases, minimise the disturbance of the asbestos product. "

"4.3 PROPERTY OWNERS

Property owners or lessees, or managers or their agents have a responsibility in relation to asbestos, to:

- identify all asbestos products within their properties and to record the location and condition of such asbestos in a register in accordance with Section 3.5
- inform tenants of any asbestos treatment which may become necessary
- ensure that all contractors required to do work are informed of the presence of asbestos
- arrange for regular periodic inspections of properties by a competent person whose advice shall be taken on any treatment indicated. "

8. WORKSAFE AUSTRALIA, AUGUST 1988 "ASBESTOS: CODE OF PRACTICE AND GUIDANCE NOTES"

TABLE 1: DETERMINATION OF APPROPRIATE CONTROL METHOD FOR ASBESTOS."

"DEFER

Appropriate when:	**Not appropriate when**
Negligible risk of exposure	Possibility of deterioration or damage
and	
Asbestos inaccessible and fully contained	Airborne asbestos dust exceeds recommended exposure standard
or	
Asbestos stable and not liable to damage	

Advantages	**Disadvantages**
No initial cost	Hazard remains
Cost of removal deferred	Need for continuing assessment
	Asbestos management programme required

ENCAPSULATE OR SEAL

Appropriate when:	**Not appropriate when:**
Removal difficult or not feasible	Asbestos deteriorating
Firm bond to substrate	Application of sealant may cause damage to material
Damage unlikely	Water damage likely
Short life of structure	Large areas of damaged asbestos

Advantages	Disadvantages
Quick and economical for repairs to damaged areas	Hazard remains
May be an adequate technique to control release of asbestos dust	Cost for large areas may be near removal cost
	Asbestos management system required
	Eventual removal may be more difficult and costly

ENCLOSURE

Appropriate when:	Not appropriate when:
Removal extremely difficult	Enclosure itself liable to damage
Fibres can be completely contained within enclosure	Water damage likely
Most of surface already inaccessible	Asbestos material cannot be fully enclosed
Disturbance to, or entry into enclosure area not likely	

Advantages	Disadvantages
May minimise disturbance to occupants	Hazard remains
Provides an adequate method of control for some situations	Continuing maintenance of enclosure
	Asbestos management program required
	Need to remove enclosure before eventual removal of asbestos
	Precautions necessary for entry into enclosure

INCLUSIONS - cont./

REMOVAL

Appropriate when:	Not appropriate when:
Surface friable or asbestos poorly bonded to substrate	Located on complex and inaccessible surfaces
Asbestos is severely water damaged or liable to further damage or deterioration	Removal extremely difficult and other techniques offer satisfactory alternative
Located in A/C duct	
Airborne asbestos exceeds recommended exposure standard	
Other control techniques inappropriate	

Advantages	Disadvantages
Hazard removed	Increases immediate risk of exposure especially to removal workers
No further action required	Creates major disturbance inbuilding
	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 done poorly"

INCLUSIONS - cont./

"12. LABELLING AND WARNING SIGNS

Material containing asbestos should be labelled as follows:

CAUTION

CONTAINS ASBESTOS FIBRE

AVOID CREATING DUST

SERIOUS INHALATION HEALTH HAZARD

All identified asbestos in a building or other structure should be labelled so that it is clearly visible to a person using the area, until it is finally removed. This requirement applies equally to asbestos in good condition and to treated asbestos. Labels used for this purpose must identify the material as containing asbestos and should comply with Australian Standard 1216. (7) All warning signs should comply with Australian Standard 1319. (8)

Enclosed areas, and areas which contain encapsulated or sealed asbestos, should be labelled or otherwise signposted with cautionary warning signs in accordance with Australian Standard 1319.(8) The purpose of these cautionary warning signs is to ensure that the asbestos is not worked upon without correct precautions being taken and to ensure that, in the event of damage, the occurrence is reported immediately so that corrective action can be taken.

An example of these signs is shown below.

CAUTION ASBESTOS

RESPIRATORY PROTECTION MUST BE WORN

NO ADMITTANCE - ASBESTOS

REPORT TO PROPERTY MANAGER

An alternative international (9) symbol may also be used for labelling of asbestos-containing products."

11 APPENDIX B : LABORATORY REPORTS

12 APPENDIX C : ASBESTOS MATERIAL LOCATION PLAN - APW

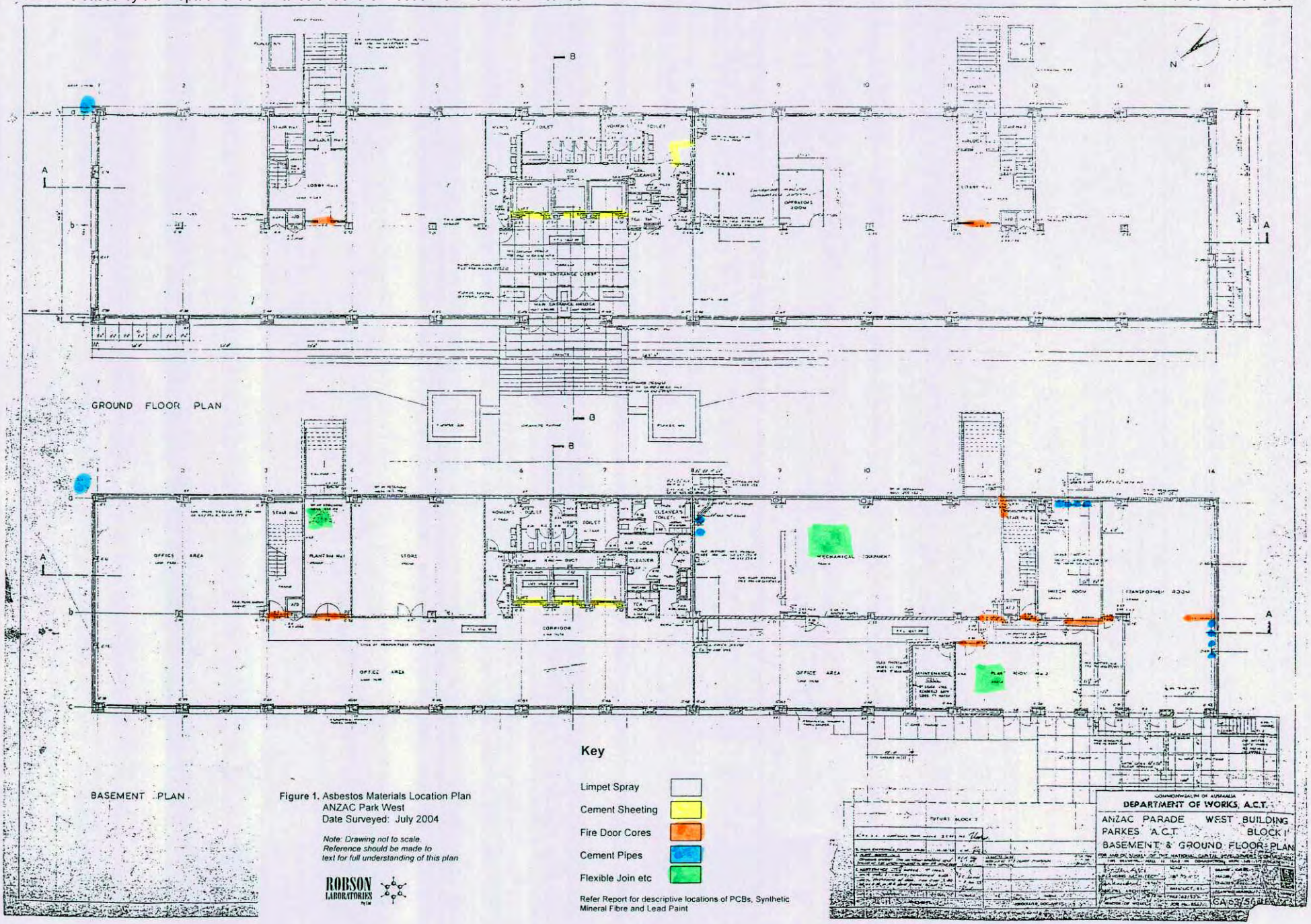

Figure 1. Asbestos Materials Location Plan
ANZAC Park West
Date Surveyed: July 2004

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

ROBSON LABORATORIES

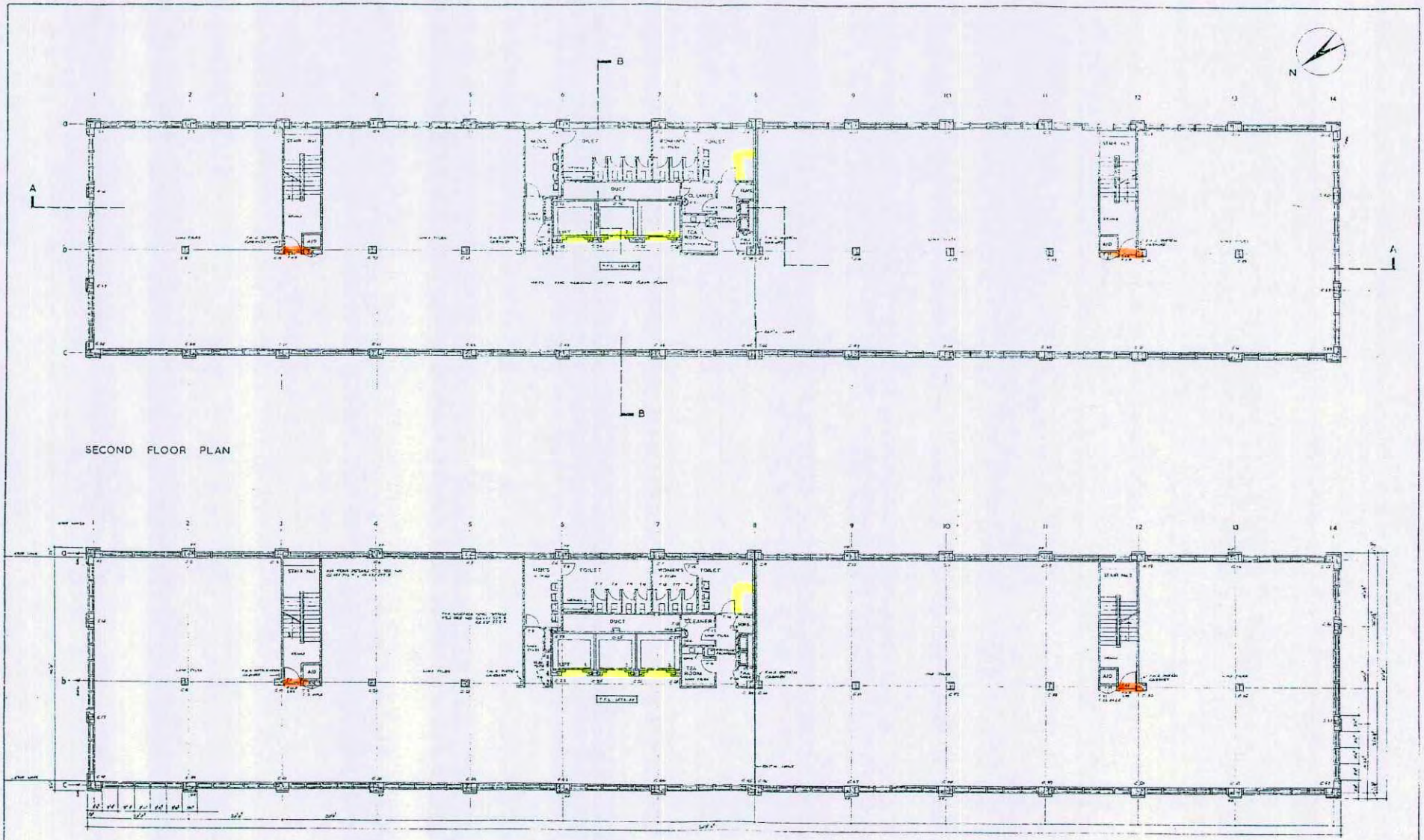

Figure 1. Asbestos Materials Location Plan
ANZAC Park West
Date Surveyed: July 2004

Note: Drawing not to scale.
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ROBSON LABORATORIES

Key

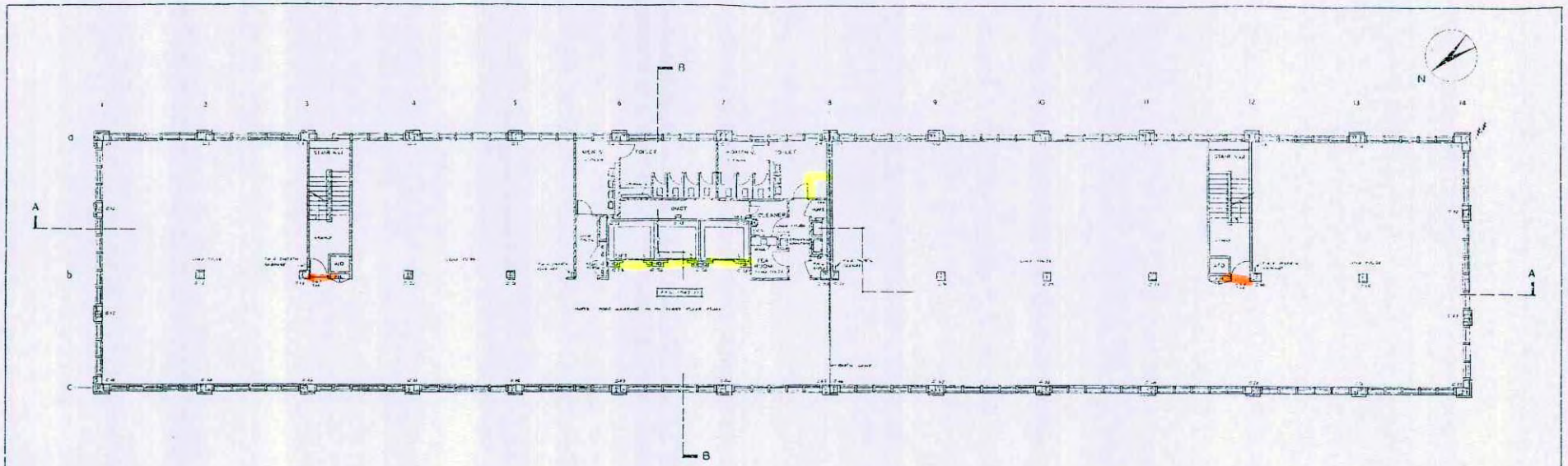
- Limpet Spray
- Cement Sheeting
- Fire Door Cores
- Cement Pipes
- Flexible Join etc

Refer Report for descriptive locations of PCBs, Synthetic Mineral Fibre and Lead Paint

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF WORKS, A.C.T.

ANZAC PARADE WEST BUILDING
PARKES A.C.T. BLOCK 1
FIRST & SECOND FLOOR PLAN

CA 63/568.B/



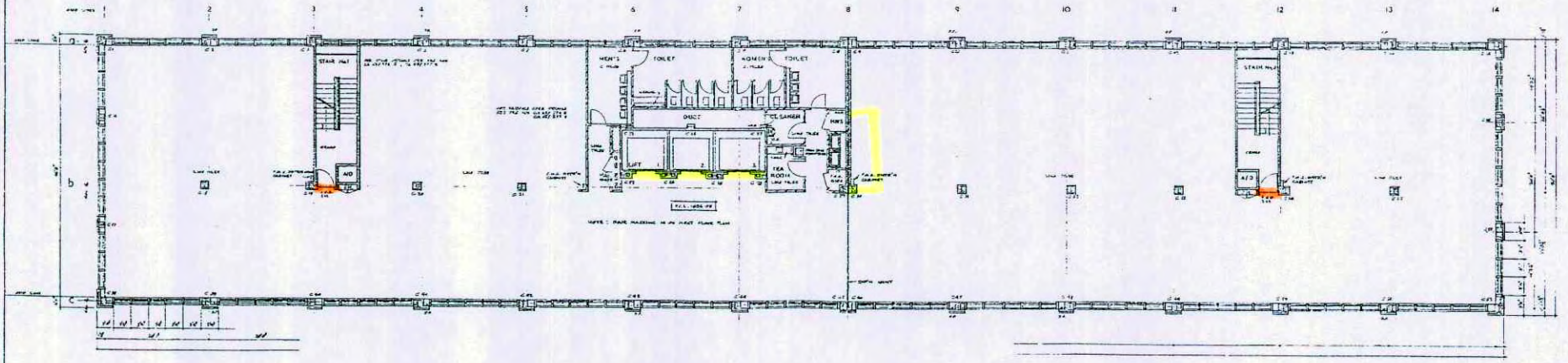


Figure 1. Asbestos Materials Location Plan
ANZAC Park West
Date Surveyed: July 2004

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

ROBSON LABORATORIES

Key

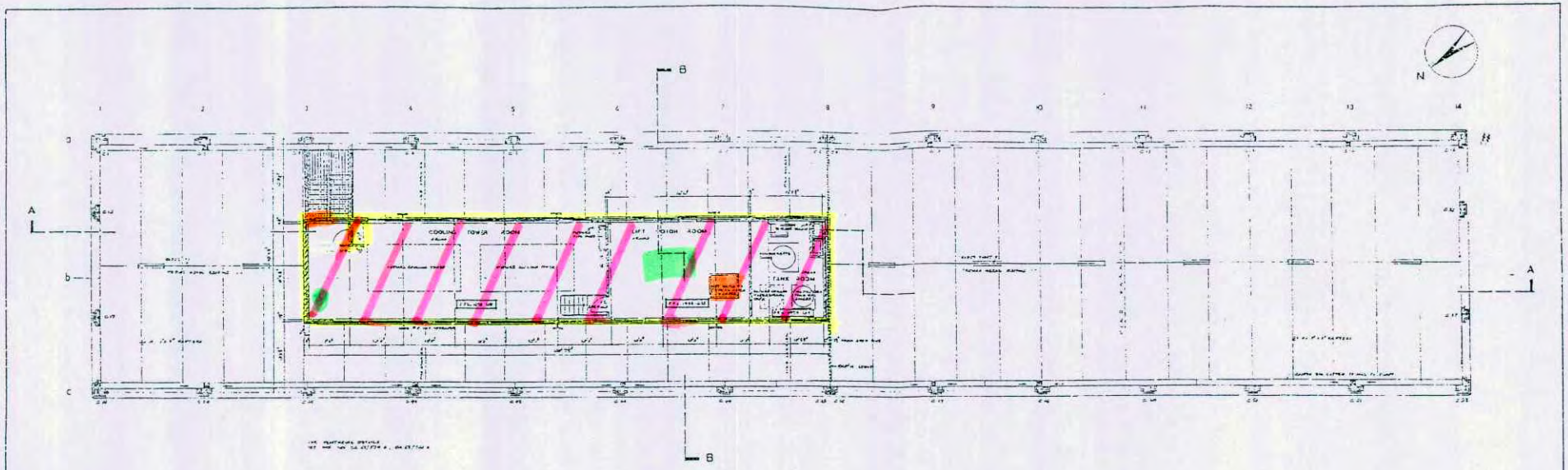
Limpet Spray	
Cement Sheeting	
Fire Door Cores	
Cement Pipes	
Flexible Join etc	

Refer Report for descriptive locations of PCBs, Synthetic Mineral Fibre and Lead Paint

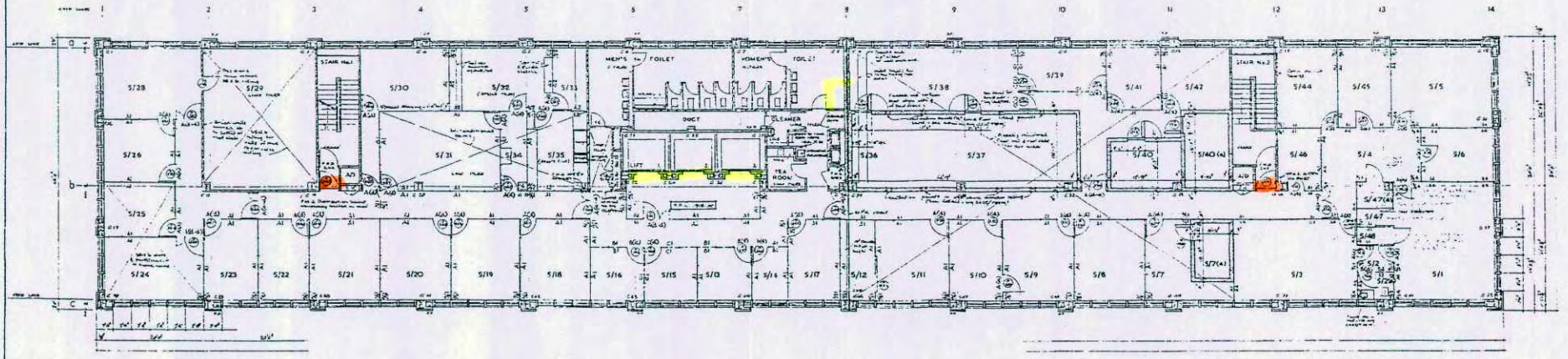
COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF WORKS, A.C.T.

ANZAC PARADE WEST BUILDING
PARKES A.C.T. BLOCK 1
THIRD & FOURTH FLOOR PLAN

CA63/569.B/



ROOF PLAN



FIFTH FLOOR PLAN

Figure 1. Asbestos Materials Location Plan
ANZAC Park West
Date Surveyed: July 2004

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

ROBSON LABORATORIES

Key

- Limpet Spray
- Cement Sheeting
- Fire Door Cores
- Cement Pipes
- Flexible Join etc

Refer Report for descriptive locations of PCBs, Synthetic Mineral Fibre and Lead Paint

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF WORKS, A.C.T.

ANZAC PARADE WEST BUILDING
PARKES A.C.T. BLOCK 1
FIFTH FLOOR & ROOF PLAN

CA 63/570.B/3

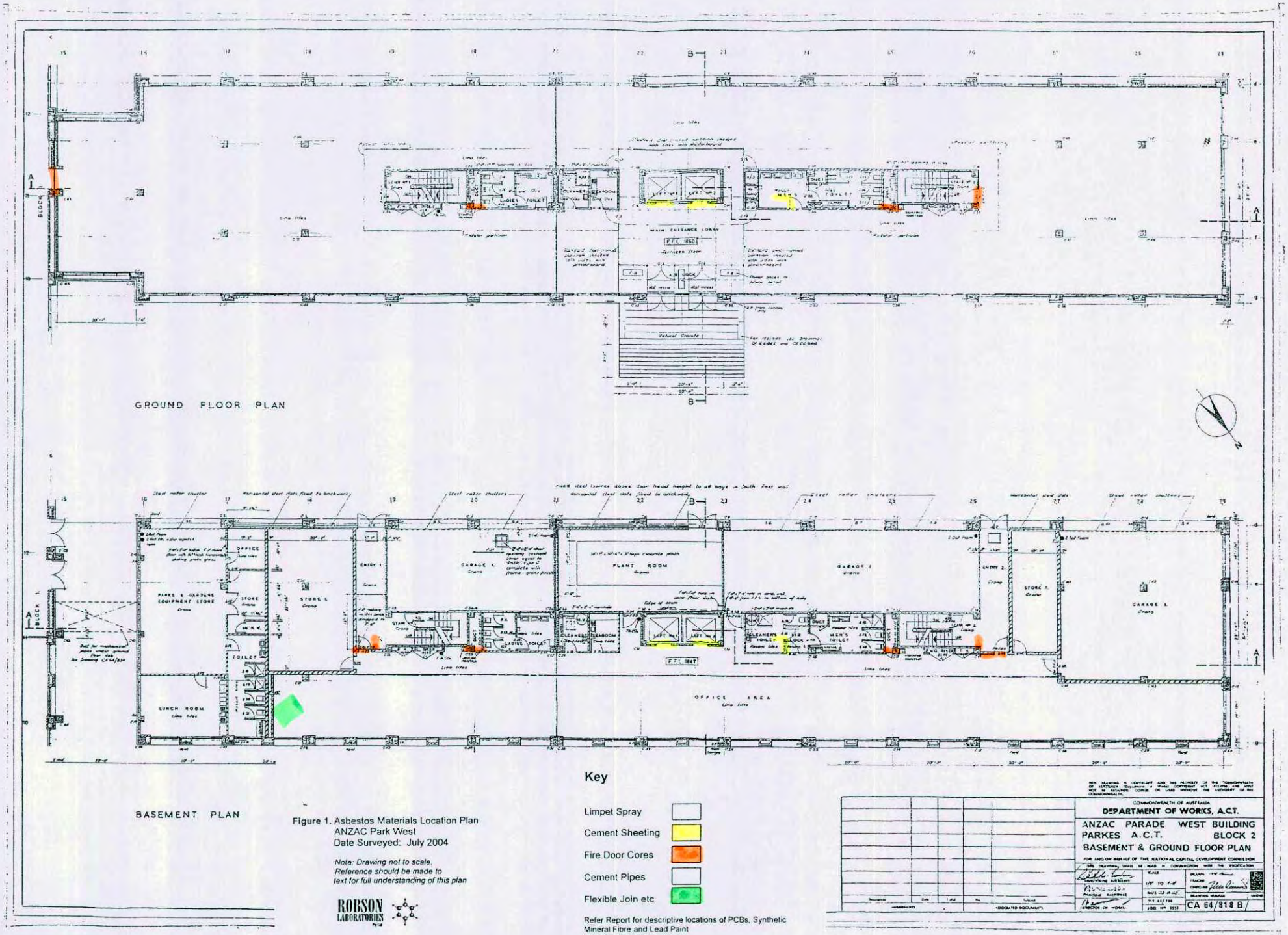


Figure 1. Asbestos Materials Location Plan
ANZAC Park West
Date Surveyed: July 2004

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Reference should be made to text for full understanding of this plan

ROBSON LABORATORIES

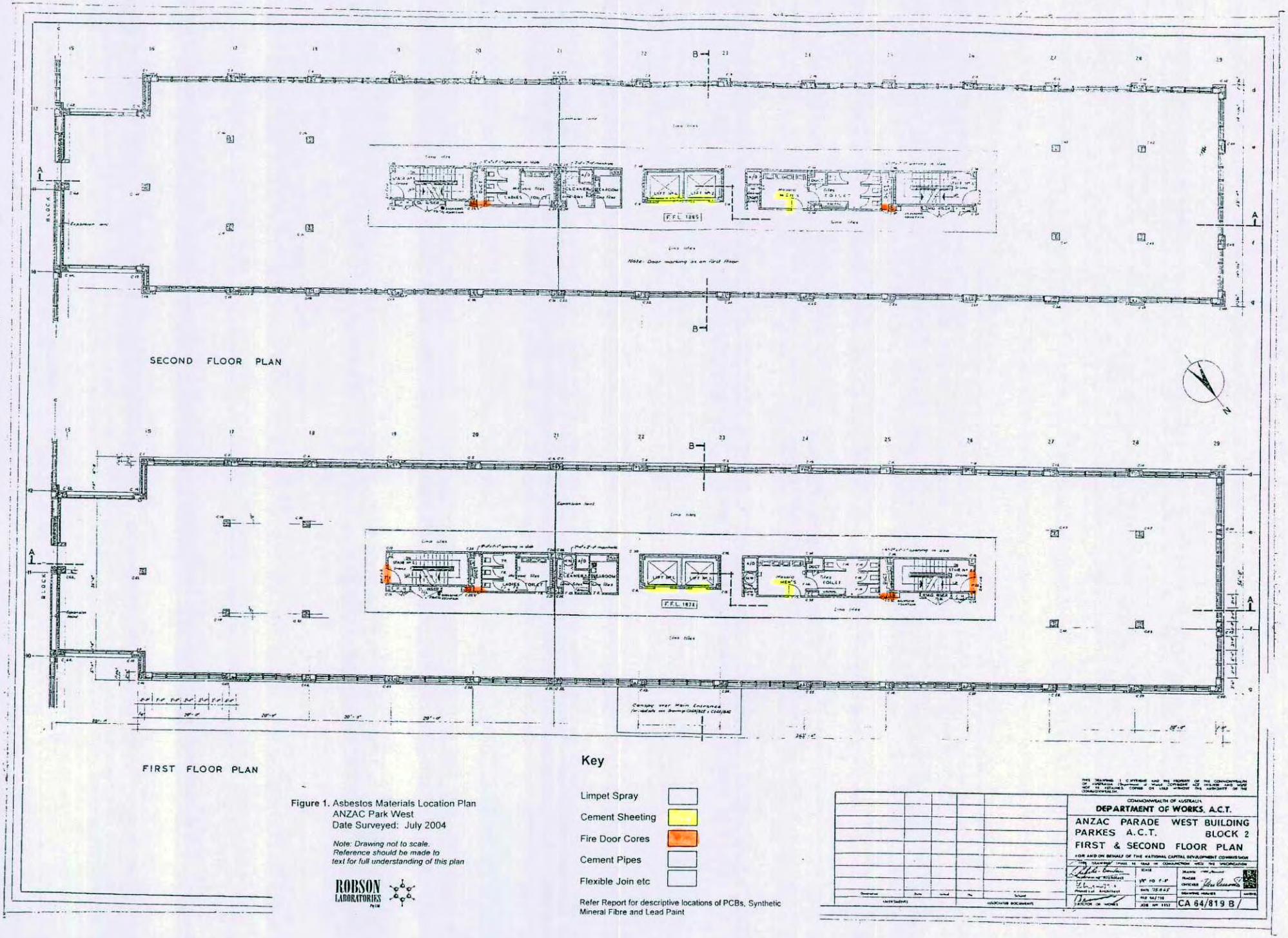

Figure 1. Asbestos Materials Location Plan
ANZAC Park West
Date Surveyed: July 2004

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ROBSON LABORATORIES

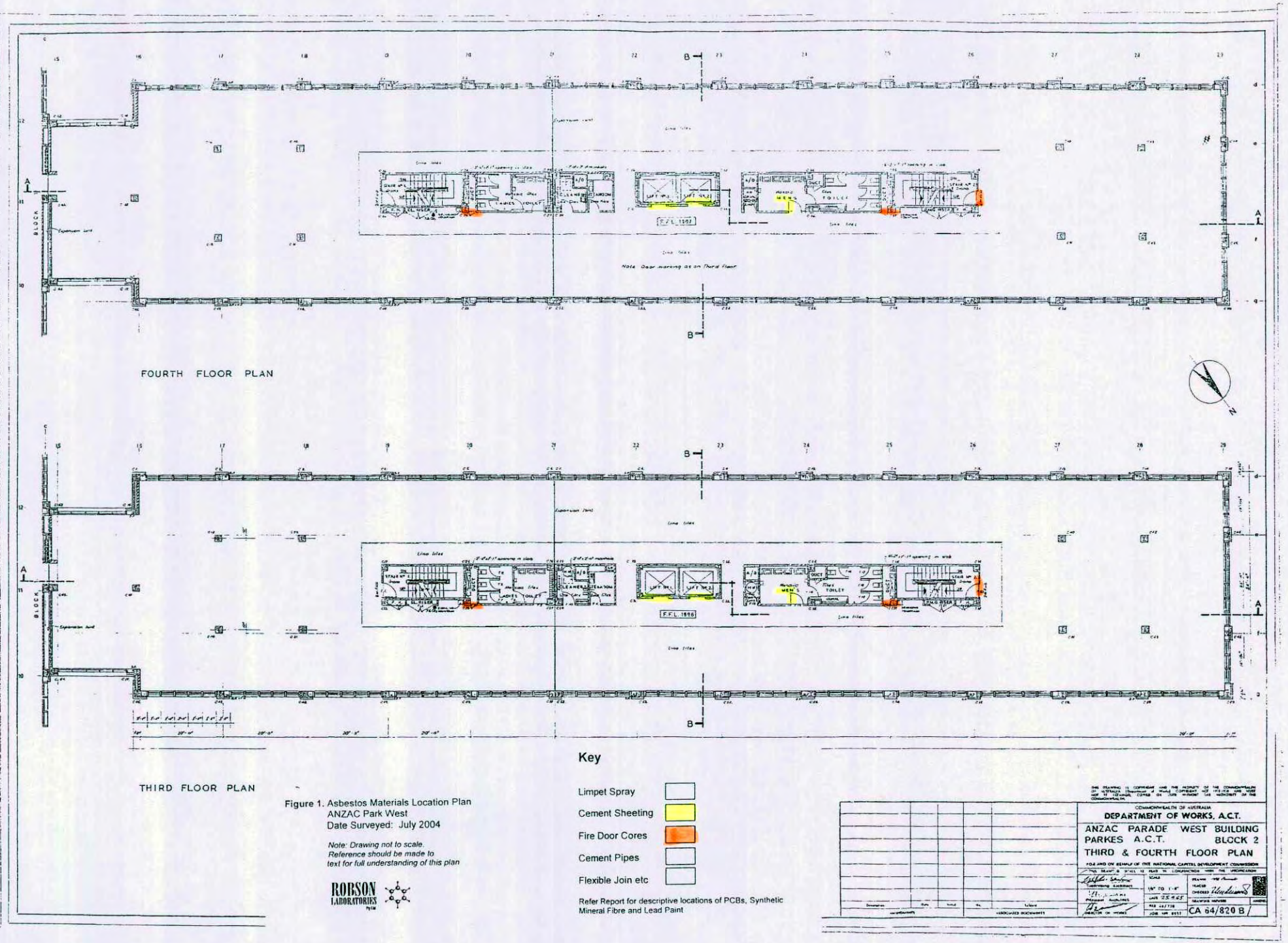

Figure 1. Asbestos Materials Location Plan
ANZAC Park West
Date Surveyed: July 2004

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

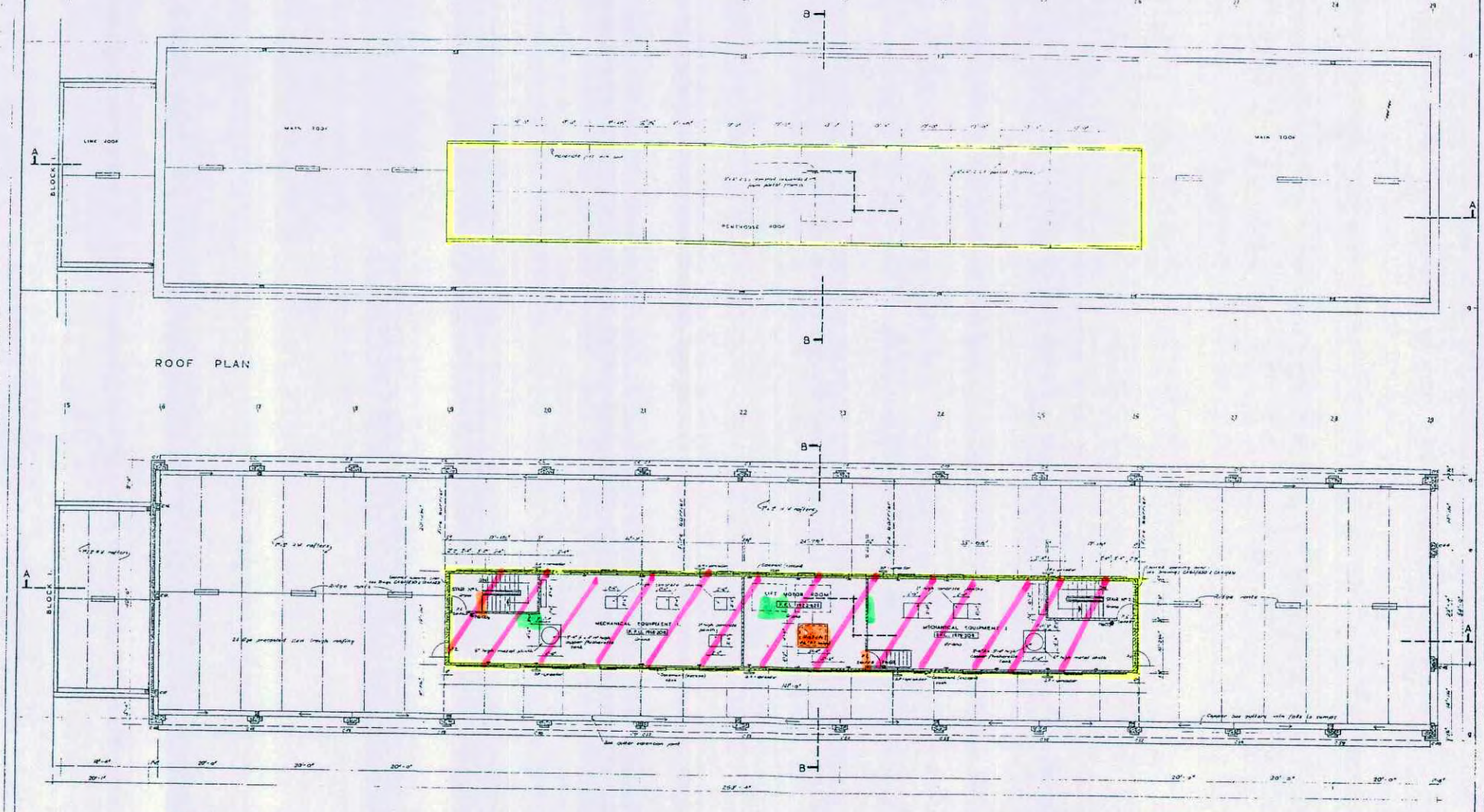

Figure 1. Asbestos Materials Location Plan
ANZAC Park West
Date Surveyed: July 2004

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

ROBSON LABORATORIES

Refer Report for descriptive locations of PCBs, Synthetic Mineral Fibre and Lead Paint