HAZARDOUS MATERIALS MANAGEMENT REGISTER

City of Parramatta

B003261, Riverside Theatres

Corner Church and Market Streets

Nov 2018

17273

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JMB ENVIRONMENTAL CONSULTING

EXECUTIVE SUMMARY

JMB Environmental Consulting Pty Ltd (JMBEC) were commissioned by City of Parramatta to conduct a Hazardous Materials Management Register for the building located at Corner Church and Market Streets.

The inspection was conducted on 14/09/2018, and the following items were identified:

ASBESTOS

NO ASBESTOS DETECTED
No asbestos containing materials were identified at this inspection.
Please refer to Appendix A for the full materials register, Appendix B for recommended action code guidance and Appendix E for guidance on possible risk mitigation strategies than can be adopted on these materials.

LEAD PAINT

NO LEAD PAINT DETECTED
No lead based paints were identified at this inspection.
Please refer to Appendix A for the full materials register, Appendix B for recommended action code guidance and Appendix E for guidance on possible risk mitigation strategies than can be adopted on these materials.

DOCUMENT CONTROL

DOCUMENT NO.	DATA ENTRY		APPROVED & AUTHORISED	
	DATE	PERSONEL	DATE	PERSONEL
17273B00326114092018HMMR	14/09/2018	Charly Golding	09/10/2018	Rob Whitehouse

PREVIOUS DOCUMENTATION

NO PREVIOUS DOCUMENTATION DATA FOUND

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INTRODUCTION

BUILDING INFORMATION

ASSET #:	B003261
BUILDING NAME:	Riverside Theatres
BUILDING ADDRESS:	Corner Church and Market Streets
BUILDING DESCRIPTION:	Multiple story building, brick walls, metal sheet roof and metal rain water goods
APPROXIMATE AGE:	1980

SCOPE OF WORKS

REPORT TYPE	Hazardous Materials Management Register
OBJECTIVE	To locate, identify and assess the human exposure risks associated with hazardous materials. For the purpose of this report hazardous materials includes: • Asbestos and Lead
THE CLIENT	City of Parramatta
AREA COVERED BY THE SCOPE	Whole Building
MATERIALS COVERED BY THE SCOPE	Asbestos and Lead
LEAD SURVEYOR	Charly Golding
LEAD SURVEYOR LAA NO.	N/A
ASSISTANT SURVEYOR	Jim Batty
ASSISTANT SURVEYOR LAA NO.	LAA001272
INSPECTION DATE	14/09/2018
SAMPLE METHODOLOGY	Based on the assessor experience, if any suspect asbestos containing materials are encountered, they will be sampled using dust suppression techniques and correct sampling methodology for the material being sampled. JMBECs sampling methodology has been omitted from this report due to file size, but is available on request. In summary, asbestos containing materials were sampling in accordance with the United Kingdom HSE guidance HSG264 for the most part with guidance also taken from Safework Australia's model code of practice (CoP) How to manage and control asbestos in the workplace. Free versions of both these documents are freely available online from the respective publishing institutions. This is with the exception of sampling frequency, which will be largely reduced for large areas of visually assessed homogenous

	materials, in these locations representative or composite sampling techniques may be used at the surveyor's discretion after visually inspecting the material in its entirety. This methodology will be discussed with the client as and when the presence of larger sections of potentially asbestos containing materials are discovered, namely, but not limited to, large sections of insulated pipework, false ceiling tiles and large fiber cement surfaces. Similarly to the sampling methods described above lead paint and SMF products will be sampled using similar RPE, PPE, dust suppression and decontamination techniques to limit exposure pathways to the surveyor and building occupants and eliminate cross contamination. As previously, limited representative samples of large areas of homogenous materials will be taken. If lead dust is suspected, swab samples were taken in accordance with Section 5.6: Clearance testing and Appendix C: Standard Practice for Determining of Lead in Surface Dust of AS/NZS-4361.2-2017 Guide to lead paint management Residential and commercial buildings. The majority of SMF products will be visually assessed only. All sampled asbestos and SMF materials are double bagged, and lead materials single bagged, and transported under strict chain of custody to National Australian Testing Authority (NATA) accredited laboratories for analysis. Where possible a representative number of fluorescent light fittings were assessed for the likely presence of capacitors that may contain PCB oils. Where suspect capacitors were identified, the details of the capacitors were noted and crossreferenced with the publication, Identification of PCB-containing Capacitors, ANZECC, 1997. Where the electrical equipment was still live, internal inspection and/or sampling was not possible due to the inherent hazard to safety. Where recorded capacitor details were not identified in the ANZECC publication, potential PCB content was determined based on the electrical component's type, shape, encasing material, age and comparative weight. ODS are not sampled, but the type and weight of the coolant used will be visually assessed based on the equipment data plate if visible or presumed in other cases. All samples of materials suspected to contain asbestos and lead were collected and analysed at a NATA Accredited Laboratories.
PRESUMED SAMPLES	Where it is unsafe to access a material for close inspection or sampling (e.g.high level eaves, live electrical panels etc.), or access prohibits close inspection but the assessor has encountered materials in similar area in the past (e.g. textile asbestos flash pads in fuses), the material or area will be presumed to contain the relevant hazardous material until proven otherwise.They are then risk assessed and photographed in the same way as sampled materials.
INACCESSIBLE AREAS	While maximum effort was made to inspect all areas, when access was unavailable and where practicable avenues of inspection had been exhausted, a reason was provided and the

	area deemed to contain ACM/HAZMAT until otherwise determined. Specific areas of no or limited access, that are not encompassed or detailed in the scope or survey limitations, are detailed within the Register which can be found in Appendix A.

LEGISLATIVE REQUIREMENTS & GUIDANCE

The following legislation and guidance documents govern the management of hazardous contaminants contaminants throughout NSW.

This report was prepared in accordance with the following documents:

ASBESTOS AND OTHER HAZARDOUS MATERIALS

NO.	DOCUMENT NAME
LEGISLATION	
1	Work Health and Safety (WHS) Act NSW (2011 [reviewed 2016]).
2	WHS Regulation NSW 2017.
3	Ozone Protection and Synthetic Greenhouse Gas Management Regulations NSW (1996 [amended 2016]).
4	NSW Protection of the Environment Operations Act (1997).
STANDARDS	
5	AS/NZS4361.2 (2017) Guide to Lead Paint Management, Part 2: Residential and Commercial Buildings.
6	National Occupational Health and Safety Commission (NOHSC):1012 (1994), National Standard for the Control of Inorganic Lead at Work.
7	NOHSC: 1004 (1990), National Standard for Synthetic Mineral Fibres.
8	AS 1319 (1994). Safety Signs for the Occupational Environment.
9	AS/New Zealand Standard (NZS) 1716 (2003), Respiratory Protective Devices.
10	AS/NZS 1715 (2009), Selection, Use and Maintenance of Respiratory Protective Devices.
11	The Australian and New Zealand Environment Conservation Council (ANZECC, 1996), Polychlorinated Biphenyls Management Plan.
12	Australian Commonwealth Government. (2015). Standard for the Uniform Scheduling of Medicines and Poisons, Section Seven/Appendix I: Paints or Tinters.
13	AIOH Exposure Standards Committee (2016), Synthetic Mineral Fibres (SMF) and Occupational Hygiene Issues (3rd Edition).
14	Australian Standard (AS) 4964 (2004) Method for the qualitative identification of asbestos in bulk samples.
CODES OF PRACTICE	
15	NOHSC: 2006 (1990), National Code of Practice for the Safe Use of Synthetic Mineral Fibres.
16	ANZECC (1997) Identification of PCB-containing Capacitors: An information booklet for Electricians and Electrical Contractors.
17	United Kingdom Health & Safety Executive. (2012). Health and Safety Guidance 264, Asbestos: The survey guide.

18	NOHSC:2015 (1994), National Code of Practice for the Control and safe use of Inorganic Lead at Work.
19	Safework Australia (2016), How to Manage and Control Asbestos in the Workplace: Code of Practice.
20	Safework Australia (2016), How to Safely Remove Asbestos: Code of Practice.
21	National Occupational Health and Safety Commission (NOHSC):3003 (2005), Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres. 2nd Edition
22	Workcover NSW (2008), Your Guide to Working with Asbestos.
23	National Occupational Health and Safety Commission. (1989). 3006: Guidance Note on the Membrane Filter Method for the Estimation of Airborne Synthetic Mineral Fibres.
24	United Kingdom Health & Safety Executive. (2002). Health and Safety Guidance 227, A Comprehensive Guide to Management of Asbestos in Premises.
25	United Nations Environment Program (UNEP, 2001) Inventory of Trade Names of Chemical Products Containing Ozone Depleting Substances and their Alternatives.

HAZARDOUS SUBSTANCES

ASBESTOS

Asbestos is a naturally occurring mineral fibre, consisting of two groups:

- Serpentine Group – comprised of only chrysotile (white asbestos)
- Amphibole Group – comprised of anthophyllite, amosite (brown asbestos or grey asbestos), crocidolite (blue asbestos), tremolite, and actinolite.

Due to its flexibility, tensile strength, insulating properties (both heating and electrical), chemical inertness and affordability, asbestos was widely regarded as one of the most versatile materials during the mid 20th Century.

These properties made asbestos a very popular material, and it was used in many industries and applications worldwide. Australia was one of the highest users per capita in the world up until the mid- 1980s. It is approximated that one third of all homes built in Australia contain asbestos products. Raw asbestos was mined extensively throughout Australia until the mid 1980s.

Asbestos containing materials (ACMs) are categorised as friable and non-friable:

- Non-friable asbestos is usually bonded in a matrix after it has been mixed with other materials like cement or plastics. Non friable asbestos is most commonly found in the built environment.
- Friable asbestos is defined as any asbestos material in a powder form or can be crumbled, pulverised or reduced to a powder by hand pressure when dry_ and is much more likely to become airborne.

Both friable and non-friable asbestos pose a significant health risk to all workers and others, and as such are governed by strict regulations and codes of practice. Asbestos containing materials must be identified and then properly managed until a time when they are to be carefully removed.

The Work Health Safety (WHS) Regulations set out the training and competency requirements for asbestos assessors, asbestos removal workers and supervisors. Under the Regulations, two licenses have been established — Class A and Class B. Businesses with a Class A license are permitted to remove all types of asbestos, including both friable and non-friable asbestos. Businesses with a Class B license can only remove non-friable asbestos.

The WHS Regulations have also created a new license for asbestos assessors, whom must be employed to carry out air monitoring and clearance inspections following removal of friable asbestos.

In a special note to asbestos containing dusts (ACD), settled dusts can contain free fibres, in areas adjacent to friable, low density or heavily damaged non-friable products, or even in locations of large quantities of good to moderate condition non-friable products will be considered to be generated from the wear and tear or installation of the non-friable product. The level of risk of requirements for remedition of ACD will depend on the severity of the damage and the type of product (friable, non-friable or low density) that the dust is identified to have originated from. Dust sampling for asbestos can only be done in a qualitative manner, to establish presence or absence of asbestos.

LEAD BASED PAINTS

Lead-based paint is paint containing lead that was used as pigment. The heavy metal was added to paint to speed drying, increase durability and for moisture resistance.

Like all paint systems, leaded paint will chip, flake and peel over time, leading to contamination of indoor dust and exterior surrounding soils. Lead does not biodegrade, and so lead dust is a long-term exposure problem.

Lead is especially damaging to young children who are still developing, pregnant women and to unborn and new born babies via their pregnant or breast feeding mothers. Lead affects the hematopoietic, neurologic, gastrointestinal, and reproductive systems, but predominantly the nervous system. High levels of exposure can result in miscarriage in women, and may affect fertility in men.

Lead has also been proven to affect a child's mental and physical growth. Unborn children can be exposed through their mothers. Harmful effects include premature birth, smaller babies, decreased mental ability in the infant, learning difficulties and reduced growth in young children.

Lead paint has been used extensively throughout residential and commercial buildings in Australia, and it was only in 1997 that the allowable level of lead in residential and commercial paint in Australia went down to 0.1% which is still higher than the US 1978 standard of less than 0.06% lead.

AS/NZS4361.2-2017 Guide to lead paint management Residential and commercial buildings defines lead paint as paint film or component coat of a paint system in which the lead content (calculated as lead metal) is in excess of 0.1% by weight of the dry film as determined by laboratory testing, thus bringing it in-line with the legislation for paint manufacture. Additionally however, the Work Health and Safety Regulation 2017 Section 7.2 (h) states that 'Lead machine sanding or buffing surfaces coated with paint containing more than 1% by dry weight of lead' constitutes a lead process.

However, research has previously shown that machine sanding or buffing surfaces coated with paint containing more 0.25% by dry weight of lead metal can lead to soil and dust concentrations which exceed the clearance levels given in AS/NZS4361 Guide to Lead Paint Management.

The standard also goes on to say at levels as low as 0.25%, the dust generated by dry sanding and abrasive blast cleaning can have sufficient lead content to produce levels exceeding exposure limits. It is generally accepted within the industry that paints exceeding 0.25% require precautions when working on them.

Finally lead is classified as a reproductive toxicant and as such the GHS and Safework Australia HCIS consider any mixture (or alloy) with a reproductive toxicant combined component (such as lead) of greater than or equal to 0.3% to present a reproductive risk and be labelled and controlled under GHS classifications. Furthermore, the Safework Australia HCIS specifically recommends no abrasive blasting be undertaken on any lead products (mixtures and alloys) over 0.1% due to the risk of exceeding exposure standards. As such further restrictions should be considered for these products to limit abrasive treatment and hot works that create excessive contaminated fumes, dust and particulate.

JMBEC acknowledge that outside of occupational exposure, legislated and recommended limits, it is widely accepted that there is no level of lead exposure that can be considered completely risk free particularly to susceptible individuals such as children, pregnant women and breast feeding mothers. We also recognise that other mixture components could also be reproductive toxins.

As such the following applies to the classification of the paints found on site:

- Concentrated Lead paint (> 1.0% w/w Pb)
- Formally First Schedule Paint (≥ 0.25% w/w Pb)
- Lead Paint (≥ 0.1% w/w Pb)
- Considered a negligible risk as a lead mixture (<0.1% w/w Pb)

LEAD DUST

Lead swab samples were taken in accordance with Section 5.6: Clearance testing and Appendix C: Standard Practice for Determining of Lead in Surface Dust of AS/NZS4361.2-2017 Guide to lead paint management Residential and commercial buildings.

This guidance document stipulates the following lead dust loadings for clearance purposes:

- 1mg/m2 for interior floors,
- 5mg/m2 for interior window sills, and

- 8mg/m2 for exterior surfaces

Should the area be due for demolition, other avenues of control and remedition can be considered as part of an overall demolition occupational health and safety management plan to reduce the risk to workers without having to achieve the clearance levels above.

LEAD PRODUCTS

Lead containing products (such as batteries) or Lead containing alloys (such as flashing) will be identified on site visually during the survey.

Products and bulk materials containing lead should be stored and managed as per GHS hazard classification rules and WHS regulations and should be considered and labelled a class 1A reproductive toxin if containing a combined level of lead, and any other class 1 reproductive toxin, to a level greater or equal to 0.3%.

In addition, lead alloys and materials noted to be built into the fabric of the building material, should not be subjected to un controlled abrasive or hot working methods that will give off particulate and fumes. Works of this type on these material should be considered a lead process and be controlled accordingly. In particular no abrasive blasting should be undertaken on any lead mixture with a concentration of lead greater or equal to 0.1% as per Safework Australia HCIS guidelines.

LIMITATIONS

This Hazmat Register has been prepared in line with an agreement made between JMBEC and City of Parramatta, and was developed following a site inspection carried out by an experienced and qualified licensed asbestos assessor. The methodology used is in accordance with the codes of practice listed in the previous section. As such this report is solely for the use of City of Parramatta, and is intended for use by no other person(s) or parties. It should be presented in full, and should not be used to support other objectives or documents without written approval from JMBEC.

To the best of our knowledge, this report is thorough and correct, however JMBEC cannot guarantee complete accurateness. This report relates to the identification of asbestos containing materials and, while every attempt has been made to locate all Hazardous materials, the extent of the site inspection was limited to non-destructive sampling. This restricts any major damage to building materials such as ceilings, walls and partitions, and flooring etc.

In light of this, no guarantees are made that any area of Corner Church and Market Streets is absolutely free of asbestos materials since future refurbishment or demolition may reveal asbestos containing materials. JMBEC would strongly advise conducting a destructive survey for the presence of asbestos on specific areas of the building before any major works begin.

Specific exclusions are captured within the Register located in Appendix A. Until such a time that these areas can be accessed, the probability of the presence of asbestos containing materials must be assumed until proven otherwise.

JMBEC cannot be accountable for any omissions to this report resulting from information, data, systems or areas of the building not made readily accessible by City of Parramatta.

The following areas are not regarded as ‘inaccessible areas’ and therefore inspected as part of the scope or presumed to contain asbestos subject to safe or reasonable access:

- Locked rooms;
- Crawl Spaces, that are not considered confined space by the surveyor;
- Confined spaces where safe access has been provided by City of Parramatta;
- Heights below 3m;
- Heights above 3m, where safe access has been provided by City of Parramatta;
- Within electrical equipment, where isolation and safe access has been proven and provided by City of Parramatta;
- Basement and cellars;
- Storage areas; and
- Ceiling spaces where safe access has been provided by City of Parramatta.

If safe access is not provided by City of Parramatta for hazardous areas, these areas will be listed specifically for their limited access with reasons for City of Parramatta reference.

Examples of inaccessible areas that may contain asbestos or ACM:

- A cavity in a building that is completely (or almost completely) enclosed and suspected of containing asbestos (based on where asbestos is located elsewhere in the building) and access is only possible through destruction of part of the walls of the cavity;

- The inner lining of an old boiler pressure vessel (information on this type of vessel suggests it contain asbestos) and the inner lining is not accessible due to the design and operation of the boiler and access can only be via partial destruction of the outer layer;
- Vinyl tiles that may contain asbestos, which have had a number of layers of non-ACM placed over them and secured - where the layers above it have been well secured and require some form of destruction in order to access to vinyl that may contain asbestos;
- Enclosed riser shafts in multi-storey buildings containing cables that may be insulated with ACM.
- Air conditioning ducts that may contain asbestos gaskets, linings or insulation panels; and
- Sub-surface soils, concrete encased form work, cable ducts or pipework (beyond survey scope).

Areas not accessed are deemed to contain HAZMATs until such a time that access can be gained and the presence, or otherwise, of HAZMAT can be confirmed.

APPENDICES

APPENDIX A: REGISTER

Photos of identified materials are included in Appendix C, and are listed by their sample/reference number in the order listed in the register below.

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friability	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES
1	B003261-A5.1	Asbestos	No asbestos detected	Asbestos Cement	External, GF, External Courtyard, East, Wall sheeting	20 m^2	Non-Friable	n/a	A5	-
2	B003261-L18.12	Lead	<0.1 %w/w	Grey top coat	External, GF, External Courtyard, Walls	30 Linear meters	n/a	n/a	A5	-
3	B003261-L21.14	Lead	<0.1 %w/w	Black top coat	External, GF, External Courtyard, Metal framework and rain water goods	70 Linear meters	n/a	n/a	A5	-
4	B003261-L24.2	Lead	4.1% w/w	Orange top coat	External, GF, External Riverside walkway, Metal structural beams	30 Linear meters	n/a	Low	A4	Annual Reinspection
5	B003261-L25	Lead	<0.1 %w/w	Brown top coat to blue undercoat	External, GF, External Riverside walkway, Metal handrails	20 Linear meters	n/a	n/a	A5	-
6	B003261-L18.11	Lead	<0.1 %w/w	Grey top coat	External, GF, External Riverside walkway, Concrete structural columns	30 Linear meters	n/a	n/a	A5	-
7	B003261-L26	Lead	<0.1 %w/w	Cream top coat to light blue undercoat	External, GF, External Riverside walkway, Metal decorative panels between handrails	30 Linear meters	n/a	n/a	A5	-
8	B003261-L12.7	Lead	<0.1 %w/w	White top coat	External, GF, External Riverside walkway, Metal canopy	80 Linear meters	n/a	n/a	A5	-
9	B003261-L2.2	Lead	<0.1 %w/w	Blue undercoat	External, GF, External throughout, Metal gutters	25 Linear meters	n/a	n/a	A5	-

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (insert link to relevant register in docsies)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friability	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES
10	B003261-L1.4	Lead	<0.1 %w/w	Green top coat to brown undercoat	External, GF, External throughout, Door frames throughout	8 Linear meters	n/a	n/a	A5	-
11	B003261-L25.1	Lead	<0.1 %w/w	Brown top coat to blue undercoat	External, GF, External throughout, Metal framework to building	20 Linear meters	n/a	n/a	A5	-
12	B003261-L25.2	Lead	<0.1 %w/w	Brown top coat to blue undercoat	External, GF, External throughout, Window Frames throughout	40 Linear meters	n/a	n/a	A5	-
13	B003261-L2.1	Lead	<0.1 %w/w	Blue top coat to white undercoat	External, GF, External throughout, Doors & shutters throughout	20 Linear meters	n/a	n/a	A5	-
14	B003261-L18.5	Lead	<0.1 %w/w	Grey top coat	External, GF, External throughout, Metal gutters	25 Linear meters	n/a	n/a	A5	-
15	B003261-L21.13	Lead	<0.1 %w/w	Black top coat	External, GF, External throughout south elevation, Door and door frames throughout south elevation	50 Linear meters	n/a	n/a	A5	-
16	B003261-L21.11	Lead	<0.1 %w/w	Black top coat	Internal, L2, Lennox Theatre catwalk, Ceilings	120 m^2	n/a	n/a	A5	-
17	B003261-L8.4	Lead	<0.1 %w/w	Green top coat to blue undercoat	Internal, L2, Lennox Theatre catwalk, Doors & door frames	6 m^2	n/a	n/a	A5	-
18	B003261-L1.3	Lead	<0.1 %w/w	Green top coat to brown undercoat	Internal, L2, Lennox Theatre catwalk, Metal handrails and framework	30 Linear meters	n/a	n/a	A5	-
19	B003261-L21.12	Lead	<0.1 %w/w	Black top coat	Internal, L2, Riverside Theatre catwalk, Ceilings	150 m^2	n/a	n/a	A5	-

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (insert link to relevant register in docsies)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friability	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES
20	B003261-L1.6	Lead	<0.1 %w/w	Green top coat to brown undercoat	Internal, L2, Riverside Theatre catwalk, Metal handrails and framework	30 Linear meters	n/a	n/a	A5	-
21	B003261-L8.5	Lead	<0.1 %w/w	Green top coat to blue undercoat	Internal, L2, Riverside Theatre catwalk, Doors & door frames	6 m^2	n/a	n/a	A5	-
22	B003261-L18.10	Lead	<0.1 %w/w	Grey top coat	Internal, L1, Dressing rooms 3,4,5,6, Walls	30 m^2	n/a	n/a	A5	-
23	B003261-L14.4	Lead	<0.1 %w/w	Grey top coat	Internal, L1, Dressing rooms 3,4,5,6, Timber wall paneling	30 m^2	n/a	n/a	A5	-
24	B003261-A8	Asbestos	No asbestos detected	Bitumen coating to underside of drainer	Internal, L1, Lunch area, Sink unit	1 Linear meters	Non-Friable	n/a	A5	-
25	B003261-L24	Lead	4.1% w/w	Orange top coat	Internal, L1, Plant Room 1, Electrical box	14 m^2	n/a	Low	A4	Annual Reinspection
26	B003261-L3.1	Lead	0.21% w/w	Red undercoat	Internal, L1, Plant Room 1, Metal pipework & ladder	10 Linear meters	n/a	Very Low	A4	Annual Reinspection
27	B003261-L5.1	Lead	<0.1 %w/w	Blue top coat to white undercoat	Internal, L1, Plant Room 1, Metal Ductwork	14 m^2	n/a	n/a	A5	-
28	B003261-L24.1	Lead	4.1% w/w	Orange top coat	Internal, L1, Plant Room 2, Electrical box	14 m^2	n/a	Low	A4	Annual Reinspection
29	B003261-L3.2	Lead	0.21% w/w	Red undercoat	Internal, L1, Plant Room 2, Metal pipework & ladder	10 Linear meters	n/a	Very Low	A4	Annual Reinspection

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (insert link to relevant register in docsies)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friability	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES
30	B003261-L5.2	Lead	<0.1 %w/w	Blue top coat to white undercoat	Internal, L1, Plant Room 2, Electrical box	14 m^2	n/a	n/a	A5	-
31	B003261-L22	Lead	<0.1 %w/w		Internal, GF, Bar Area, Walls	80 m^2	n/a	n/a	A5	-
32	B003261-L14.3	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Bar Area, Floor paint	15 m^2	n/a	n/a	A5	-
33	B003261-L17.3	Lead	<0.1 %w/w	Red top coat	Internal, GF, Bar Area/ Box office, Walls	15 m^2	n/a	n/a	A5	-
34	B003261-A5	Asbestos	No asbestos detected	Asbestos Cement	Internal, GF, Bar Storage room, Wall sheeting to external wall	10 m^2	Non-Friable	n/a	A5	-
35	B003261-L21	Lead	<0.1 %w/w	Black top coat	Internal, GF, Café, Walls surrounding café	20 m^2	n/a	n/a	A5	-
36	B003261-L18.13	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Covered walkway to north of courtyard, Walls	30 m^2	n/a	n/a	A5	-
37	B003261-L11	Lead	0.41% w/w	Red top coat	Internal, GF, Dressing room 1, Metal gas pipework throughout ground floor	10 Linear meters	n/a	Low	A4	Annual Reinspection
38	B003261-L14	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Dressing room 1, Timber wall paneling	10 m^2	n/a	n/a	A5	-
39	B003261-L12	Lead	<0.1 %w/w	White top coat	Internal, GF, Dressing room 1, Walls	20 m^2	n/a	n/a	A5	-

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (insert link to relevant register in docsies)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friability	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES
40	B003261-A4	Asbestos	No asbestos detected	Asbestos Cement	Internal, GF, Dressing room 1, Boxing panels	4 m^2	Non-Friable	n/a	A5	-
41	B003261-L15	Lead	<0.1 %w/w	Light blue topcoat with yellow undercoat	Internal, GF, Dressing room 1 toilets, Walls	15 m^2	n/a	n/a	A5	-
42	B003261-L12.2	Lead	<0.1 %w/w	White top coat	Internal, GF, Dressing room 2, Walls	20 m^2	n/a	n/a	A5	-
43	B003261-L14.1	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Dressing room 2, Timber wall paneling	10 m^2	n/a	n/a	A5	-
44	B003261-L15.1	Lead	<0.1 %w/w	Light blue topcoat with yellow undercoat	Internal, GF, Dressing room 2 toilets, Walls	15 m^2	n/a	n/a	A5	-
45	B003261-L14.2	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Dressing rooms 7&8, Timber wall paneling	10 m^2	n/a	n/a	A5	-
46	B003261-L18.9	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Dressing rooms 7&8, Walls	30 m^2	n/a	n/a	A5	-
47	B003261-L13.1	Lead	<0.1 %w/w	Grey top coat	Internal, GF, East side of courtyard throughout , Doors and door frames	50 m^2	n/a	n/a	A5	-
48	B003261-L19	Lead	0.1% w/w	Light brown top coat to blue undercoat	Internal, GF, Fire exit lobby to courtyard, Metal Frame work	2 m^2	n/a	Low	A4	Annual Reinspection
49	B003261-L20	Lead	<0.1 %w/w	Dark blue top coat to light blue undercoat	Internal, GF, Fire exit lobby to courtyard, Metal Handrails	4 linear meters	n/a	n/a	A5	-

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (insert link to relevant register in docsies)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friability	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES
50	B003261-L17	Lead	<0.1 %w/w	Red top coat	Internal, GF, Fire exit lobby to courtyard, Walls	15 m^2	n/a	n/a	A5	-
51	B003261-A7	Asbestos	No asbestos detected	Compressed board	Internal, GF, Food Prep area to east of building, Lining panels to food counter	2 m^2	Non-Friable	n/a	A5	-
52		Lead	No or limited access potential hazardous materials present within inaccessible areas		Internal, GF, Kitchen Area , No access within fridges due to being locked			N/a	NA	-
53	B003261-A6	Asbestos	No asbestos detected	Asbestos Cement	Internal, GF, Kitchen Area Cupboard, Panel to door surround	2 m^2	Non-Friable	n/a	A5	-
54	B003261-L21.7	Lead	<0.1 %w/w	Black top coat	Internal, GF, Kitchen Area Cupboard, Walls	10 m^2	n/a	n/a	A5	-
55	B003261-L8.3	Lead	<0.1 %w/w	Green top coat to blue undercoat	Internal, GF, Laundry Room, Timber built cupboards	4 m^2	n/a	n/a	A5	-
56	B003261-L10.1	Lead	<0.1 %w/w	Dark yellow top coat	Internal, GF, Laundry Room, Walls lower level	10 m^2	n/a	n/a	A5	-
57	B003261-L9.2	Lead	<0.1 %w/w	Light yellow top coat	Internal, GF, Laundry Room, Walls high level	10 m^2	n/a	n/a	A5	-
58	B003261-L21.3	Lead	<0.1 %w/w	Black top coat	Internal, GF, Lennox Theatre, Stage Floor	40 m^2	n/a	n/a	A5	-
59	B003261-L21.4	Lead	<0.1 %w/w	Black top coat	Internal, GF, Lennox Theatre, Walls	40 m^2	n/a	n/a	A5	-

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (insert link to relevant register in docsies)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friability	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES
60	B003261-L12.5	Lead	<0.1 %w/w	White top coat	Internal, GF, Lennox Theatre, Walls	15 m^2	n/a	n/a	A5	-
61	B003261-L18.1	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Lobbies x2 to west of riverside theatre, Walls	30 m^2	n/a	n/a	A5	-
62	B003261-L17.2	Lead	<0.1 %w/w	Red top coat	Internal, GF, Lobbies x2 to west of riverside theatre, Walls	15 m^2	n/a	n/a	A5	-
63	B003261-L16.1	Lead	<0.1 %w/w	Grey top coat with yellow undercoat	Internal, GF, Lobby leading to courtyard, Walls	20 m^2	n/a	n/a	A5	-
64	B003261-L18	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Main lobby area, Walls	15 m^2	n/a	n/a	A5	-
65	B003261-L21.9	Lead	<0.1 %w/w	Black top coat	Internal, GF, Male/ female and disabled toilets, Doors/ door frames	6 m^2	n/a	n/a	A5	-
66	B003261-L21.10	Lead	<0.1 %w/w	Black top coat	Internal, GF, Male/ female and disabled toilets, Ceiling's	18 m^2	n/a	n/a	A5	-
67	B003261-L18.2	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Male/ female and disabled toilets, Walls	40 m^2	n/a	n/a	A5	-
68	B003261-L18.4	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Office to east of female toilets, Walls	25 m^2	n/a	n/a	A5	-
69	B003261-L18.3	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Office to east of main entrance door, Walls	14 m^2	n/a	n/a	A5	-

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (insert link to relevant register in docsies)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friability	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES
70	B003261-L8.1	Lead	<0.1 %w/w	Green top coat to blue undercoat	Internal, GF, Operations manager, Window surround	3 m^2	n/a	n/a	A5	-
71	B003261-L12.3	Lead	<0.1 %w/w	White top coat	Internal, GF, Operations manager, Walls	20 m^2	n/a	n/a	A5	-
72	B003261-L9.3	Lead	<0.1 %w/w	Light yellow undercoat	Internal, GF, Production room, Walls beneath green and blue	15 m^2	n/a	n/a	A5	-
73	B003261-L12.4	Lead	<0.1 %w/w	White top coat	Internal, GF, Production room, Walls	15 m^2	n/a	n/a	A5	-
74	B003261-L21.5	Lead	<0.1 %w/w	Black top coat	Internal, GF, Rafferty's Theatre, Stage Floor	20 m^2	n/a	n/a	A5	-
75	B003261-L21.6	Lead	<0.1 %w/w	Black top coat	Internal, GF, Rafferty's Theatre, Walls	40 m^2	n/a	n/a	A5	-
76	B003261-L12.6	Lead	<0.1 %w/w	White top coat	Internal, GF, Rafferty's Theatre, Walls	20 m^2	n/a	n/a	A5	-
77	B003261-L1.5	Lead	<0.1 %w/w	Green top coat to brown undercoat	Internal, GF, Riverside Theatre, Metal lifting equipment framework	6 m^2	n/a	n/a	A5	-
78	B003261-L10.2	Lead	<0.1 %w/w	Dark yellow top coat	Internal, GF, Riverside Theatre, Metal lifting equipment framework hinges	10 m^2	n/a	n/a	A5	-
79	B003261-L17.1	Lead	<0.1 %w/w	Red top coat	Internal, GF, Riverside Theatre, Concrete Columns	40 m^2	n/a	n/a	A5	-

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (insert link to relevant register in docsies)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friability	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES
80	B003261-L21.1	Lead	<0.1 %w/w	Black top coat	Internal, GF, Riverside Theatre, Walls	120 m^2	n/a	n/a	A5	-
81	B003261-L21.2	Lead	<0.1 %w/w	Black top coat	Internal, GF, Riverside Theatre, Stage Floor	30 m^2	n/a	n/a	A5	-
82	B003261-L23	Lead	<0.1 %w/w	Purple top coat to red undercoat	Internal, GF, Riverside Theatre, Walls and metal fixed ladders	20 m^2	n/a	n/a	A5	-
83	B003261-L21.8	Lead	<0.1 %w/w	Black top coat	Internal, GF, Seating area to east of building, Walls and ceilings	120 m^2	n/a	n/a	A5	-
84	B003261-L18.7	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Storage room and 3 offices to rear off Rafferty's , Walls	30 m^2	n/a	n/a	A5	-
85	B003261-L1.2	Lead	<0.1 %w/w	Green top coat to brown undercoat	Internal, GF, Technical office, Walls	12 m^2	n/a	n/a	A5	-
86	B003261-L9.1	Lead	<0.1 %w/w	Light yellow top coat	Internal, GF, Technical office, Walls	15 m^2	n/a	n/a	A5	-
87	B003261-L12.1	Lead	<0.1 %w/w	White top coat	Internal, GF, Technical office, Ceiling	12 m^2	n/a	n/a	A5	-
88		Lead	No or limited access potential hazardous materials present within inaccessible areas		Internal, GF, Throughout, No access above 2.7 meters high due to height restrictions			N/a	NA	-
89	B003261-A3.1	Asbestos	No asbestos detected	Asbestos insulation board	Internal, GF, Throughout first floor, Door internal lining	4 m^2	Non-Friable	n/a	A5	-

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (insert link to relevant register in docsies)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friability	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES
90	B003261-L8.2	Lead	<0.1 %w/w	Green top coat to blue undercoat	Internal, GF, Walkway, Timber built cupboards	10 m^2	n/a	n/a	A5	-
91	B003261-L16	Lead	<0.1 %w/w	Grey top coat with yellow undercoat	Internal, GF, Walkway, Walls	50 m^2	n/a	n/a	A5	-
92	B003261-L18.6	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Walkway running behind Rafferty's, Walls	30 m^2	n/a	n/a	A5	-
93	B003261-L18.8	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Walkway to north of Rafferty's, Walls	30 m^2	n/a	n/a	A5	-
94	B003261-L1.1	Lead	<0.1 %w/w	Green top coat to brown undercoat	Internal, GF, Westside of Ground Floor, Doors throughout ground floor	50 m^2	n/a	n/a	A5	-
95	B003261-L13	Lead	<0.1 %w/w	Grey top coat	Internal, GF, Whole Ground Floor, Door frames	50 m^2	n/a	n/a	A5	-
96	B003261-L6	Lead	<0.1 %w/w	Black top coat to red undercoat	Internal, B1, Orchestra Pit, Doors & door frames	4 m^2	n/a	n/a	A5	-
97	B003261-A3	Asbestos	No asbestos detected	Asbestos insulation board	Internal, B1, Orchestra Pit, Door internal lining	2 m^2	Non-Friable	n/a	A5	-
98	B003261-L6.1	Lead	<0.1 %w/w	Black top coat to red undercoat	Internal, B1, Orchestra Pit, Walls & Ceiling	35 m^2	n/a	n/a	A5	-
99	B003261-L7	Lead	0.12% w/w	Grey top coat	Internal, B1, Stairs to basement, Floor paint	20 m^2	n/a	Low	A4	Annual Reinspection

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (insert link to relevant register in docsies)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friability	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES
100	B003261-L10	Lead	<0.1 %w/w	Dark yellow top coat	Internal, B1, Stairs to basement, Lower level dark yellow	15 m^2	n/a	n/a	A5	-
101	B003261-L8	Lead	<0.1 %w/w	Green top coat to blue undercoat	Internal, B1, Stairs to basement, Metal Handrails	8 Linear meters	n/a	n/a	A5	-
102	B003261-L9	Lead	<0.1 %w/w	Light yellow top coat	Internal, B1, Stairs to basement, Higher level light yellow	15 m^2	n/a	n/a	A5	-
103	B003261-L7.1	Lead	0.12% w/w	Grey top coat	Internal, B1, Substage, Floor paint	30 m^2	n/a	Very Low	A4	Annual Reinspection
104	B003261-A2	Asbestos	No asbestos detected	Mastic	Internal, B1, Substage, Mastic to metal ductwork	3 Linear meters	Non-Friable	n/a	A5	-
105	B003261-L5	Lead	<0.1 %w/w	Blue top coat to white undercoat	Internal, B1, Substage, Metal Ductwork	8 Linear meters	n/a	n/a	A5	-
106	B003261-A1	Asbestos	No asbestos detected	Asbestos Cement	Internal, B1, Walkway, Panels around high level cabling	2 m^2	Non-Friable	n/a	A5	-
107	B003261-L3	Lead	0.21% w/w	Red top coat	Internal, B1, Whole Level, Metal gas pipework throughout basement	15 Linear meters	n/a	Very Low	A4	Annual Reinspection
108	B003261-L1	Lead	<0.1 %w/w	Green top coat to brown undercoat	Internal, B1, Whole Level, Door frames throughout basement	10 m^2	n/a	n/a	A5	-
109	B003261-L4	Lead	<0.1 %w/w	Cream top coat	Internal, B1, Whole Level, Walls	100 m^2	n/a	n/a	A5	-

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (insert link to relevant register in docsies)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friability	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES
110	B003261-L2	Lead	<0.1 %w/w	Blue top coat to white undercoat	Internal, B1, Whole Level, Doors throughout basement	25 m^2	n/a	n/a	A5	-

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (insert link to relevant register in docsies)

APPENDIX B: RISK ASSESSMENT AND RECOMMENDATION ACTION CODES

RISK ASSESSMENT

Docsies risk assessment is explained, in tables 2 and 3. Our semi-quantitative risk assessment borrows elements from the materials risk assessment documented in HSG264: Asbestos: The survey guide – HSE and the priority risk assessment documented in HSG 227: A comprehensive guide to Managing Asbestos in premises – HSE, providing an element of quantification to the qualitative nature of site risk assessment.

Some of the elements of these well documented risk assessments have been omitted. Most notably the asbestos type from the materials risk assessment, as all types of asbestos are listed by the International Agency for Research on Cancer (IARC) as Type 1 Carcinogens. In addition we have omitted the maintenance activity from HSG 277. The reason being that human risk factors associated with maintenance activities are often difficult to assess in-situ, and require detailed input from the Person in Control of a Business of Undertaking (PCBU).

The risk assessment then takes into account all other Hazardous materials, and utilizes the similar algorithms to create a risk assessment for those materials.

The asbestos containing material risk score is a quantitative assessment determined by the sum of the scores based on the material assessment and the likelihood of exposure; i.e. Risk score = Material Score + Location Score (out of as possible 18).

An explanation of the material assessment and likelihood of exposure scores can be found in the further below.

Table 1 – Risk Scores

OVERALL RISK ASSESSMENT SCORE	OVERALL RISK RATING
0 - 4	Very Low
5-8	Low
9-13	Moderate
14-18	High

RECOMMENDATION ACTION CODES

Following the risk assessment of building materials for both asbestos containing and other Hazardous Materials an action score is assigned for recommended best practice to control the risk presented by the hazardous material. The action score will be assigned according to the surveyor's assessment of the situation at the time of the survey.

Table 2 – Overarching Recommended Risk Control Actions

Action Code	Risk Control Recommended Actions
A1	Restrict Access and remove under controlled conditions with licensed contractors
A2	Remove, enclose, encapsulate or seal by licensed contractors followed by a re-inspection and maintenance schedule under a management plan. Remove prior to refurbishment or Demolition by licensed contractors.
A3	Enclose, encapsulate or seal by appropriately trained general maintenance or licensed contractors. Implement re-inspection, maintenance and demolition schedule under a management plan. Remove or protect prior to refurbishment or demolition by licensed contractors or competent individuals as required.
A4	No remedial action required. Implement re-inspection and maintenance schedule under a management plan.
A5	No further action required
NA	Access to survey to be gained prior to refurbishment, demolition or modification of building materials in the area of limited or no access. In some situations access should be provided to survey prior to occupancy if a room is inaccessible.

Further interpretation of the recommended risk control actions can be found in Appendix E.

MATERIALS ASSESSMENT

Table 3 – Product Type (or debris)

EXAMPLES OF MATERIALS - ASBESTOS	EXAMPLES OF MATERIALS - HAZMAT	SCORE
Asbestos reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, asbestos cement etc)	SMF composite products / insulation batts / woven products, Lead paint, Lead Compounds/Alloys/Products, Small PCB containing electrical capacitors	1
Asbestos insulating board, mill boards, other low density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt	RCF woven/treated products, Lead paint flakes, Industrial PCB containing industrial transformers	2
Thermal insulation (eg pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packing	RCF loose fill products, Lead dust, PCB containing oils in bulk storage, or uncontained spills.	3

Table 4 – Extent of the Damage or Deterioration

EXAMPLES OF MATERIALS - ASBESTOS	EXAMPLES OF MATERIALS - HAZMAT	SCORE
Good condition: no visible damage	Good condition: no visible damage	0
Low damage: a few scratches or surface marks; broken edges on boards, tiles etc	Low damage: a few scratches or surface marks; Pealing paint, Large paint flakes, Redundant PCB container in accessible area out of electrical product	1
Medium damage: significant breakage of materials or several small areas where material has been damaged revealing loose asbestos fibres	Medium damage: significant breakage of materials or several small areas where material has been damaged, good condition sprays and insulation, large amounts of fine flaking paint and debris, Leaking PCB containing electrical equipment	2
High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris	High damage or delamination of materials. Visible debris, Lead dust, Pooling PCB oils, leaking oil bulk containers	3

Table 5 – Surface type or treatment 2

EXAMPLES OF MATERIALS - ASBESTOS	EXAMPLES OF MATERIALS - HAZMAT	SCORE
Composite materials containing asbestos: reinforced plastics, resins, vinyl tiles	SMF/RCF composite products, insulation products sealed behind a non friable barrier, Lead paints <0.1%w/w, lead, compounds/alloys/products <0.1%w/w lead, PCB oils <2mg/kg	0
Enclosed sprays and lagging, asbestos insulating board (with exposed face painted or encapsulated), asbestos cement sheets etc	SMF/RCF woven and insulation products, Lead paints ≥0.1%w/w and <0.25%w/w, PCB ≥2mg/kg and <50mg/kg in oil	1
Unsealed asbestos insulating board, or encapsulated lagging and sprays	SMF/RCF heat-treated insulation products, Lead paints ≥0.25%w/w and <1.0% w/w, Lead dusts above recommended clearance indicator based on AS/NZS4361.2 PCB ≥50mg/kg and <10,000mg/kg in oil	2
Unsealed laggings and sprayed asbestos	Lead dusts a multiple of at least 5 times above recommended clearance indicator based on AS/NZS4361.2, Lead paint >1.0%, ≥10,000mg/kg in oil (10%w/w)	3

[2] Lead and PCB refers specifically to the analysis result

LIKELIHOOD OF EXPOSURE

Occupant Activity

Table 6 – Occupant Activity

EXAMPLE OF OCCUPANT ACTIVITY	SCORE
Rare disturbance activity (eg little used store room)	0
Low disturbance activities (eg office type activity)	1
Moderate disturbance activity (eg industrial or vehicular activity which may cause contact with ACMs)	2
High levels of disturbance, (eg fire door with asbestos insulating board sheet in constant use)	3

Likelihood of Disturbance

Table 7 – Likelihood of Disturbance

FREQUENCY OF DISTURBANCE	SCORE
Usually inaccessible or unlikely to be disturbed	0
Minimal likelihood for disturbance	1
Likely disturbance	2
Frequent disturbance	3

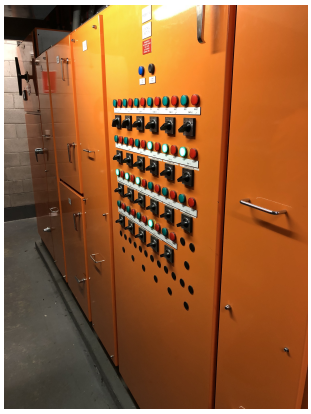
Human Exposure Potential

Table 8 – Human Exposure Potential

FREQUENCY OF HUMAN EXPOSURE POTENTIAL	SCORE
Infrequent	0
Monthly	1
Weekly	2
Daily	3

APPENDIX C: PHOTOGRAPHS

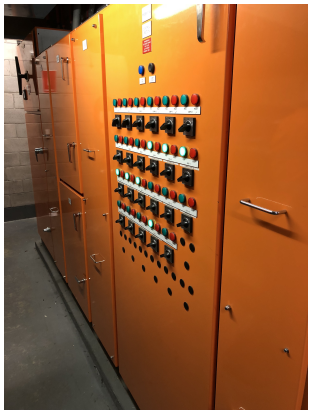
B003261-L24.2 Orange top coat External GF External Riverside walkway Metal structural beams



B003261-L24 Orange top coat Internal L1 Plant Room 1 Electrical box

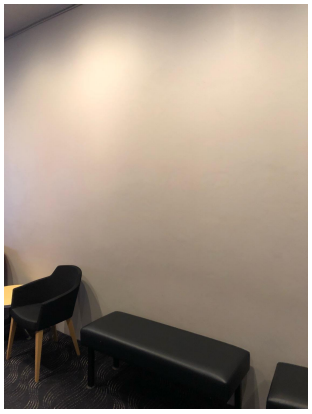
B003261-L3.1 Red undercoat Internal L1 Plant Room 1 Metal pipework & ladder

B003261-L3.2 Red undercoat Internal L1 Plant Room 2 Metal pipework & ladder



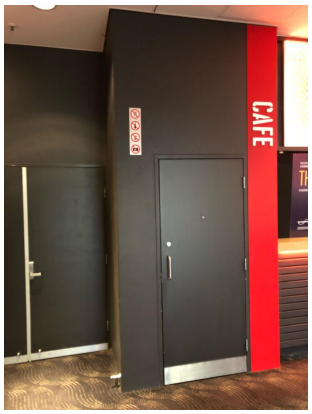
B003261-L24.1 Orange top coat Internal L1 Plant Room 2 Electrical box

B003261-L11 Red top coat Internal GF Dressing room 1 Metal gas pipework throughout ground floor

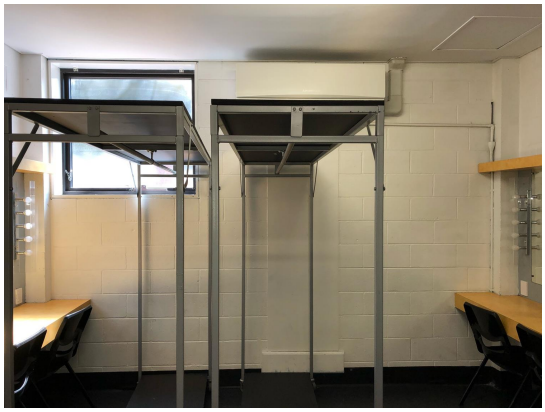


B003261-L22 Internal GF Bar Area Walls

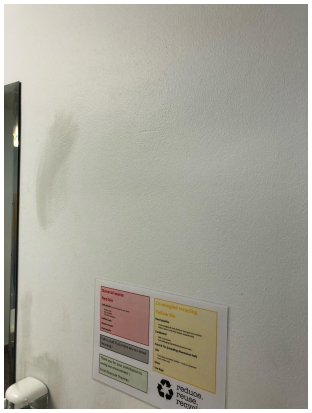
B003261-L14 Grey top coat Internal GF Dressing room 1 Timber wall paneling



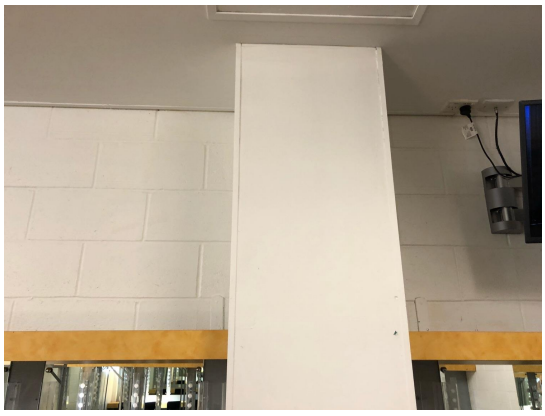
B003261-L21 Black top coat Internal GF Café Walls surrounding café



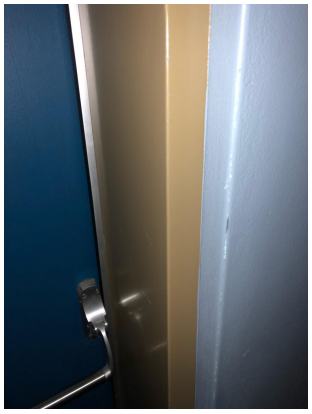
B003261-L12 White top coat Internal GF Dressing room 1 Walls



B003261-L15 Light blue topcoat with yellow undercoat Internal GF Dressing room 1 toilets Walls



B003261-A4 Asbestos Cement Internal GF Dressing room 1 Boxing panels



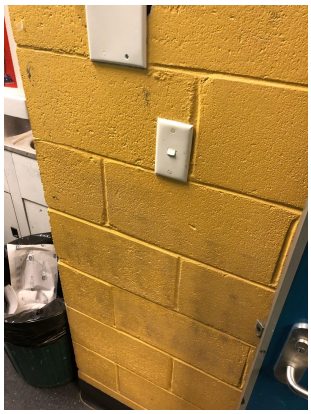
B003261-L19 Light brown top coat to blue undercoat Internal GF Fire exit lobby to courtyard Metal Frame work

Internal GF Kitchen Area No access within fridges due to being locked

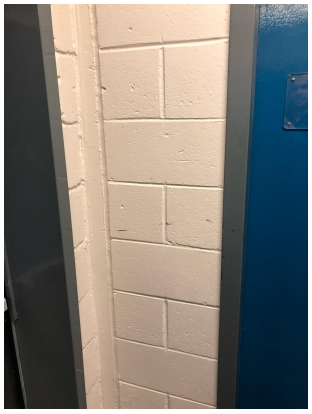
B003261-L20 Dark blue top coat to light blue undercoat Internal GF Fire exit lobby to courtyard Metal Handrails

B003261-L8.3 Green top coat to blue undercoat Internal GF Laundry Room Timber built cupboards

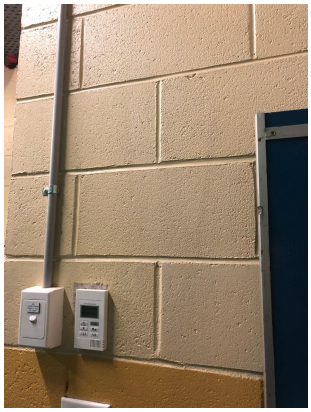
B003261-L17 Red top coat Internal GF Fire exit lobby to courtyard Walls



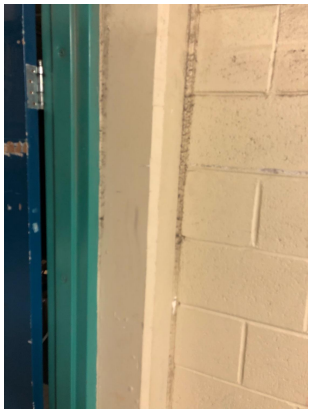
B003261-L10.1 Dark yellow top coat Internal GF Laundry Room Walls lower level



B003261-L16.1 Grey top coat with yellow undercoat Internal GF Lobby leading to courtyard Walls

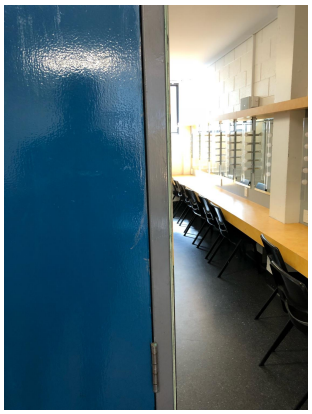


B003261-L9.2 Light yellow top coat Internal GF Laundry Room Walls high level

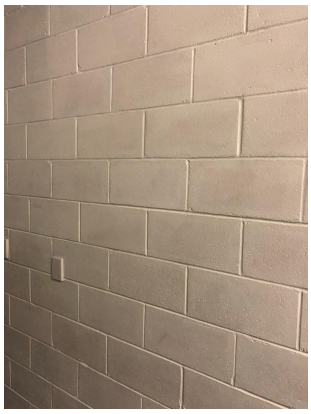


B003261-L1.2 Green top coat to brown undercoat Internal GF Technical office Walls

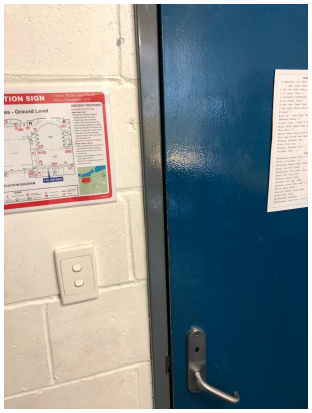
B003261-L8.1 Green top coat to blue undercoat Internal GF Operations manager Window surround



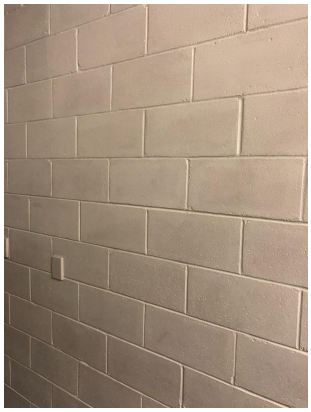
B003261-L1.1 Green top coat to brown undercoat Internal GF Westside of Ground Floor Doors throughout ground floor



B003261-L9.3 Light yellow undercoat Internal GF Production room Walls beneath green and blue



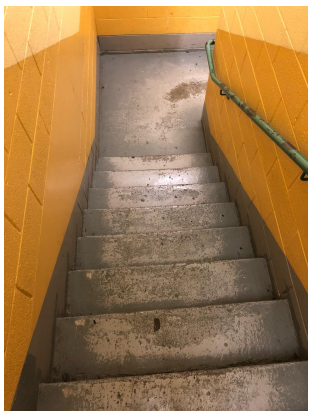
B003261-L13 Grey top coat Internal GF Whole Ground Floor Door frames



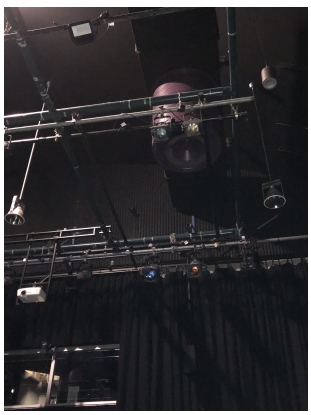
B003261-L12.4 White top coat Internal GF Production room Walls

B003261-A3 Asbestos insulation board Internal B1 Orchestra Pit Door internal lining

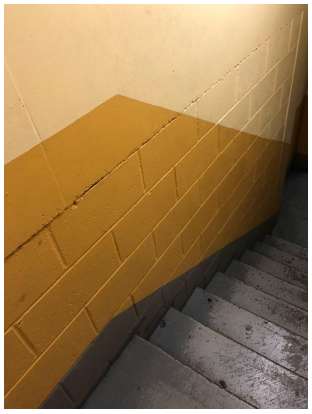
B003261-L9.1 Light yellow top coat Internal GF Technical office Walls



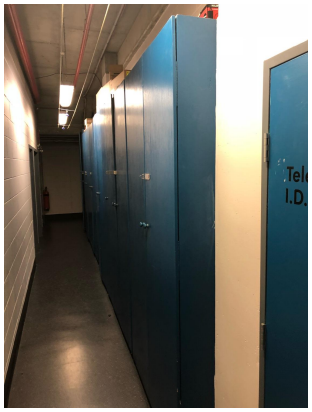
B003261-L7 Grey top coat Internal B1 Stairs to basement Floor paint



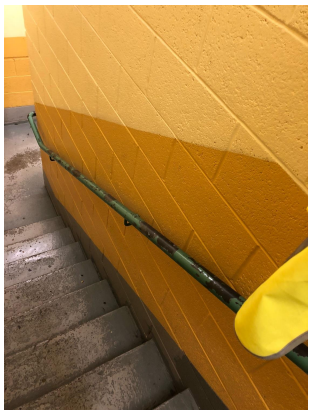
Internal GF Throughout No access above 2.7 meters high due to height restrictions



B003261-L10 Dark yellow top coat Internal B1 Stairs to basement Lower level dark yellow



B003261-L8.2 Green top coat to blue undercoat Internal GF Walkway Timber built cupboards



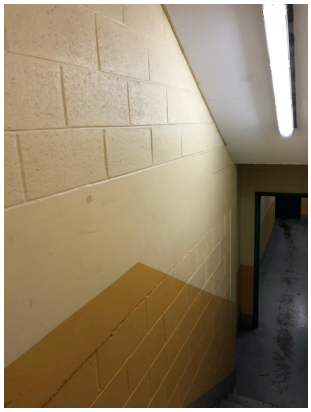
B003261-L8 Green top coat to blue undercoat Internal B1 Stairs to basement Metal Handrails

B003261-L6 Black top coat to red undercoat Internal B1 Orchestra Pit Doors & door frames

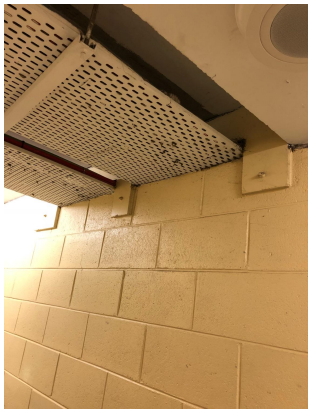
B003261-L7.1 Grey top coat Internal B1 Substage Floor paint

B003261-L6.1 Black top coat to red undercoat Internal B1 Orchestra Pit Walls & Ceiling

B003261-A2 Mastic Internal B1 Substage Mastic to metal ductwork

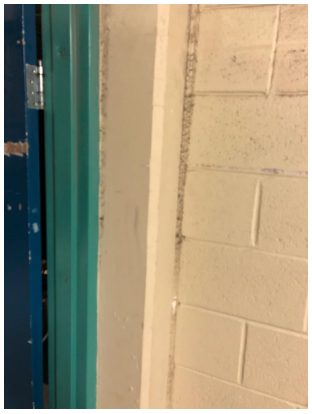


B003261-L9 Light yellow top coat Internal B1 Stairs to basement Higher level light yellow



B003261-A1 Asbestos Cement Internal B1 Walkway Panels around high level cabling

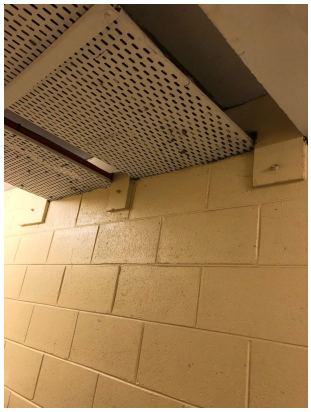
B003261-L5 Blue top coat to white undercoat Internal B1 Substage Metal Ductwork



B003261-L1 Green top coat to brown undercoat Internal B1 Whole Level Door frames throughout basement

B003261-L3 Red top coat Internal B1 Whole Level Metal gas pipework throughout basement

B003261-L2 Blue top coat to white undercoat Internal B1 Whole Level Doors throughout basement



B003261-L4 Cream top coat Internal B1 Whole Level Walls

APPENDIX D: LABORATORY CERTIFICATES

JMB environment consulting Pty Ltd

15/77-79 Bourke Road, Alexandria, NSW 2015

P:02 9545 6017

E: info@jmbec.com.au

ABN: 92 168 286 600

Certificate of Analysis – Asbestos Identification

Report Number: 17273B00326119092018AID

CLIENT:	City of Parramatta	**JMB JOB NUMBER:**	17273B003261
CLIENT CONTACT:	Omar Aboulahaf	**DATE RECEIVED:**	17/9/18
CLIENT REFERENCE:	B003261	**DATE ANALYSED:**	18/9/18
CLIENT EMAIL:	Oaboulahaf@cityofparramatta.nsw.gov.au	**REPORT DATE:**	19/9/18
CLIENT TELEPHONE:	61477308637	**SAMPLE DATE:**	11-14/9/2018

Test method:

Asbestos fibre qualitative determination in bulk & soil samples at JMB Environmental Consulting Pty Ltd (JMBEC) laboratory, by polarised light microscopy, conjunction with dispersion staining technique. The strategies and methods used are as per AS4964(2004) and in-house SOP JMBEC D123. All results of the tests, calibrations, and records are traceable to Australian/national standard. Accredited for compliance with ISO/IEC 17025 - Testing. NATA accreditation number 19564

CLIENT REFERENCE	JMBEC REFERENCE	SAMPLE INFORMATION	SAMPLE DIMENSIONS (mm) / WEIGHT (g)	ANALYTICAL RESULT
B003261-A1	17273B003261/A1	Cement Material	0.1	NAD ORG
B003261-A2	17273B003261/A2	Mastic-like material	0.3	NAD ORG
B003261-A3	17273B003261/A3	Insulation	0.1	NAD ORG
B003261-A4	17273B003261/A4	Cement Material	0.1	NAD ORG
B003261-A5	17273B003261/A5	Cement Material	0.1	NAD ORG
B003261-A6	17273B003261/A6	Cement Material	0.1	NAD ORG
B003261-A7	17273B003261/A7	Insulation	0.1	NAD ORG
B003261-A8	17273B003261/A8	Bitumen-like materil	0.1	NAD ORG

Approved analyst - **Name:** Joe Breslin **Signature:**

Approved Signatory - **Name:** Rob Whitehouse **Signature:**

Legend:
NAD: No asbestos detected
NADRL: No asbestos found, at the reporting limit (0.1 g/kg / 0.01%)
CHR: Chrysotile asbestos detected
AMO: Amosite asbestos detected
CRO: Crocidolite asbestos detected
ORG: Organic fibre detected
SMF: Synthesis mineral fibre detected
UMF: Unknown mineral fibre detected

Glossary and notes:

AS4964 recommends minimum sample sizes for all materials. In particular, soil sample volume is 50-100ml (approximately 50 to 250g). It is the sampling party's responsibility to meet this recommendation.
Other analytical reporting limits outside of mentioned scope is not cover by NATA accreditation; such as NEPM WA.
JMBEC require receipt of all samples under a chain of custody, however JMBEC except no responsibility for the sampling method/location/transportation or packaging of samples from external sources.
**No asbestos detected by Polarized Light Microscopy in conjunction with Dispersion staining techniques. The client is advised to obtain a further result from an independent confirmatory analytical technique due to the nature of sample, e.g. scanning electron microscopy (SEM).*

JMBEC D129 / Revision V5 / August 2018 / Page 1 of 1

SGS

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS		LABORATORY DETAILS	
Contact	JAMES BRESLIN	Manager	Huong Crawford
Client	JMB ENVIRONMENTAL CONSULTING PTY LTD	Laboratory	SGS Alexandria Environmental
Address	PO Box 807 JANNALI NSW 2226	Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	(Not specified)	Telephone	+61 2 8594 0400
Facsimile	(Not specified)	Facsimile	+61 2 8594 0499
Email	info@jmbec.com.au	Email	au.environmental.sydney@sgs.com
Project	**17273 -B003261**	SGS Reference	**SE183980 R0**
Order Number	**17273**	Date Received	17/9/2018
Samples	26	Date Reported	21/9/2018

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES

Bennet Lo
Senior Organic Chemist/Metals Chemist

SGS

ANALYTICAL RESULTS

SE183980 R0

Metals in Paint by ICPOES [AN065/AN320] Tested: 20/9/2018

PARAMETER	UOM	LOR	B003261 - L1 PAINT - 11/9/2018 SE183980.001	B003261 - L2 PAINT - 11/9/2018 SE183980.002	B003261 - L3 PAINT - 11/9/2018 SE183980.003	B003261 - L4 PAINT - 11/9/2018 SE183980.004	B003261 - L5 PAINT - 11/9/2018 SE183980.005
Lead, Pb	%w/w	0.001	0.057	0.012	0.21	<0.001	0.036

PARAMETER	UOM	LOR	B003261 - L6 PAINT - 11/9/2018 SE183980.006	B003261 - L7 PAINT - 11/9/2018 SE183980.007	B003261 - L8 PAINT - 11/9/2018 SE183980.008	B003261 - L9 PAINT - 11/9/2018 SE183980.009	B003261 - L10 PAINT - 11/9/2018 SE183980.010
Lead, Pb	%w/w	0.001	0.087	0.12	0.020	<0.001	<0.001

PARAMETER	UOM	LOR	B003261 - L11 PAINT - 11/9/2018 SE183980.011	B003261 - L12 PAINT - 11/9/2018 SE183980.012	B003261 - L13 PAINT - 11/9/2018 SE183980.013	B003261 - L14 PAINT - 11/9/2018 SE183980.014	B003261 - L15 PAINT - 11/9/2018 SE183980.015
Lead, Pb	%w/w	0.001	0.41	<0.001	0.002	<0.001	<0.001

PARAMETER	UOM	LOR	B003261 - L16 PAINT - 13/9/2018 SE183980.016	B003261 - L17 PAINT - 13/9/2018 SE183980.017	B003261 - L18 PAINT - 13/9/2018 SE183980.018	B003261 - L19 PAINT - 13/9/2018 SE183980.019	B003261 - L20 PAINT - 13/9/2018 SE183980.020
Lead, Pb	%w/w	0.001	<0.001	0.002	<0.001	0.10	0.015

PARAMETER	UOM	LOR	B003261 - L21 PAINT - 13/9/2018 SE183980.021	B003261 - L22 PAINT - 13/9/2018 SE183980.022	B003261 - L23 PAINT - 13/9/2018 SE183980.023	B003261 - L24 PAINT - 13/9/2018 SE183980.024	B003261 - L25 PAINT - 13/9/2018 SE183980.025
Lead, Pb	%w/w	0.001	<0.001	0.003	0.016	4.1	0.003

PARAMETER	UOM	LOR	B003261 - L26 PAINT - 13/9/2018 SE183980.026
Lead, Pb	%w/w	0.001	0.007

SGS

METHOD SUMMARY

SE183980 R0

METHOD	METHODOLOGY SUMMARY
AN065/AN320	A portion of paint chips sample is digested with nitric acid to solubilise the metals into solution. Digest then analysed by ICP OES with result calculated back to the as received paint sample basis .

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the Soa o.pxSaunit for activity and equa nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : http://www.sgs.com.au/~/media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

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APPENDIX E: FURTHER INTERPRETATION OF RECOMMENDED RISK CONTROL ACTIONS

The following details are designed to provide with City of Parramatta guidance on recommended practices, summarized from established code of practices and standards, that designed to meet legislation and help implement actionable items identified within this report. This also provides the client with other options available to control risk presented by hazardous materials, that may not have been recommended as best practice, but due to budget and time constraints, are available to reduce the risk presented by a hazardous material.

Table 9 – Detailed Risk Control Actions for Guidance

	ASBESTOS	LEAD	OTHER HAZMAT
CODES OF PRACTICE & STANDARDS	• WHS Regulations 2017 • Management and Control of Asbestos in Workplaces [NOHSC:2018(2005)] • Safework Australia How to safely remove asbestos (2016) • Safework Australia – How to manage and control asbestos in the workplace (2016) • Australian Standards AS-1715(9) and AS-1716(10)	• WHS Regulations 2017 • National Code of Practice for the Safe Use of Inorganic Lead at Work [NOHSC: 2015(1994)] • AS/NZS4361 (Parts 1 and 2 [2017 & 2017]) Guide to lead paint management	• WHS Regulations 2017 • NSW EPA Polychlorinated Biphenyl (PCB) Chemical Control Order 1997 • Ozone protection and synthetic greenhouse gas management regulations 1996 (amended 2016)
REMOVAL	• Friable - Class A Licensed Asbestos removalist required. Independent LAA to carry out air monitoring and final clearance. • Non-Friable - Minimum Class B Licensed Asbestos removalist required. Independent hazardous materials consultant/competent hygienist to carry out final clearance. Air monitoring recommended, especially in sensitive areas such as schools, hospitals, residential areas etc • All licensable asbestos removal work must be notified to work cover by the licensed removal contractor prior to works undertaken. This process may take up to 5 working days. • Removal of <10m2 of non-friable asbestos can be undertaken without notification, by non-licensed individuals. However it is recommended that this is still conducted by skilled and trained contractors that are aware of the risks and control measures required to safely remove asbestos in accordance with the above codes of practice. • General Notes - Inspect and update register following completion of removal work.	• Lead abatement contractor to remove lead dust or excessive paint debris as per recommendations in the guidance and code of practice. • Removal of paint recommended prior to demolition in areas that require hot works or abrasive techniques to prevent airborne lead concentrations exceeding exposure limits. • Lead paint certified contractor required to remove under controlled lead abatement methods with an appropriate SWMS as per AS/NZS4361.2. Uncontrolled removals could cause personal exposure levels in excess of the national exposure limit • Undertake lead air control monitoring during removal works if there are neighboring sensitive receptors such as schools, residential areas, hospitals, offices, parks and playgrounds etc. • Undertake clearance surface lead loading testing in area of removal to ensure satisfactory clean for re-occupation and unrestricted use as per ASNZS4361.2. • Undertake personal exposure monitoring of similar exposure groups (SEGs) to assess occupant exposure against national exposure limits where a lead process is being undertaken. • Inspect and update register following completion of removal work.	• Remove products under controlled conditions. • RCF respirable Synthetic mineral fibres are a category 2 Carcinogen and irritant to the eyes, throat and skin. Disturbance, handling and removal of friable RCF Synthetic Mineral Fibre product should be undertaken with PPE, RPE and dust suppression. • Airborne fibre monitoring is recommended during the removal of RCF SMF, to maintain respirable fibre levels below 0.5 fibres/ml of air. • Engage a hazardous chemical remediation contractor to design a remedial action plan and safely remediate, spill and contaminated material (including contaminated soil) under controlled conditions ith PPE and RPE fit for task. • Transport and dispose of PCB ballast containing transformers and electrical capacitors at a licensed disposal facility as per the EPA guidelines. • Refrigeration and Air Conditioning equipment (RAC) should be worked on and decommissioned, as per the ozone protection and synthetic greenhouse gas management regulations 1996 (amended 2016). • Inspect and update register following completion of removal work.

ISOLATION	• Prevent uncontrolled access to contaminated area. Conduct reassurance or background asbestos air monitoring depending on situation of access and/or disturbance. • Access only permitted with preferable face fitted, P2 half face mask, PPE (that includes CE marked Cat3, type 5/6 coveralls, boot covers, disposable gloves) and decontamination procedure in place. • Consider implementation of permit to work system to monitor access. • Consider personal exposure air monitoring during access.	• Prevent uncontrolled access to contaminated area. • Access only permitted with preferable face fitted, P2 half face mask, PPE (that includes CE marked Cat3, type 5/6 coveralls, boot covers, disposable gloves) and decontamination procedure in place. • Consider implementation of permit to work system to monitor access. • Consider personal exposure air monitoring during access.	• Isolate PCB Spill to prevent uncontrolled access. • Use spill kit to contain spill, and sand bags/drainage barriers to prevent run off, further leaching and/or contamination of soil, watercourses, service lines and ground water.
ENCLOSE / SEAL / ENCAPSULATE / REPAIR	• Construct solid sealed enclosure around product and label. Manage friable and badly damaged non-friable materials in situ. • Repair/patch material with non-abrasive or penetrative methods if damage is not significant and access for further damage is limited. • Consider encapsulation of product with general purpose paint as a minimum. • Encapsulate with industrial barrier paint such as Emer-clad or Bostik ET -150, if damage is not significant and access for further damage is limited. • Consider either personal exposure air monitoring or control air • Monitoring during work around material. • Maintain condition and re-inspect in accordance with management plan. Label as per AS1319 • Inspections may be required more regularly depending on condition and location of material.	• Enclose contamination permanently behind physical barrier and label product as per AS1319. • Remove paint flakes and associated debris and repaint painted surface to encapsulate lead paint layer. • Maintain condition and inspect annually due to high risk receptors. • Maintain condition and inspect at a minimum interval of 5 years or in line with other hazardous materials. Do not perform abrasive or hot works that create dust, fumes or particulates from product in uncontrolled conditions.	• Consider encapsulation or enclosing SMF insulations to prevent accidental disturbance and irritation of occupants from airborne fibres.
ADDITIONAL DEMOLITION / REFURBISHMENT INFORMATION	• Removal of all asbestos products is required prior to any demolition/refurbishment works which may damage or impact the material.	• Although lead content as a %w/w component of demolition waste will be relatively minimal, lead in demolition waste may affect the classification or recyclability of the waste and should be assessed and potentially removed prior to demolition to avoid additional contaminated waste disposal costs. • Lead particulates and debris from uncontrolled demolition may cause personal exposure levels in excess of the national exposure limit.	• PCBs and ODS products remove and dispose of appropriately prior to demolition via use of a qualified contractor, to prevent uncontrolled exposure to the environment (ODS and PCBs) in addition to human exposure for (PCBs only) • SMF products to be appropriately handled with dust suppression to prevent excessive respirable fibre levels during demolition. Preferably soft stripped prior to uncontrolled demolition.

MAINTENANCE SCHEDULE AND MANAGEMENT PLAN	• Asbestos containing materials should be re-inspected for changes in material condition and risk assessed a minimum of every 5 years as per the WHS regulations. However materials in locations likely to be disturbed or in damaged condition may need to be inspected more frequently. Re-inspection and maintenance schedule should be detailed in an asbestos management plan. • Label Product as per AS1319	• Lead containing paints should be repainted as necessary to maintain condition and inspect at a minimum interval of 5 years or in line with other hazardous materials. Do not perform abrasive or hot works that create dust, fumes or particulates from product in uncontrolled conditions. • Where multiple paint layers are present, individual layers may actually contain lead to a higher concentration.	• Re-inspected as necessary to ensure maintenance of condition. • Risk management program for the systematic removal and disposal of PCB containing capacitors stored on the facility. • Put into place a plan to recover and dispose of ozone depleting refrigerants appropriately at the end of the equipment life prior to disposal of the air conditioning equipment. Refrigeration and Air Conditioning equipment (RAC) should be worked on and decommissioned, as per the ozone protection and synthetic greenhouse gas management regulations 1996 (amended 2016). • Label product as per AS1319.

APPENDIX F: SITE PLAN

No site specific plans or drawings were requested as part of this inspection.