Acton Campus
Building # 10A
Hazardous Materials Report

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Report Version Date: 8/9/2015
HAZARDOUS MATERIALS SURVEY & REGISTER
BUILDING 10A
THE AUSTRALIAN NATIONAL UNIVERSITY
ACTON CAMPUS, ACTON, ACT, 2601
Author and Document Control

<table>
<thead>
<tr>
<th>Reference</th>
<th>Author</th>
<th>Reviewed/Approved</th>
<th>Approved</th>
<th>Date issued</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>C100710(10A) - R01</td>
<td>Tim Smith, Licensed Asbestos Assessor</td>
<td>Luke Nuttall, Licensed Asbestos Assessor, ACT Operations Manager</td>
<td>08/09/2015</td>
<td>08/09/2015</td>
<td>1 PDF</td>
</tr>
</tbody>
</table>

Prepared For:
The Facilities & Services Division
The Australian National University
Level 3, Anthony Low Building #124, Eggleston Road, ACTON, ACT, 2601

Prepared by:
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1 INTRODUCTION

Safe Work and Environments Pty Ltd (SWE) was commissioned by the Australian National University (ANU) Facilities & Services Division to undertake a Hazardous Materials Survey of Building 10A located at the ANU Acton Campus, Acton, ACT, 2601. The survey was undertaken by Mr. Tim Smith (Licensed Asbestos Assessor) on 21st May 2015. The purpose of the survey was to identify hazardous materials within the building, document findings and produce a current hazardous materials register for the site which can be incorporated into the site asbestos materials management plan in compliance with the ACT Dangerous Substances (General) Regulation (2004).

1.1 Scope of Works

The scope of works involved the following:

- Development of a task specific Safe Work Method Statement (SWMS);
- Walkthrough inspection of the site building/s;
- Identification of all visible and accessible hazardous materials including asbestos, lead, SMF, PCBs & ODSs;
- Sampling of suspect materials where necessary/possible;
- Laboratory analysis of selected samples where the assessor suspected the presence of asbestos or lead containing materials; and
- Preparation of a Hazardous Materials Register with photographs of identified hazardous items and site plans marked up to show the location of asbestos items.

1.2 Objectives

The objectives of the Hazardous Materials Survey are to:

- Identify hazardous materials within the building(s);
- Detail the survey methodology;
- Provide a qualitative risk assessment of the identified hazardous materials and provide information regarding health risks;
- Provide recommendations for control measures and management strategies;
- Prepare a document containing including the Hazardous Materials Register for the site to ensure compliance with regulation and the existing site management plan.

1.3 Background

The site has not been previously assessed by Safe Work and Environments. The purpose of the survey was to comply with current regulations and to identify asbestos containing materials within the building to enable the asbestos containing materials to be managed.

It is a requirement of the ACT Work Health and Safety Regulation 2011 that all non-domestic premises built before 31 December 2003 have in place an Asbestos Management Plan. These plans must be compiled by an ACT appropriately licensed Asbestos Assessor.
1.4 Legislative Requirements

The survey works and production of this report have been undertaken in accordance with the requirements of:

- ACT Work Health and Safety Regulation 2011.
2 SURVEY METHODOLOGY

Hazardous materials surveys (including asbestos (AS), synthetic mineral fibre (SMF [in friable and exposed condition]), lead based paint systems (Pb), Ozone Depleting Substances (ODS) and Polychlorinated Biphenyls (PCB)) are carried out applying a risk management approach to identify, assess and ultimately control the risk associated with the identified materials. Furthermore semi-quantitative asbestos risk assessment methodology was applied to assess the risk of all identified asbestos situations. This assessment methodology is presented in the below section 3.0 Asbestos Risk Assessment.

The survey comprises a walk through survey of the accessible areas of the premises and may also include the gathering of anecdotal information available from the public space, building occupants, owners and property management where available. Based upon the aforementioned information sources and physical inaccessibility on the day of the assessment, building fabric and fittings suspected of containing any of the above referenced hazardous materials are identified by means of visual observation and representative sampling. Sampling for asbestos and lead based paint systems will be confirmed by laboratory analysis. These findings will then be included in the hazardous materials register (Appendix A) with all notated items risk assessed as per the above mentioned methodology.

The surveys are typically limited to the experience and training of the surveyor(s) and the information and access made available at the time of the survey by the client. All SWE surveyors are trained in accordance with our in house hazardous materials consulting manual and work instructions for asbestos and hazardous materials surveys, which amongst other parameters requires that all surveyors are trained by and ‘shadowed’ on numerous diverse sites by a competent and experienced surveyor prior to carrying out independent surveys. There is, however, still a possibility that some hazardous (asbestos) materials may not be identified as any surveying is subject to human error.

Where necessary the surveyor will sample suspected hazardous material situations to confirm or refute the presence asbestos fibres or other hazardous item within the sampled materials. All sampling is undertaken by use of representative sampling which caters for numerous similar situations when appropriate. This means that a close inspection of all similar situations within the site is carried out, however, sampling may not be undertaken to reduce the risk of disturbance of materials, exposure to occupants and surveyor and analytical costs for client. Some sampling is also conducted as what is referred to as presumptive sampling. Presumptive samples may be included in the hazardous materials register where no actual sample is collected but there is reason to presume that a hazardous material may be present; however, no access and/or safe access for sampling and/or no visual access can be obtained. Examples of typical presumptive samples are millboard insulation to electrical duct heaters, electrical backing boards, lift brake linings and similar. Sample collection is conducted in a non-destructive and non-invasive manner.

A standard hazardous materials survey does not include access and inspection of any areas that will require special access permits or other means of access to restricted areas such as confined spaces, work at height, isolation of energy services, live equipment and mechanical building services, partial demolition of structures and similar access limitations.

All properties will have concealed materials in its current state that cannot be accessed or revealed prior to demolition or refurbishment of the structure(s). Ongoing assessment of building materials is recommended and required during any such structural work and should be carried out by hazardous materials awareness trained personnel. Where any suspected material is uncovered an experienced hazardous materials consultant should be contacted to sample, risk assess and document the finding(s).
3 HAZARDOUS MATERIALS RISK ASSESSMENT

3.1 Asbestos

Asbestos is considered a health risk whenever a potential asbestos fibre release is likely to occur. The health risk posed by asbestos containing materials and products in premises are due to a number of risk factors including:

- Condition of the material;
- Friability of the material;
- Airborne potential of the material;
- Accessibility of the material; and
- Location of the material.

A risk level for asbestos products or materials can be determined by multiplying the hazard level for the given asbestos type* by the 5 variants (above) which have also been assigned hazard levels (Table 1). The risk assessment methodology used in our assessment is based on the Australian Standard AS4360-1999, “Risk Management”.

A qualitative Asbestos materials risk assessment is undertaken each time an asbestos survey or re-survey of the site/property or structures is conducted and detailed in an Asbestos Report Register (ARR). The risk assessments are performed by competent persons only. Each asbestos situation is allocated either a ‘High’, ‘Moderate’, ‘Low’ or ‘Nil’ risk rating (Table 2). These ratings are defined as follows:

- **High Risk**: There is an immediate exposure risk to anyone entering the area due to friable material which has already been disturbed or there is a short term exposure risk to anyone entering the area (usually a friable or poorly bonded material in an average or poor condition). Immediate action is required to restrict access and stop the spread of fibres or dust as well as plan for decontamination and remedial works.

- **Moderate risk**: Due to the material status and/or activity in the area. Usually applies to bonded materials in a state of minor deterioration and in moderate to high activity levels, or accessible friable materials in good condition.

- **Low Risk**: Poses a negligible or low risk to occupants of the area due to the material being in sound condition unless seriously disturbed. Usually applies to bonded or sealed products in at least average condition, or materials with no or low accessibility.

The risk assessment of the asbestos containing material is to be reviewed when:

- The Asbestos Management Plan is reviewed;
- Further asbestos or ACM is identified at the workplace;
- Asbestos is removed from or disturbed, sealed, enclosed or undergoes any other change in condition;
- There is evidence that the risk assessment is no longer valid;
- There is evidence that control methods are not effective; or
- A significant change is proposed for the workplace or for work practices or procedures relevant to the risk assessment.

Alternatively an asbestos risk assessment review is to be conducted every 5 years if not effected by one or more of the aforementioned variables. This is to be performed by a competent person.
### Table 1: Asbestos risk assessment factors.

<table>
<thead>
<tr>
<th>Asbestos Type* – Hazard Level 0 - 2</th>
<th>Condition – Hazard Level 1 to 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 No Asbestos Detected (NAD)</td>
<td>1 No sign of damage/deterioration, non-friable</td>
</tr>
<tr>
<td>1 Non-friable</td>
<td>2 Mild damage/deterioration, friable by force</td>
</tr>
<tr>
<td>2 Friable</td>
<td>3 Severe damage/deterioration, very friable</td>
</tr>
</tbody>
</table>

**Accessibility – Hazard Level 1 to 3**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fully concealed behind a false wall or ceiling, sealed/painted. Inaccessible due to height.</td>
</tr>
<tr>
<td>2</td>
<td>Partial encapsulation, low activity area, low exposure to weathering and/or physical impact.</td>
</tr>
<tr>
<td>3</td>
<td>No encapsulation, high activity area; exposed to weathering, people and maintenance.</td>
</tr>
</tbody>
</table>

**Airborne Potential – Hazard Level 1 to 3**

<table>
<thead>
<tr>
<th></th>
<th>Exposure potential – Hazard Level 1 to 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Material not present in common air space.</td>
</tr>
<tr>
<td>2</td>
<td>Material exposed to natural ventilation</td>
</tr>
<tr>
<td>3</td>
<td>Material exposed to forced ventilation (A/C, fans)</td>
</tr>
</tbody>
</table>

### Table 2: Asbestos risk score, status and action priority categories.

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Risk Status</th>
<th>Action Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>50+</td>
<td>High (H)</td>
<td>Immediate action should be taken (Materials that pose an immediate or elevated health risk to employees and/or general public – assessed as in poor condition / very friable).</td>
</tr>
<tr>
<td>20 - 49</td>
<td>Moderate (M)</td>
<td>Removal or encapsulation and regular monitoring of the material is recommended (likely potential for further deterioration, instability and an increased risk of exposure).</td>
</tr>
<tr>
<td>1 - 19</td>
<td>Low (L)</td>
<td>Label, maintain and review (Products or materials that pose little health risk to employees and/or general public – assessed as stable, non-friable, low access)</td>
</tr>
<tr>
<td>0</td>
<td>Nil (N)</td>
<td>No action necessary</td>
</tr>
</tbody>
</table>

**Note:** Where any planned maintenance, refurbishment or demolition works will disturb ACM, licensed removal is recommended.

### 3.2 Synthetic Mineral Fibres

The risk assessment factors for SMF are similar to those of asbestos including:

- Evidence of physical damage;
- Accessibility to material;
- Likelihood of disturbance;
- Accessibility to exposed areas; and
- Environmental and occupational conditions.

**High Risk:** Friable synthetic mineral fibre exposed and readily accessible.

**Moderate Risk:** Friable synthetic mineral fibre or damaged bonded material which due to its present condition and/or location is likely to be further damaged resulting in fibre release.

**Low Risk:** Non-friable or seated stable friable material that is unlikely to present a risk to health unless damaged, tooled, cut, sanded or machined.
3.3 Lead

Lead when inhaled or ingested is toxic to humans. The lead containing paint risk assessment factors are assessed based on these two exposure routes on human receptors (infants, children, adults or contractors). These factors include:

- Likelihood of inhalation or ingestion;
- Likelihood of disturbance;
- Condition of the paint system; and
- Environmental and occupational conditions.

**High Risk:** Damaged or deteriorated paint membrane, which due to its present condition and location, presents a significant health risk.

**Moderate Risk:** Paint membrane showing signs of deterioration and weathering which if left will continue to deteriorate and require abatement that is more extensive.

**Low Risk:** Stable paint membrane that is in good condition and/or covered by a lead-free paint membrane, which is also in a good condition.

Lead paint is defined by the Australian Standard (AS 4361.2 – 1998 Guide to lead paint management Part 2: Residential and Commercial buildings) as a paint or component coat of a paint system containing lead or lead compounds, in which the lead content (calculated as lead metal) is in excess of 1.0% by weight of the dry film as determined by laboratory testing.

### 3.3.1 Lead-containing dusts

Settled dust containing lead in ceilings spaces, voids and cavities is in fine particles and has a potential for greater bioavailability causing serious long-term health problems on the brain, kidneys and reproductive organs. Human exposure is through inhalation or ingestion. Routes of exposure and risk assessment factors include:

- Areas of exposed soil adjacent to the building;
- Type of materials and age of the building;
- Refurbishment works conducted on the building;
- Distance from roads, commercial garages and mining/smelting operations;
- Dust fall rates and carpet wear; and
- Nature of paint work.

The below lead dust guidelines are extracted from Australian Standards AS 4361.2-1998, Section 5.6.4.2 (Surface Dust Lead Loadings) after lead paint management activities. The permissible amount of leaded dust remaining on each of the following surfaces following lead hazard work is:

- 1 mg/m² on floors (carpeted or uncarpeted)
- 5 mg/m² on interior window sills (or stools).
- 8 mg/m² on window troughs (the area where the sash sits when closed).
- 8 mg/m² on exterior concrete.
3.4 Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are a set of persistent organic chemicals that are known or suspected to cause a wide range of health effects. There is clear evidence that PCBs cause cancer in animals, and they are considered probable human carcinogens [U.S. Environmental Protection Agency (EPA) 1996]. Human and animal data provide evidence that PCBs have significant toxic effects, including effects on the immune system, the reproductive system, the nervous system, and the endocrine system.

**High Risk:** PCB oil leaking from the component item under consideration.

**Low Risk:** Component item is in good condition. Unlikely to present a risk to health unless capacitor is damaged or deteriorates.

3.5 Ozone Depleting Substances (ODS)

The risk assessment factors for Ozone Depleting Substances (ODS) are similar to those of asbestos including:

- Evidence of physical damage;
- Accessibility to material;
- Likelihood of disturbance;
- Leakage;
- Accessibility to exposed areas; and
- Environmental and occupational conditions.
4 STATEMENT OF LIMITATIONS

This report and the associated services performed by SWE are in accordance with the scope of services set out in the contract between SWE and the Client. The scope of services was defined by the requests of the Client, by the time and budgetary constraints imposed by the Client, and by the availability of access to the Subject Site.

SWE derived the data in this report primarily from research, visual inspections, examination of available records, interviews with individuals with information about the site, and if requested, limited sample collection and analysis made on the dates indicated. In preparing this report, SWE has relied upon, and presumed accurate, certain information provided by government authorities, the Client and others identified herein. Except as otherwise stated in the report, SWE has not attempted to verify the accuracy or completeness of any such information.

Limitations also apply to analytical methods used in the identification of substances [refer to examples a), b) and c) below]. These limitations may be due to non-homogenous material being sampled (i.e. the sample to be analysed may not be representative), low concentrations, the presence of ‘masking’ agents and the restrictions of the approved analytical technique. As such, non-statistically significant sampling results can only be interpreted as ‘indicative’ and not used for quantitative assessments.

a). Due to the very low concentration of asbestos fibres and the non-homogenous matrix of vinyl floor tiles, false negative results may be obtained. Therefore the accuracy of all results cannot be guaranteed.

b). Notably, with some asbestos containing bulk material it can be very difficult, or impossible to detect the presence of asbestos using the polarised light microscopy analytical method, even after ashing or disintegration of samples. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or attributed to the fact that, very fine fibres have been distributed individually throughout the materials.

c). The analysis of many asbestos products used as a component of insulation materials, may be compromised in instances where the material has been heat affected, as heat may alter the morphology of the fibrous material.

No warranty, undertaking, or guarantee, whether expressed or implied, is made with respect to the data reported or to the findings, observation, conclusions and recommendations expressed in this report. Furthermore, such data, findings, observations, conclusions and recommendations are based solely upon the existence at the time of the investigation. The passage of time, manifestation of latent conditions or impacts of future events (e.g. changes in legislation, scientific knowledge, land uses, etc) may require further investigation at the site with subsequent data analysis and re-evaluation of the findings, observation, conclusions and recommendations expressed in this report.

This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the provisions of the agreement between SWE and the Client. SWE accepts no liability or responsibility whatsoever and expressly disclaims any responsibility for or in respect of any use of or reliance upon this report by any third party or parties.
APPENDIX A

HAZARDOUS MATERIALS REGISTER
### Site Location:
Building 10A, ANU

### Assessor:
T. Smith - Safe Work & Environments

### Inspection Date:
21 May 2015

### Reinspection Date:
May 2020 or as specified within comments

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Results</th>
<th>Photo ID</th>
<th>Description</th>
<th>Location</th>
<th>Asbestos Type</th>
<th>Condition</th>
<th>Accessibility</th>
<th>Airborne Potential</th>
<th>Exposure Potential</th>
<th>Risk Score</th>
<th>Action Priority</th>
<th>Quantity (m, m², m³)</th>
<th>Actions/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asbestos Containing Materials</strong></td>
<td></td>
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</tr>
<tr>
<td>No Asbestos Containing Materials found on Day of Inspection</td>
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<td></td>
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<tr>
<td><strong>Lead Containing Materials</strong></td>
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<td>No Lead Containing Materials found on Day of Inspection</td>
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<tr>
<td><strong>PCB Containing Materials</strong></td>
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<td></td>
</tr>
<tr>
<td>No PCB Containing Materials found on Day of Inspection</td>
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<td></td>
</tr>
<tr>
<td><strong>ODS Containing Materials</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual Observation</td>
<td>ODS</td>
<td>2</td>
<td>ODS (Refrigerant 22)</td>
<td>External; Level 1 Building 10A South Side 2 Smaller Units.</td>
<td>-</td>
<td>G</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>L</td>
<td>2</td>
<td>Label and maintain in current condition. Review condition of asbestos material by May 2020. Remove prior to refurbishment or demolition.</td>
<td></td>
</tr>
<tr>
<td><strong>SMF Containing Materials</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Visual Observation</td>
<td>SMF</td>
<td>3</td>
<td>Ceiling Insulation</td>
<td>Building 10A, Internal; Level 2, Insulation above suspended ceiling.</td>
<td>-</td>
<td>G</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>L</td>
<td>300m²</td>
<td>Good condition. Remove prior to refurbishment or demolition.</td>
<td></td>
</tr>
<tr>
<td>Visual Observation</td>
<td>SMF</td>
<td>4</td>
<td>Suspended Ceiling Tiles</td>
<td>Building 10A, Internal; Level 2, ceiling tiles to suspended ceiling.</td>
<td>-</td>
<td>G</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>L</td>
<td>300m²</td>
<td>Good condition. Remove prior to refurbishment or demolition.</td>
<td></td>
</tr>
<tr>
<td>Visual Observation</td>
<td>SMF</td>
<td>5</td>
<td>Pipe Insulation</td>
<td>Building 10A, Internal; Level 1, north side office.</td>
<td>-</td>
<td>G</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>L</td>
<td>11m</td>
<td>Good condition. Remove prior to refurbishment or demolition.</td>
<td></td>
</tr>
</tbody>
</table>
### No Asbestos Detected

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Results</th>
<th>Photo ID</th>
<th>Description</th>
<th>Location</th>
<th>Asbestos Type</th>
<th>Condition</th>
<th>Accessibility</th>
<th>Airborne Potential Exposure</th>
<th>Exposure Potential</th>
<th>Risk Score</th>
<th>Action Priority</th>
<th>Quantity (m, m², m³)</th>
<th>Actions/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>10A/Int/A01</td>
<td>NAD</td>
<td>-</td>
<td>Fire Door Core Insulation</td>
<td>Building 10A, Internal; Level 1, door to chancelery Building (Door Plated 1990's).</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>No action required.</td>
<td>2 m²</td>
<td>No action required.</td>
</tr>
<tr>
<td>10A/Int/A02</td>
<td>NAD</td>
<td>-</td>
<td>Green Speckled Vinyl Floor Tile</td>
<td>Building 10A, Internal; Level 1, records room, eastern internal wall.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15 m²</td>
<td>No action required.</td>
<td>15 m²</td>
<td>No action required.</td>
</tr>
</tbody>
</table>

### No Lead Paint Detected

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Results</th>
<th>Photo ID</th>
<th>Description</th>
<th>Location</th>
<th>Asbestos Type</th>
<th>Condition</th>
<th>Accessibility</th>
<th>Airborne Potential Exposure</th>
<th>Exposure Potential</th>
<th>Risk Score</th>
<th>Action Priority</th>
<th>Quantity (m, m², m³)</th>
<th>Actions/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>C100710(10A)/L01</td>
<td>&lt;0.05% w/w</td>
<td>-</td>
<td>White Paint</td>
<td>Building 10A, Internal; Level 1, wall paint to masonry walls.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>&gt;100 m²</td>
<td>No action required.</td>
<td>&gt;100 m²</td>
<td>No action required.</td>
</tr>
</tbody>
</table>

### No Access Areas

The following areas were not accessible at the time of the inspection:

- Level 1 Electrical Switchboard Building 10A near exit door to Chancelry Building
- Level 1 Locked Cupboard under Eastern End Fire Stairs
APPENDIX B
PHOTOGRAPHS
Photograph 1: ANU – Building 10A, Chancelry Building Acton, Act, 2601.

Photograph 2: External Refrigerant 22 (ODS) to Level 1 South Side (x2) Smaller Units Bldg 10A.

Photograph 3: Internal SMF Ceiling Insulation above Suspended Ceiling Level 2 Building 10A.

Photograph 4: Internal SMF Suspended Ceiling Tiles to Level 2 Building 10A.

Photograph 5: Internal SMF Pipe Insulation to Level 1 North Side Office Bldg 10A.
APPENDIX C
SITE PLANS
No asbestos containing materials were found to be positive from the 2 samples taken on 21 May 2015.
No asbestos containing materials were found to be positive from the 2 samples taken on 21 May 2015
APPENDIX D

HAZARDOUS MATERIALS MAINTENANCE LOG
HAZARDOUS MATERIALS MAINTENANCE LOG

The following log should be maintained by the responsible person. It should contain information relating to the on-going maintenance or control measures associated with ACM including removal, remedial works, repairs, inspection, monitoring and clearance details etc.

<table>
<thead>
<tr>
<th>Date</th>
<th>Scope / Location</th>
<th>Carried out by</th>
<th>Result/Comments</th>
<th>Entered by</th>
</tr>
</thead>
<tbody>
<tr>
<td>21/05/2015</td>
<td>Hazardous Materials Survey &amp; Register</td>
<td>Tim Smith – Safe Work &amp; Environments</td>
<td>Hazardous Materials Survey &amp; Register produced and delivered</td>
<td>Tim Smith - Safe Work Environments Pty Ltd</td>
</tr>
</tbody>
</table>
APPENDIX E
CERTIFICATE/S OF ANALYSIS
22 May 2015

**Attention:** Michael Wright  
**Company:** Facility & Services Division, Australian National University  
**Fax/email:** Michael.wright@anu.edu.au  
**Address:** Level 3, Anthony Low Building #124, Eggleston Road, Acton, ACT, 2601

SWE Reference: C100710(10A)  
Client Reference: Building 10A, Australian National University, Acton, ACT, 2601.  
Date of Receipt: 21st May 2015  
NATA Accreditation No: 17092

**Asbestos Identification**  
This report presents the results of two (2) samples taken by Tim Smith (Senior WHS&E Consultant) on 21st May 2015 for analysis for asbestos.

1. **Introduction:** Two samples were examined and analysed as received for the presence of asbestos.

2. **Methods:** The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized light Microscopy in conjunction with Dispersion Staining.

3. **Results:**

<table>
<thead>
<tr>
<th>SWE Ref.</th>
<th>DATE ANALYSED</th>
<th>SAMPLE DESCRIPTION</th>
<th>DIMENSIONS (mm) or (grams)</th>
<th>ASBESTOS DETECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>10A/Int/A01</td>
<td>22/05/2015</td>
<td>Insulation material</td>
<td>0.35g</td>
<td>No Asbestos Detected</td>
</tr>
<tr>
<td>10A/Int/A02</td>
<td>22/05/2015</td>
<td>Vinyl tile</td>
<td>398 x 51 x 2</td>
<td>No Asbestos Detected*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adhesive</td>
<td></td>
<td>No Asbestos Detected</td>
</tr>
</tbody>
</table>

*No asbestos detected by Polarized Light Microscopy in conjunction with Dispersion Staining technique. An independent confirmatory analytical technique is advised due to the nature of the sample.*

**Methodology:** Qualitative identification of asbestos type fibres in bulk using Polarised Light Microscope carried out in accordance with AS4964-2004 and SWE’s *In-House Method 3 – Fibre Identification*. The collection of the sampling is not covered under the below NATA Accreditation Scope.

**NATA Accreditation Number:** 17092  
**NATA Accreditation Scope:** 7.82.31 – Asbestos Fibre Identification  
7.84.31 – Asbestos

Analysed and reported by:  

![Signature](signature.png)

**Rune Knoph**  
Approved Identifier/Signatory

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The results of the tests, calibrations and/or measurements in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025.
CERTIFICATE OF ANALYSIS

Client: Safe Work & Environments
35/103 Majors Bay Rd
Concord
NSW 2137

Attention: Tim Smith

Sample log in details:
Your Reference: ANU
No. of samples: 3 paints
Date samples received / completed instructions received 22/05/15 / 22/05/15

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:
Date results requested by: / Issue Date: 29/05/15 / 26/05/15
Date of Preliminary Report: Not Issued
NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025. Tests not covered by NATA are denoted with *.

Results Approved By:

Envirolab Reference: 128364
Revision No: R 00

Page 1 of 6
<table>
<thead>
<tr>
<th>Lead in Paint</th>
<th>Our Reference:</th>
<th>UNITS</th>
<th>128364-1</th>
<th>128364-2</th>
<th>128364-3</th>
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</thead>
<tbody>
<tr>
<td>Your Reference</td>
<td>-----------------</td>
<td>23/Ext/Pb1</td>
<td>C100710</td>
<td>C100710</td>
<td>(48)/L01</td>
</tr>
<tr>
<td>Type of sample</td>
<td>---------------</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
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<tr>
<td>Date Sampled</td>
<td>-----------</td>
<td>19/05/15</td>
<td>19/05/15</td>
<td>21/05/15</td>
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</tr>
<tr>
<td>Date prepared</td>
<td>-</td>
<td>25/05/2015</td>
<td>25/05/2015</td>
<td>25/05/2015</td>
<td></td>
</tr>
<tr>
<td>Date analysed</td>
<td>-</td>
<td>25/05/2015</td>
<td>25/05/2015</td>
<td>25/05/2015</td>
<td></td>
</tr>
<tr>
<td>Lead in paint</td>
<td>% w/w</td>
<td>0.73</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td></td>
</tr>
<tr>
<td>Method ID</td>
<td>Methodology Summary</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>-----------</td>
<td>---------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metals-004</td>
<td>Digestion of Paint chips/scrapings/liquids for Metals determination by ICP-AES/MS and or CV/AAS.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUALITY CONTROL</td>
<td>UNITS</td>
<td>PQL</td>
<td>METHOD</td>
<td>Blank</td>
<td>Duplicate Sm#</td>
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<tr>
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<td>-------</td>
<td>-----</td>
<td>--------</td>
<td>-------</td>
<td>---------------</td>
</tr>
<tr>
<td>Lead in Paint</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>25/05/2 015</td>
<td>[NT]</td>
</tr>
<tr>
<td>Date prepared</td>
<td>-</td>
<td>-</td>
<td>25/05/2 015</td>
<td>[NT]</td>
<td>[NT]</td>
</tr>
<tr>
<td>Date analysed</td>
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<td>-</td>
<td>25/05/2 015</td>
<td>[NT]</td>
<td>[NT]</td>
</tr>
<tr>
<td>Lead in paint</td>
<td>% w/w</td>
<td>0.05</td>
<td>Metals-004</td>
<td>&lt;0.05</td>
<td>[NT]</td>
</tr>
</tbody>
</table>

Envirolab Reference: 128364
Revision No: R 00
Report Comments:

Asbestos ID was analysed by Approved Identifier: Not applicable for this job
Asbestos ID was authorised by Approved Signatory: Not applicable for this job

INS: Insufficient sample for this test
NA: Test not required
<: Less than
PQL: Practical Quantitation Limit
RPD: Relative Percent Difference
>: Greater than
NT: Not tested
NA: Test not required
LCS: Laboratory Control Sample
Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.