

Division 5 Asbestos Hazardous Building
Materials Assessment
Maribyrnong River Children's Centre -
Shed (Bldg No. 242.1)
6 Wests Road,
Maribyrnong 3032

Maribyrnong City Council

June 2014



261 – 271 Wattletree Road

Malvern VIC 3144

T: (03) 9508 0100

F: (03) 9509 6125

E: admin@prensa.com.au

ABN: 12 142 106 581

Job No: 15054-056 : Client No: M0070

Executive Summary

Prensa Pty Ltd (Prensa) was engaged by Maribyrnong City Council (MCC) to conduct a Division 5 Asbestos Hazardous Building Materials Assessment (Assessment) of Building Number 242.1, Maribyrnong River Children's Centre - Shed, 6 Wests Road, (the Site).

The objective of this Assessment was to identify and assess the health risk posed by hazardous building materials which are considered accessible during normal occupation of the building.

The scope of the Assessment included the accessible interior and exterior areas of the building.

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

Maribyrnong City Council	Asbestos- containing Materials		Synthetic Mineral Fibre	Lead- containing Paint
	Bonded	Friable		
Building 242.1 – Maribyrnong River Children’s Centre - Shed	-	-	✓	-

The following significant key findings are noted:

- No asbestos-containing materials were identified or assumed to be present during the Assessment.
- SMF in the form of sarking insulation was suspected to be present in the roof lining of the shed.

Recommendations

A Hazardous Building Material Survey in accordance with Part 4.3, Division 6 of the Victorian Occupational Health and Safety Regulations, 2007 should be carried out prior to any demolition or refurbishment works. Any hazardous building materials identified within this survey should be removed prior to the commencement of any works that may cause disturbance - as per Australian Standard (AS) 2601:2001 *The Demolition of Structures*.

A number of other recommendations were made in the body of this report which address the ongoing management of hazardous building materials at this site.

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

Statement of Limitations

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

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

Unless otherwise stated in this report, the scope is limited to fixed and installed materials and excludes buried waste materials, contaminated dusts and soils.

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

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

Sampling Risks

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

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

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

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

Reliance on Information Provided by Others

Prensa notes that where information has been provided by other parties in order for the works to be undertaken, Prensa cannot guarantee the accuracy or completeness of this information. MCC therefore waives any claim against the company and agrees to indemnify Prensa for any loss, claim or liability arising from inaccuracies or omissions in information provided to Prensa by third parties. No indications were found during our investigations that information contained in this report, as provided to Prensa, is false.

Future Works

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

Table of Contents

1	Introduction	1
2	Scope of Works	1
3	Site Description	1
4	Methodology.....	1
5	Findings	2
5.1	Document Review and Interviews	2
5.2	Analytical results	2
5.2.1	Asbestos Bulk Sample Analysis	Error! Bookmark not defined.
5.3	Assessment Findings	2
5.3.1	Asbestos-containing Materials.....	3
5.3.2	Synthetic Mineral Fibre Materials.....	3
5.3.3	Lead-containing Paint	3
5.4	Areas not Accessed	3
6	Management Options	3
7	Site Specific Recommendations.....	3
7.1	Synthetic Mineral Fibre Materials.....	4

Appendix A: Risk Assessment Factors and Priority Ratings

Appendix B: NATA Endorsed Laboratory Sample Analysis Report

Appendix C: Hazardous Building Materials Register

Appendix D: Photographs

Appendix E: Areas Not Accessed

1 Introduction

Prensa Pty Ltd (Prensa) was engaged by Maribyrnong City Council (MCC) to conduct a Division 5 Asbestos and Hazardous Building Materials Assessment (Assessment) of Building Number 242.1, Maribyrnong River Children's Centre - Shed, 6 Wests Road, , Maribyrnong 3032 (the Site). Paul Kenny of Prensa conducted the Assessment on 25 June 2014 at the request of David Cheng of MCC.

The objective of this Assessment was to identify and assess the health risk posed by hazardous building materials which are considered accessible during normal occupation of the building.

2 Scope of Works

The scope of the Assessment included the accessible internal and exterior areas of the Site included in the scope of the Assessment.

Specifically, Prensa included the following hazardous building materials in the scope of this Assessment:

- Asbestos-containing materials (ACM);
- Synthetic mineral fibre (SMF) materials; and
- Lead-containing paint (LCP).

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

3 Site Description

The Site consists of a single building. Details of the building contained within this Site are provided in Table 1 below.

Table 1: Site Information			
Site:	Building 242.1 – Maribyrnong River Children’s Centre - Shed		
Age (Circa):	1990s	External walls:	Brick
Approximate area:	<100 m ²	Internal walls:	Fibre cement sheet
Levels:	1	Ceiling:	Timber frames
Roof type:	Metal	Floor and coverings:	Concrete

4 Methodology

The Assessment comprised a review of relevant Site information made available to Prensa, interviews with available Site personnel and a visual inspection of accessible areas and destructive sampling techniques where necessary.

The methodology for assessing the hazardous building materials at the Site is presented in the following sections.

Asbestos-containing Materials – This component of the works was conducted to satisfy Part 4.3, Division 5 of the Victorian *Occupational Health and Safety Regulations 2007* and in accordance with the *WorkSafe Victoria Compliance Code Managing Asbestos in Workplaces, 2008*. When safe to do so, building materials that were suspected of containing asbestos were sampled at the discretion of the Prensa consultant. Samples of suspected ACM were analysed in Prensa’s laboratory, which is NATA accredited to conduct asbestos bulk sample analysis. The analysis was conducted using polarised light microscopy including dispersion staining techniques.

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

Lead-containing Paint – Representative painted surfaces were tested in locations for the presence of lead using the qualitative *LeadCheck* paint swab method. This method can detect lead in paint at concentrations of 0.5% and above, and may indicate lead in some paint films as low as 0.2%. It is noted that AS 4361.2 – 1998 *Guide to lead paint management – Part 2: Residential and commercial buildings* defines lead paint as paint with a lead content greater than 1% by dry weight. In some circumstances, laboratory analysis may be recommended to quantitatively determine the content of lead in the paint.

The sampling program attempts to be representative of the various types of paints found at the Site. However, particular attention is paid to areas where LCPs were more likely to have been used (e.g. exterior gloss paints, window and door architraves and skirting boards). The objective of LCP identification in this Assessment is to highlight the presence of LCP within the Site building(s), not to specifically identify every location of LCP.

5 Findings

5.1 Document Review and Interviews

As part of this Assessment, Prensa requested copies of previous documentation pertaining to asbestos building materials at the Site.

Maribyrnong City Council made available to Prensa a previous survey report that had been carried out by Identifibre Pty Ltd, in 2007. The survey report (9982-1-Maribyrnong Asbestos Registers), is understood to be the most recent survey report for this building, however Prensa was unable to locate information relating to Building 242.1.

5.2 Analytical results

5.2.1 Asbestos Bulk Sample Analysis

A total of one (1) sample suspected to contain asbestos were collected and submitted to Prensa’s NATA accredited laboratory for analysis. The asbestos bulk sample analysis report is provided in **Appendix B: NATA Endorsed Laboratory Sample Analysis Report(s)** of this Assessment report. In summary, zero (0) samples were reported to contain asbestos.

5.3 Assessment Findings

The findings of this Assessment are presented in tabulated format in **Appendix C: Hazardous Building Materials Register** of this Assessment report. Hazardous building materials that have been photographed are depicted in **Appendix D: Photographs** of this Assessment report.

5.3.1 Asbestos-containing Materials

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

5.3.2 Synthetic Mineral Fibre Materials

Sarking insulation material in the roof lining was suspected to contain SMF.

5.3.3 Lead-containing Paint

No LCP was identified or suspected during the Assessment.

Refer to **Appendix C: Hazardous Building Materials Register** for the details of these findings.

5.4 Areas not Accessed

Areas that are generally not accessed as part of Prensa's assessments are listed in **Appendix E: Areas Not Accessed**. Site-specific areas that were inaccessible during Prensa's Assessment and were deemed likely to contain asbestos are also listed in this **Appendix C: Hazardous Building Materials Register**.

6 Management Options

As per state legislation, all materials suspected of containing asbestos must be identified and recorded in a register. Furthermore, a risk assessment must be conducted of each hazardous building material and appropriate control measures implemented. The control measures have been determined based on reducing the risk of exposure, so far as is reasonably practicable. The control measures, which were determined by a competent person and/or hygienist, need to reflect the hierarchy of control outlined in specific state legislation and is as follows:

1. **Elimination/removal** (most preferred);
2. **Substitution**;
3. **Isolation**, such as erection of permanent enclosures encasing the material;
4. **Engineering** controls, such as negative air pressure enclosures for removal works, HEPA filtration systems;
5. **Administrative** controls – including the incorporation of registers and management plans, the use of signage, personnel training, safe work procedures, regular re-inspections and registers; and
6. The use of **Personal Protective Equipment (PPE)** (least preferred).

To manage the hazardous building materials, a combination of the above techniques may be required.

7 Site Specific Recommendations

Based on the findings of this Assessment, it is recommended that the following control measures be adopted as part of the management of the hazardous building materials at the Site.

Recommendations for specific items of hazardous building materials are also presented in **Appendix C: Hazardous Building Materials Register** of this Assessment report:

7.1 Asbestos-Containing Materials

A Hazardous Building Material Survey in accordance with Part 4.3, Division 6 of the Victorian Occupational Health and Safety Regulations, 2007 should be carried out prior to any demolition or refurbishment works. Any hazardous building materials identified within this survey should be removed prior to the commencement of any works that may cause disturbance - as per Australian Standard (AS) 2601:2001 *The Demolition of Structures*.

7.2 Synthetic Mineral Fibre Materials

SMF materials that are likely to be disturbed during any proposed demolition/refurbishment works should be handled in accordance with the National *Code of Practice for the Safe Use of Synthetic Mineral Fibres* [NOHSC:2006(1990)].

Appendix A: Risk Assessment Factors and Priority Ratings

Risk Assessment Factors

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

- Product type;
- Condition;
- Disturbance potential;
- Friability of the material;
- Proximity to direct air stream; and
- Surface treatment (if any).

The purpose of the material risk assessment is to establish the relative risk posed by specific hazardous building materials identified in this assessment. The following risk factors are defined to assist in determining the relative health risk posed by each item.

Condition

The condition of the hazardous building materials identified during the assessment is reported as being **good**, **fair** or **poor**.

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

Friability

The friability of a material describes the ease by which the material can be crumbled, which in turn, can increase the release of fibres into the air. Therefore, friability is only applicable to asbestos and SMF.

- **Friable asbestos** can be crumbled, pulverised, or reduced to powder by hand pressure, which makes it more dangerous than non-friable asbestos.
- **Non-friable asbestos**, more commonly known as bonded asbestos, is typically comprised of asbestos fibres tightly bound in a non-asbestos matrix. If accidentally damaged or broken these ACM may release fibres initially but will not continue to do so.
- **Bonded SMF** describes a synthetic fibrous material which has a specific designed shape and exists within a stable manufactured product. **Un-bonded SMF** is a loosely packed synthetic fibrous material which has no adhesive or cementitious binding properties.

Disturbance Potential

Hazardous building materials can be classified as having low, medium or high disturbance potential.

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

Health Risk Status

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

- A **low health risk** describes a material that poses a negligible or low health risk to occupants of the area due to the materials not readily releasing fibres (or other toxic/hazardous constituents) unless seriously disturbed.
- A **medium health risk** describes a material that pose a moderate health risk due to the material status and activity in the area.
- A **high health risk** describes a material that pose a high health risk to personnel or the public in the area of the material.

ACM Priority Rating System for Control Recommendations

While an assessment of health risk has been made, our recommendations have been prioritised based on the practicability of a required remedial action. In determining a suitable priority ranking, consideration has been given to the following:

- Level of health risk posed by the asbestos containing material;
- Potential commercial implications of the finding; and
- Ease of remediation.

As a guide the recommendation priorities have been given a timeframe as follows:

Priority 1 (P1):	ACM with High Risk Potential - Requiring immediate action
-------------------------	--

Status: Asbestos-containing materials which are either damaged or are being exposed to continual disturbance. Due to these conditions there is an increased potential for exposure and/or transfer of the material to other parts of the property if unrestricted use of the area containing the material is allowed.

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

Priority 2 (P2):	ACM with Medium Risk Potential – May require action in the short term
-------------------------	--

Status: Asbestos-containing materials with a potential for disturbance due to the following conditions:

- Material has been disturbed or damaged and its current condition, while not posing an immediate risk, is unstable.
- The material is accessible and can, when disturbed, present a short-term exposure risk.
- The material could pose an exposure risk if workers are in close proximity.

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

Priority 3 (P3):	ACM with Low Risk Potential – May require action in the medium term
-------------------------	--

Status: Asbestos-containing materials with a low potential for disturbance due to the following conditions:

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

Recommendation: Minor health risks if the material is left undisturbed under the control of an asbestos-containing materials management plan. Consider removal or encapsulation within 12 months of the damaged bonded asbestos-containing materials being identified.

Priority 4 (P4):	ACM with Negligible (very low) Risk Potential - Requiring ongoing management or longer term remedial action
-------------------------	--

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

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

Appendix B: NATA Endorsed Laboratory Sample Analysis Report

26 June 2014

David Cheng
Maribyrnong City Council
95 Sunshine Rd
West Footscray 3012

Dear David,

Asbestos Bulk Sample Analysis Report

6 Wests Road, Maribyrnong, 3032

Please find attached the asbestos bulk sample analysis results of the 1 sample collected by of Prensa Pty Ltd for 6 Wests Road, Maribyrnong, 3032 and received at the Prensa Pty Ltd laboratory (GF, 261-271 Wattletree Road, Malvern, VIC, 3144) on 26 June 2014. The sample was analysed on 26 June 2014 and the results are presented on the following page(s).

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

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

Regards,



Ellen Lawson
Prensa Signatory and NATA Approved Asbestos Fibre Identifier



Accredited for compliance with ISO/IEC 17025. Corporate Site Number 19121. This document shall not be reproduced except in full. Sampling is not covered by the scope of the NATA accreditation.

Asbestos Bulk Sample Analysis Report
6 Wests Road, Maribyrnong, 3032

Sample No	Sample Location / Description / Size	Result
15054 - 056 - 001	Internal - Walls throughout - Fibre cement sheet Fibro cement material 20 x 10 x 3 mm	No asbestos fibres detected Organic fibres detected

Only the samples submitted for analysis have been considered in presenting these results.

Appendix C: Hazardous Building Materials Register

Key to asbestos-containing materials priority risk rating:	
Priority 1 (P1):	High Priority - Requiring immediate action
Priority 2 (P2):	Medium Priority – May require action in the short term
Priority 3 (P3):	Low Priority – May require action in the medium term
Priority 4 (P4):	Very Low Priority - Requires ongoing management or longer term remedial action

Client Name: Maribyrnong City Council
Site Name: Maribyrnong River Children's Centre - Shed

Building Number: 242.1
Site Address: 6 Wests Road, Maribyrnong, 3032

Client No: M0070
Job No: 15054-056

Area / Level	Room & Location	Feature	Item Description	Hazard Type	Sample No.	Sample Status	Friability	Disturb. Potential	Condition	Risk Status	Quantity	Recommendations & Comments	Control Priority	Reinspect date	Photo No.
Ground Floor	Throughout	Walls	Fibre cement sheet	Asbestos	15054-056-001	Negative	-	-	-	-	-	-	-	-	-
Ground Floor	External	Eaves	Fibre cement sheet	Asbestos	Similar to 15054-056-001	Assumed Negative	-	-	-	-	-	-	-	-	-
Ground Floor	Roof lining	Insulation	Sarking insulation	SMF	-	Suspected Positive	Bonded	Low	Good	Low	20 m ²	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres (NOHSC: 2006 [1390]).	-	-	1

Appendix D: Photographs


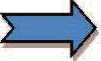
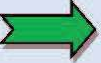
KEY	
	Confirmed or assumed ACM
	Confirmed or suspected other hazardous material type (SMF; PCB & lead paint)
	Confirmed or suspected non-ACM or other non-hazardous material



Photo 3. Bldg 242.1, roof lining, sarking insulation suspected to contain SMF.

Appendix E: Areas Not Accessed

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

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

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

Areas Not Accessed

Underneath the concrete slab of all building structures at the Site.

Exposed soils surrounding the building structures of the Site.

Energised services, gas, electrical, pressurised vessel and chemical lines.

Height restricted areas above 2.7m or any area deemed inaccessible without the use of specialised access equipment.

Within cavities that cannot be accessed by the means of a manhole or inspection hatch.

Within voids or internal areas of plant, equipment, air-conditioning ducts etc.

Within service shafts, ducts etc., concealed within the building structure.

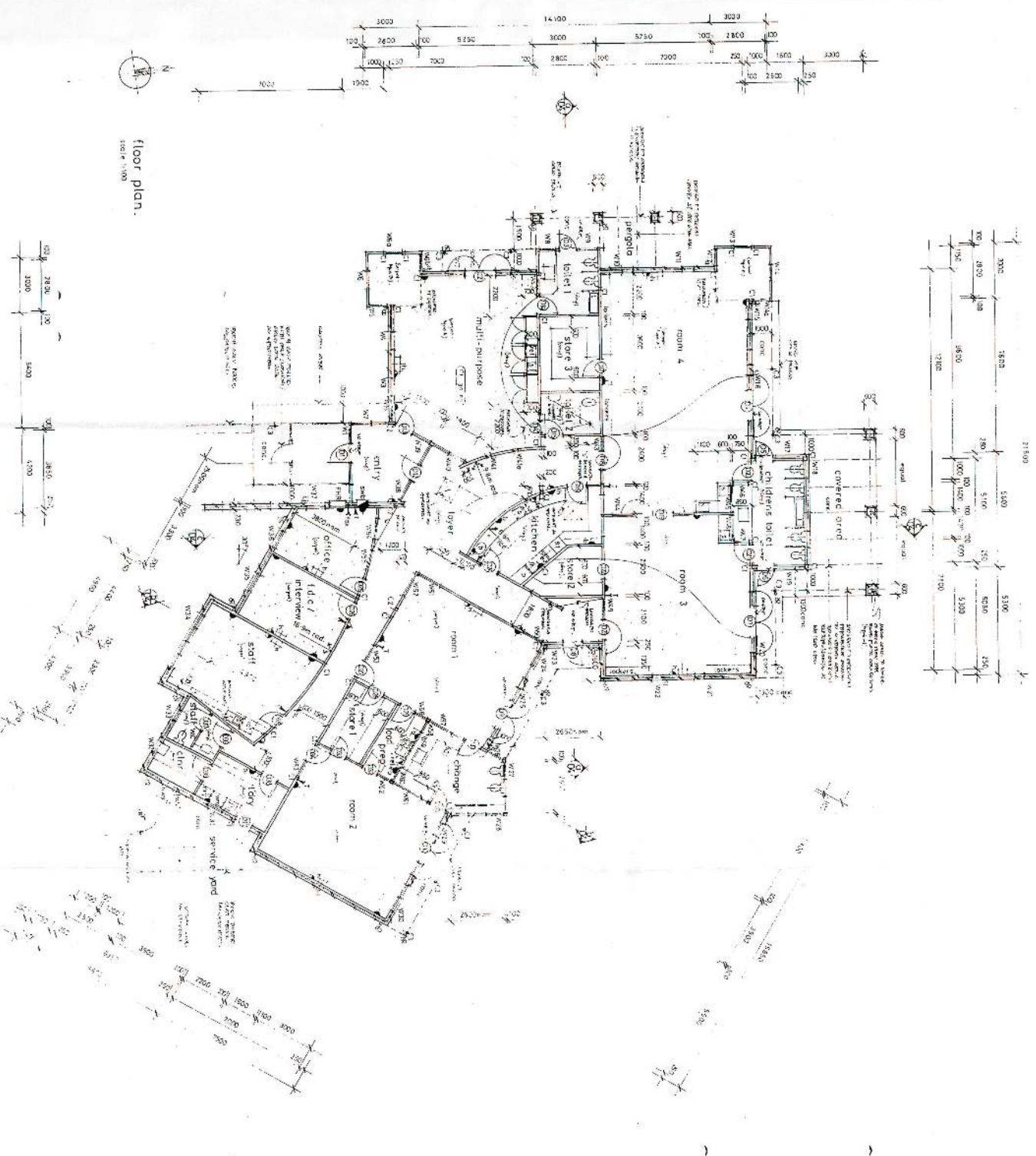
Within those areas accessible only by dismantling equipment.

Within totally inaccessible areas such as voids and cavities present but intimately concealed within the building structure.

All areas outside the Scope of Work.

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

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



floor plan.
scale 1:500

Wests Road Children's Centre
City of Maribyrnong

CITY OF MARIBYRNONG
 2939222 - 4188/888
 BUILDING APPROVAL
 WESTS ROAD CHILDRENS CENTRE
 WESTS ROAD, MARIBYRNONG
 CITY OF MARIBYRNONG
 FLOOR PLAN
 Date: 11/10/10
 Drawn: T. Chan
 Checked: T. Chan
 Project: 4722 W/A-02

member schedule

- C 1 2990x45 F5 SIMBL SITE
- C 2 6120x15 G15 R 7290x45 FIT CHAIR
- C 3 8830x12 CHS

Legend

- 1 Installation of hand
- 2 Installation of hand
- 3 Installation of hand
- 4 Installation of hand
- 5 Installation of hand
- 6 Installation of hand
- 7 Installation of hand
- 8 Installation of hand
- 9 Installation of hand
- 10 Installation of hand
- 11 Installation of hand
- 12 Installation of hand
- 13 Installation of hand
- 14 Installation of hand
- 15 Installation of hand
- 16 Installation of hand
- 17 Installation of hand
- 18 Installation of hand
- 19 Installation of hand
- 20 Installation of hand

electrical legend

- 1 Installation of hand
- 2 Installation of hand
- 3 Installation of hand
- 4 Installation of hand
- 5 Installation of hand
- 6 Installation of hand
- 7 Installation of hand
- 8 Installation of hand
- 9 Installation of hand
- 10 Installation of hand
- 11 Installation of hand
- 12 Installation of hand
- 13 Installation of hand
- 14 Installation of hand
- 15 Installation of hand
- 16 Installation of hand
- 17 Installation of hand
- 18 Installation of hand
- 19 Installation of hand
- 20 Installation of hand

NOTES

1. The contractor to provide and install all the equipment as shown on the drawings.
2. The contractor to provide and install all the equipment as shown on the drawings.
3. The contractor to provide and install all the equipment as shown on the drawings.
4. The contractor to provide and install all the equipment as shown on the drawings.
5. The contractor to provide and install all the equipment as shown on the drawings.