



Douglas Partners

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Integrated Practical Solutions

Hazardous Building Materials (HBM) Register

2 Dee Why Parade
Dee Why NSW 2099

Prepared for
Dee Why RSL Club

Project 99758.00
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Douglas Partners

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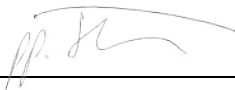
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The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, photographic logs and Register have been checked and reviewed for errors, omissions and inaccuracies.

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Executive Summary

Douglas Partners Pty Ltd (DP) was engaged by Dee Why RSL Club to conduct a hazardous building materials (HBM) survey of 2 Dee Why Parade, Dee Why NSW 2099 (the site). The survey was undertaken to assess the location, extent and condition of asbestos-containing materials (ACM) and other HBM prior to demolition. The survey consisted of a visual inspection supplemented by a limited program of sample collection and laboratory analysis.

HBM were identified or assumed present during the survey as indicated in Table 1 below.

Table 1: Summary of Results

Building / Area	Non-Friable Asbestos	Friable Asbestos	SMF	Lead Paint	Lead Dust	PCB
2 Dee Why Parade, Dee Why	✓	✗	✓	✓	✓	✗

SMF = synthetic mineral fibre, PCB = polychlorinated biphenyls, ✓ = identified or assumed present, ✗ = not identified and / or not assumed present. Refer to the Register in Appendix C for details / clarification.

Limited or no access was available to certain areas of the site. Inaccessible areas should be assumed to contain HBM unless assessment of these areas by a Competent Person confirms otherwise.

HBM should be managed in accordance with the requirements of the NSW Work Health and Safety (WHS) Act 2011 (WHS Act), NSW WHS Regulation 2017 (WHS Regulation) and relevant Codes of Practice, Australian Standards and guidelines.

HBM should be removed prior to any significant disturbance including from maintenance, refurbishment and demolition work.

Limitations apply to this HBM survey and report as outlined in Section 7.

This report should be read in its entirety and may not be reproduced other than in full, except with the prior written approval of DP.

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Hazardous Building Materials (HBM) Register

2 Dee Why Parade, Dee Why NSW 2099

1. Introduction

Douglas Partners Pty Ltd (DP) was engaged by Dee Why RSL Club to conduct a hazardous building materials (HBM) survey of 2 Dee Why Parade, Dee Why 2099 (the site). The survey was undertaken to assess the location, extent and condition of the following HBM prior to demolition:

- Asbestos containing materials (ACM);
- Synthetic mineral fibre (SMF) insulation;
- Polychlorinated biphenyls (PCBs) in fluorescent light fittings;
- Lead paint systems; and
- Lead dust in ceiling cavities.

Notes about this report are contained in Appendix A along with relevant drawings and/or plans.

Photographs were taken during the site inspection and selected photographs are presented in Appendix B

The results of the survey, including details of the HBM identified and the results of ACM risk assessments, are provided in the HBM Register (the Register) in Appendix C.

Laboratory analysis certificate(s) for the samples collected and analysed as part of the survey are provided in Appendix D.

Limited or no access was available to certain areas as outlined in the Register and Section 5 of this report.

2. Site Description

The site is located on the corner of Dee Why Parade and Pittwater Road and comprises a double storey complex constructed in the 1930s as follows:

- Ground floor – commercial premises;
- First floor – twin residential apartments.

The site was unoccupied at the time of the site inspection.

3. Survey Method

The survey consisted of a visual inspection of safely accessible areas, including use of limited destructive / intrusive techniques to access areas thought likely to contain HBM. The survey was supplemented by a limited program of sample collection and laboratory analysis.

Samples of suspected ACM were collected by DP using hand tools (e.g. knife or pliers) and analysed for asbestos by a National Association of Testing Authorities (NATA) accredited laboratory. Sample size is typically limited to minimise disturbance of the material and potential structural or aesthetic impacts. The samples were analysed by polarised light microscopy (PLM) with dispersion staining in accordance with AS4964-2004 *Method for the qualitative identification of asbestos in bulk samples*.

A screening assessment was conducted for lead paints. Samples of suspected lead paint were collected by DP and analysed for lead by a NATA accredited laboratory using Inductively Coupled Plasma – Atomic Emission Spectrometry/Mass Spectrometry (ICP-AES/MS). Paint samples contained approximately equal portions of all layers of paint at the location sampled, to the extent practicable, and therefore typically reflect the average lead content of the overall paint system at location sampled.

SMF was identified primarily by visual inspection or incidentally as a result of laboratory analysis for asbestos.

Where safe access (including certified electrical isolation) is provided to DP selected light fittings may be partially dismantled to obtain capacitor details. Capacitor details are then compared to the list of PCB-containing and PCB-free equipment in *Identification of PCB-Containing Capacitors: An Information Booklet for Electricians and Electrical Contractors, 1997* prepared by the Australian and New Zealand Environment and Conservation Council (ANZECC).

Lead dust samples are generally collected from ceiling cavities found to contain significant settled dust loadings. Samples are collected from a specified surface area (normally 100 or 900 cm²) and analysed by a NATA accredited laboratory using ICP-AES/MS. The sampling area and laboratory analysis result (total lead in µg) are then used to calculate the lead dust loading which is expressed as milligrams of lead per square metre (mg/m²).

Surveys typically proceed on a 'risk management' basis whereby priority is given to addressing material(s) likely to pose greatest risk as they are encountered. Further, material sampling and analysis programs are necessarily limited and in the case of similar or repetitive buildings, building elements and/or rooms/areas it is often necessary to assume consistent use of construction materials including HBM.

4. Asbestos Risk Assessment Method

ACM poses a health risk if asbestos fibres are released to the atmosphere and inhaled. There is also a risk of environmental contamination whenever asbestos is disturbed. The degree of risk associated with any given ACM depends on a range of factors such as the friability, extent, condition, and location/accessibility of the material, the asbestos mineral type(s) present, the nature of site activities and ventilation.

The asbestos risk assessment method employed by DP considers several key factors that influence risk and a numerical score is assigned to each (refer Table 2 below). These scores are then added together to determine an overall risk rating for the ACM (refer Table 3 below). A degree of professional judgement may be applied when determining the final risk rating since it is not practicable to include in Table 2 all risk factors that may be relevant to a given situation.

Risk assessments for ACM should be reviewed on a regular basis including when:

- The Asbestos Management Plan is reviewed;
- Further asbestos or ACM is identified at the workplace;
- Asbestos is removed, 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.

An asbestos risk assessment review is to be conducted at least every 5 years. The review is to be performed by a Competent Person.

Table 2: Key Risk Factors

Risk Factor	Score	Description
Friability	0	Non-friable (fibre reinforced vinyls, bituminous materials, adhesives)
	1	Non-Friable (fibre reinforced cement products such as wall and roof sheeting)
	2	Semi-Friable (low density insulation board, millboard, ropes, paper, textiles, gaskets or highly weathered asbestos cement)
	3	Friable (thermal insulation to pipes/boilers, sprayed insulation, loose fill insulation)
Condition	0	Very Good. Very little or no visible indication of damage. Structurally sound. No significant repairs required. Material performs as intended.
	1	Good - Minor damage in small, localised areas. Structurally sound. Minor preventative action may be required as a precaution and/or to prolong material life. Material generally performs as intended.
	2	Fair. Localised damage in various areas. Material is generally structurally sound however local removal and replacement of damaged sections may be required. Material performance may be somewhat impaired in areas.
	3	Poor. Material exhibits significant damage throughout. Overall structural stability may be compromised. Material performance is significantly impaired.
Treatment	0	Fully enclosed, encapsulated or sealed. ACM is entirely contained and the enclosure/encapsulation/sealing material is in good condition.
	1	Generally enclosed, encapsulated or sealed. ACM is generally contained however enclosure/encapsulation/sealing material may not be completely continuous or exhibits minor damage/penetrations.
	2	Partially enclosed, encapsulated or sealed. ACM is contained in area(s) however enclosure/encapsulation/sealing material is not present, significantly damaged or ineffective in area(s).
	3	Enclosure/encapsulation/sealing material is significantly damaged and/or generally ineffective or there is no treatment.
Accessibility	0	The ACM is not directly accessible to occupants. Contact is highly unlikely unless a significant, dedicated effort is made. Substantial demolition, dismantling and/or special access equipment would be required.
	1	The ACM is generally not accessible to occupants. Contact is unlikely but could be made with special tools or equipment (e.g. elevating work platform) or minor demolition/dismantling.
	2	Some portion(s) of ACM are accessible to occupants. Direct contact may occur periodically but often requires basic tools/equipment (e.g. step ladder).
	3	The majority of the ACM is accessible to occupants. Direct contact is a common occurrence and may be made with minimal or no effort.
Activity	0	Area generally not occupied. Normally very little or no activity. Activities may be highly restricted or area secured. Examples may include subfloor voids, ceiling cavities, confined spaces and other inaccessible areas.
	1	Low level occupancy. Some activity in parts or area only occupied periodically. Examples may include plant rooms and store rooms.
	2	Moderate level occupancy. Activity normally present throughout area. May include offices, laboratories, classrooms, workshops, and warehouses.
	3	High level occupancy. Generally high levels of activity. Activities may be wide-ranging and/or largely unrestricted. Examples may include production/manufacturing areas, construction sites and public areas/thoroughfares.
Ventilation	0	Exterior area where natural ventilation and associated dilution is largely unlimited. Significant retention and/or build-up of airborne contaminants is unlikely.
	1	Interior area. Natural ventilation and dilution is limited but area is not particularly confined. Limited retention and/or build-up of airborne contaminants is possible.
	2	Confined areas where ventilation and associated dilution is significantly limited. Significant retention and/or build-up of airborne contaminants is possible or likely.
	3	Asbestos material subject to direct ventilation (e.g. inside an AC system or near a fan or air exhaust) which may result in disturbance and/or elevated fibre concentrations in air.

Table 3: Risk Rating

Overall Score	Risk Rating	Description
15-18	High (H)	The ACM poses an elevated and typically unacceptable risk of exposure and/or environmental contamination. Controls should generally be implemented as soon as possible to address the risk. Removal of the whole or part of the ACM is typically required. Other controls such as enclosure, encapsulation and/or sealing may also be necessary if portion(s) of ACM are to remain in place. As an interim measure, access to the area should be appropriately restricted. Air monitoring is often recommended to confirm airborne asbestos concentrations and provide a written record for future reference.
10-14	Moderate (M)	The ACM poses a moderate risk of exposure and/or environmental contamination. Often there has been minor damage or there is potential for disturbance/degradation in the foreseeable future. Consideration should be given to implementing appropriate controls in the short to medium term to address the risk(s) and/or prolong the lifespan of the material. Relevant controls typically include enclosure, encapsulation and/or sealing. Extensive removal is generally not required and the material can generally be managed on site if desired and serving a useful purpose.
0-9	Low (L)	The risk of exposure and environmental contamination is generally low while the material remains undisturbed and in its present condition. The material may generally remain in place without the requirement for significant, material-specific control measures such as removal, enclosure, encapsulation or sealing.

Note: If the ACM is likely to be disturbed (e.g. by maintenance, refurbishment or demolition work) and/or is no longer serving a useful purpose then the ACM should generally be removed. All ACM should be clearly identified with a label where reasonably practicable.

5. Results

The overall results of the survey are summarised in Table 1 in the Executive Summary of this report. Further details of the HBM identified at the site, including the results of asbestos risk assessments, are provided in the Register in Appendix C.

A licensed electrician was not provided to DP to certify isolation of light fittings during the survey and therefore it was generally not possible to dismantle and inspect fluorescent light fittings to confirm the presence/absence of capacitors containing PCB.

Limited or no access was available to certain areas as outlined in the Register (Appendix C) and Table 4 below.

Table 4: Access Limitations*

Location / Area	Access Type	Reason(s)
Areas/materials at height (e.g. roofs)	Limited	Access limited to safely accessible areas and use of 1.8 m step ladder. Work at height and use of specialised access equipment not included in survey scope.
Plant, equipment and services in general (e.g. electrical panels, HVAC plant, generators, pumps, motors etc.)	Limited	Inspection limited to safely accessible exterior surfaces. Isolation and detailed dismantling and/or demolition typically required for further assessment.
Confined spaces	Nil	Not included in survey scope.
Ceiling, subfloor and other building voids	Limited	Access generally limited by designated access point(s), height, services and clearance within cavity/void. Inspection of crawl spaces not included in survey scope.
Below flooring materials (e.g. carpet, vinyl sheeting, floorboards etc.)	Limited	Access limited due to fixtures/furnishings and practicalities associated with complete removal.
Below ceramic tiled surfaces (e.g. walls and floors in wet areas)	Limited	Typically requires destructive removal of tiles and damage to current finish.
Enclosed building cavities and voids (e.g. fireplaces, service risers)	Nil	Detailed dismantling/demolition typically required. Access generally impractical.

* Refer also to the Register (Appendix A).

6. Recommendations

A summary recommendation for each HBM identified or assumed/suspected present at the site is provided in the Register (Appendix C).

The general recommendations in Section 6.1 onwards are provided for informative purposes and should be considered where the relevant HBM has been identified or assumed present by DP or is subsequently suspected to be present based on reasonable grounds.

The presence of identified and assumed HBM at the site, and the potential presence of any as-yet undetected HBM, should be considered during the risk assessment for any proposed work at the site or site use. Additional targeted inspection, sampling and analysis for HBM should be considered prior to any work that may result in the disturbance of such HBM.

All work involving substantive disturbance of building materials, particularly demolition and refurbishment work, should be supervised by Competent Person(s) who are able to identify, in a timely manner, any additional HBM that may be encountered

6.1 General

HBM should be managed in accordance with the requirements of the WHS Act, WHS Regulation and subordinate Codes of Practice, Australian Standards and guidelines.

A hazardous materials management plan should be developed to aid compliance with the requirements of the WHS Act and Regulation including those that relate to the identification of hazards and control of associated risks.

HBM abatement work should be appropriately monitored and/or audited to help ensure quality and compliance.

An appropriate level of stakeholder consultation and communication should be undertaken at all times to help ensure that all relevant operational and project risks are adequately controlled.

The scope, fees and terms/conditions applicable to any HBM work, including abatement, should be carefully assessed by a suitably qualified, experienced and competent person to help ensure that associated costs remain within reasonable limits. Such assessment should include consideration of the fees that may apply to the management and control of any unexpected or additional finds.

HBM should be visually inspected on a regular basis. Any change to the condition of the material or relevant site conditions should be reported.

HBM should be removed prior to any significant disturbance such as maintenance, refurbishment and demolition work.

Prior to any work involving hazardous materials a risk assessment should be conducted and Safe Work Method Statement (SWMS) developed. The SWMS should outline the controls necessary to ensure that the risk of exposure to the hazardous materials is adequately controlled.

HBM remediation and removal work should be undertaken in controlled conditions.

Waste should be assessed and classified for disposal in accordance with the NSW Environment Protection Authority (EPA) *Waste Classification Guidelines, Part 1: Classifying Waste*, November 2014 (EPA, 2014).

At the completion of hazardous material remediation and removal work a clearance inspection should be conducted by a Competent Person, or in the case of friable asbestos, by a Licensed Asbestos Assessor.

6.2 Asbestos-containing Material (ACM)

ACM must be managed in accordance the WHS Regulation, the SafeWork NSW *Code of Practice: How to Manage and Control Asbestos in the Workplace* and the SafeWork NSW *Code of Practice: How to Safely Remove Asbestos*.

Exposure to airborne asbestos in the workplace must be eliminated to the extent that is reasonably practicable. If it is not reasonably practicable to eliminate exposure it must be minimised to the extent that is reasonably practicable.

An Asbestos Management Plan must be developed to enable compliance with the WHS Regulation (Regulation 429).

The presence and location of asbestos or ACM identified at a workplace must be clearly indicated by a label if it is reasonably practicable to do so.

Warning labels and signs should be consistent with the examples provided in the SafeWork NSW *Code of Practice: How to Manage and Control Asbestos in the Workplace* and comply with AS1319 *Safety Signs for the Occupational Environment*.

Non-friable ACM that are structurally intact and in good to fair condition may typically remain in place provided that they are not significantly disturbed.

Tools and equipment that generate dust must generally not be used on asbestos. These include high-speed abrasive power and pneumatic tools (e.g. angle grinders, sanders, saws and high-speed drills, brooms and brushes).

Tools and equipment that cause the release of asbestos, including power tools and brooms, may only be used on asbestos if the equipment is enclosed and/or designed to capture or suppress asbestos fibres and/or the equipment is used in a way that is designed to capture or suppress asbestos fibres safely. In such a case, other controls including PPE may also be required based upon the results of a pre-work risk assessment and the SWMS adopted.

The use of high-pressure water spray and compressed air on asbestos or ACM is specifically prohibited under the WHS Regulation.

If ACM become damaged they should be repaired or removed and replaced with an alternative, non-asbestos building product as soon as possible.

The scope of asbestos removal work should be outlined in a technical specification (i.e. Scope of Work Report) developed by a Competent Person (in the case of non-friable asbestos) or a Licensed Asbestos Assessor (in the case of friable asbestos).

Removal of friable asbestos must only be undertaken by a Class A licensed asbestos removal Contractor.

Removal of 10 m² or more of non-friable asbestos must only be undertaken by a Class A or Class B licensed asbestos removal contractor.

Air monitoring is required during removal of friable asbestos. Air monitoring should also be considered during removal of non-friable asbestos particularly where sensitive receptors exist such as at schools, hospitals, public areas and similar sites.

Air monitoring must be undertaken in accordance with the National Occupational Health and Safety Commission (NOHSC) *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres, 2nd Edition* [NOHSC:3003(2005)].

All air monitoring samples must be analysed by a NATA accredited laboratory that holds accreditation for the required analysis.

At the completion of asbestos removal a clearance inspection must be conducted by a Competent Person (for non-friable asbestos removal) or a Licensed Asbestos Assessor (for friable asbestos removal).

Air monitoring and clearance inspections must be performed by person/s independent of the asbestos removal contractor.

All waste should be classified for disposal in accordance with the EPA (2014). Asbestos waste is preclassified as Special Waste under these guidelines.

Asbestos transporters and facilities receiving asbestos waste must report the movement of asbestos waste to the EPA. Entities involved with the transport or disposal of asbestos waste in NSW, or arranging the transport of asbestos waste in NSW, must use the EPA's online tool, WasteLocate.

All asbestos waste must be disposed at a waste collection facility licensed to receive asbestos waste. All disposal receipts should be retained.

A person who relinquishes management or control of the workplace must ensure that the Asbestos Register is given to the person, if any, assuming management or control of the workplace.

6.3 Synthetic Mineral Fibre (SMF)

SMF materials may generally remain in place providing that they are in good condition and unlikely to be disturbed.

To reduce the potential for disturbance, exposure and environmental contamination SMF materials may be encapsulated or enclosed. Higher risk materials, such as loose fill insulation, may also be removed and replaced.

SMF work is to be undertaken in accordance with the requirements of the WHS Regulation and subordinate Codes of Practice, Guidance Notes and other documents. These include:

- WorkCover NSW *Safe management of synthetic mineral fibres (SMF) – glasswool and rockwool*; and
- Safe Work Australia *Guide to Handling Refractory Ceramic Fibres, December 2013*; and
- Guidance Note on the Membrane Filter Method for the Estimation of Airborne Synthetic Mineral Fibres [NOHSC:3006(1989)].

Relevant information may also be found in the Australian Institute of Occupational Hygienists (AIOH) *Synthetic Mineral Fibres (SMF) And Occupational Health Issues, Position Paper*, October 2011 (reformatted January 2018).

Where reasonable concern exists over possible respirable fibre concentrations in any application, the first step is often to confirm that the work practices, as recommended for the particular product, are being followed. Air monitoring may not be required when it has been clearly established that appropriate work practices are being carried out.

Notwithstanding the above, exposures should not exceed the relevant SWA exposure standards outlined in Table 4 below.

Table 4: SWA Exposure Standards for SMF

Standard Name	Time Weighted Average (TWA) Exposure Standard
Glass wool, rock (stone) wool, slag wool and continuous glass filament and low biopersistence Man Made Vitreous Fibres (MMVF)	2 mg/m ³ (inhalable dust)
Refractory ceramic fibres (RCF), special purpose glass fibres and high biopersistence MMVF	0.5 f/mL (respirable) 2 mg/m ³ (inhalable dust)

SMF waste should be disposed at a licensed waste collection facility. Synthetic fibre waste (from materials such as fibreglass, polyesters and other plastics) packaged securely to prevent dust emissions is pre-classified as General Solid Waste (non-putrescible) under EPA (2014).

All disposal receipts should be retained.

6.4 Polychlorinated Biphenyls (PCBs)

Prior to any significant disturbance, such as demolition, refurbishment or maintenance works, fluorescent light fittings should be electrically isolated and inspected in detail for metal canister-type

capacitors that may contain PCB's. Any capacitors containing or suspected to contain PCB should be removed by a suitably qualified and experienced contractor.

PCB containing capacitors should be managed in accordance with the general requirements of the WHS Regulation and the:

- Environmentally Hazardous Chemicals (EHC) Act 2008 and subordinate *Polychlorinated Biphenyl (PCB) Chemical Control Order 1997*; and
- *Polychlorinated Biphenyls Management Plan, Revised Edition, April 2003*, issued by the Environment Protection and Heritage Council (EPHC).

Any PCB containing capacitors that exhibit leakage should be removed and replaced by a suitably qualified and experienced contractor as soon as possible. Access to areas containing leaking capacitors should be suitably restricted.

The conveyance and disposal of PCB material and PCB waste is subject to special requirements outlined in the *Polychlorinated Biphenyl (PCB) Chemical Control Order 1997*.

All disposal receipts should be retained.

6.5 Lead Paint

The potential presence of lead paint(s) at the Site should be considered during the risk assessment for any proposed works. Additional, targeted sampling and analysis for lead paints should be considered prior to any work that may result in significant disturbance of paint system(s).

Lead paints should be managed in accordance with the WHS Regulation including (including Chapter 7, Part 7.2 Lead) and:

- AS4361.1 – 2017, *Guide to hazardous paint management - Lead and other hazardous metallic pigments in industrial applications*; and
- AS4361.2 – 2017, *Guide to hazardous paint management - Lead paint in residential, public and commercial buildings*.

In accordance with AS4361.1 – 2017:

- When one or more tests from a building or portion of a building indicate that lead is present, the paint should be treated as lead paint; and
- A project should not be classified as free of lead, unless all samples within the area are proven to be free of lead

Lead paint that is in sound condition, not directly accessible (e.g. over-painted with lead-free paint) and unlikely to be disturbed may not require any immediate action.

Area(s) of lead paint that are in poor condition (e.g. flaking, delaminating) should generally be removed along with any lead paint debris and associated dust.

Exposed area(s) of lead paint that are intact may be stabilised by over-painting with a lead-free paint, or by covering with a suitable encapsulant. Stabilisation can provide an interim to long-term solution to a lead paint hazard.

The lead paint removal method and control measures adopted should be determined by risk assessment and a detailed knowledge of the workplace and proposed use/activities.

Exposure to airborne lead must be maintained below the relevant SWA exposure standards pertaining to lead. The SWA 8-hour TWA exposure standard for lead (inorganic dusts and fumes) is 0.05 mg/m³. Other exposure standards apply for substances such as lead chromate.

Air monitoring for lead may be required during lead paint remediation works based on risk assessment and the requirements to maintain airborne lead levels below the abovementioned exposure standards.

At the completion of lead paint removal a clearance inspection should be conducted by a Competent Person. The Competent Person should determine the requirements for clearance including any air monitoring or sample analysis that may be required.

Lead paint waste should be assessed and classified for disposal in accordance with EPA (2014).

Under EPA (2014) the following wastes (other than special waste, liquid waste, hazardous waste, restricted solid waste or general solid waste (putrescible)) are pre-classified as 'general solid waste (non-putrescible)':

- Waste contaminated with lead (including lead paint waste) from residential premises or educational or child care institutions.

Under EPA (2014) the following waste types (other than special waste or liquid waste) have been pre-classified by the EPA as 'hazardous waste':

- Lead paint waste arising otherwise than from residential premises or educational or child care institutions.

Based on previous correspondence with the NSW EPA, DP understands that EPA (2014) does not consider AS4361.1 - 2017 or AS4361.2 - 2017, including the definition of lead paint therein, for waste classification assessment. As such:

- These standards have no bearing on how waste is classified in NSW; and
- Waste classification should be carefully considered and an appropriate degree of liaison with the NSW EPA may be required to help ensure correct waste classification.

All disposal receipts should be retained.

6.6 Lead Dust

Laboratory analysis results for lead dust should be taken as a general indication of actual conditions only since sampling is limited and the concentration of lead in dust may vary considerably between locations within the same general area.

No recognised Australian guidelines have been identified for the direct assessment of lead dust concentrations in ceiling cavities. Notwithstanding this, AS4361.2-1998 *Guide to Lead Paint Management, Part 2: Residential and Commercial Buildings* (superseded) outlined acceptance limits for lead in surface dust after lead paint management activities. These limits were:

- Interior floors: 1 mg/m² (as lead).
- Interior window sills: 5 mg/m² (as lead); and
- Exterior surfaces: 8 mg/m² (as lead).

The United States Environmental Protection Authority (US EPA) 40 CFR Part 745 *Lead; Identification of Dangerous Levels of Lead; Final Rule* establishes the following standards for lead hazard identification:

- Floors - 40 µg/ft² (~0.43 mg/m²) lead;
- Interior Window sills - 250 µg/ft² (~2.7 mg/m²) lead; and
- Window troughs - 400 µg/ft² (~4.3 mg/m²) lead.

The above acceptance limits may be used as a guide to assessing lead concentrations in settled dust. As a precaution a lead concentration of 0.5 mg/m² is used to identify potentially hazardous conditions in this assessment.

Where the concentration of lead in dust exceeds 0.5 mg/m² appropriate control and/or remedial measures may need to be identified via risk assessment and with a detailed knowledge of the workplace and proposed use/activities.

Where ceiling spaces and similar cavities are effectively enclosed, and provide very limited or no opportunity for lead dust to enter occupied areas, the dust may typically remain in place. In such a case, access to the cavities should be suitably restricted and all entrances signposted with appropriate warning signs.

Any personnel required to enter building cavities or other areas containing elevated concentrations of lead in dust should undertake an appropriate risk assessment and develop a Safe Work Method Statement (SWMS) for the work. The SWMS must identify controls that ensure the risk of exposure to lead remains at an acceptable level for the personnel entering the area and for occupants of the building and surrounds.

Consideration should be given to removal of lead containing dust including when:

- There is a significant risk of the lead entering occupied areas; or

- Significant disturbance of lead dust is likely due to maintenance, refurbishment or demolition work or other reason(s); or
- Removal is a reasonably practical means of eliminating the hazard.

Removal of lead dust should be undertaken by a suitably qualified and experienced removal contractor.

The lead dust removal method and control measures adopted should be determined by risk assessment and a detailed knowledge of the workplace and proposed use/activities.

Exposure to airborne lead must be maintained below the relevant SWA exposure standards pertaining to lead. The SWA 8-hour TWA exposure standard for lead (inorganic dusts and fumes) is 0.05 mg/m³.

Air monitoring for lead may be required based on the results of the risk assessment and the requirement to maintain airborne lead concentrations below the abovementioned exposure standard(s).

At the completion of lead dust removal a clearance inspection should be conducted by a Competent Person. The Competent Person should determine the requirements for clearance including any air monitoring or sample analysis that may be required.

Lead waste should be assessed and classified for disposal in accordance with EPA (2014).

All disposal receipts should be retained.

7. Limitations

Douglas Partners (DP) has prepared this report (or services) for this project at 2 Dee Why Avenue, Dee Why NSW in accordance with DP's proposal SYD200764.P.001.Rev0 dated 14 July 2020. This report is provided for the exclusive use of Dee Why RSL Club for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the conditions on the site only at the specific inspection, sampling and/or testing locations, and then only to the extent practicable and safely accessible at the time the work was carried out. Site conditions may change after DP's field inspection, sampling and testing has been completed.

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be affected by undetected variations in site conditions across the site between and beyond the inspection, sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

Although the sampling plan adopted for this investigation is considered appropriate to achieve the stated project objectives, there are necessarily parts of the site that have not been inspected, sampled and/or tested. This is either due to undetected variations in conditions or to budget constraints (as discussed above), or to parts of the site being inaccessible or unavailable, or to occupants, furnishings or stored items preventing access. It is therefore considered possible that HBM, including asbestos, may be present in unobserved or untested parts of the site, between and beyond the inspection, sampling and testing locations, and hence no warranty can be given that all HBM have been identified.

Inspections are limited to areas that are safely accessible at the time of the inspection without undue damage to building finishes or disturbance of occupants. Inspections exclude hidden and inaccessible locations such as within building cavities, voids and enclosed sections of risers/shafts as well as materials encased within the building structure or located below the exposed ground surface (e.g. pipes, drains and formwork). In addition, residual asbestos materials (e.g. asbestos lagging to pipes and vessels) may remain undiscovered below newer, asbestos-free materials (e.g. preformed SMF insulation). Such residual asbestos materials may not be identified without extensive intrusive investigation and/or dismantling/demolition work if at all.

Any disturbance of building materials, such as during renovation, maintenance or demolition work, may reveal additional HBM.

Limitations apply to the laboratory analytical methods used. For example, it can be very difficult or impossible to detect the presence of asbestos in some bulk materials (e.g. vinyl tiles) using the polarised light microscopy analytical method, even after ashing or disintegration of samples. This is due to the small length or diameter of asbestos fibres present in the material, or attributed to the fact that very fine fibres have been dispersed individually throughout the material.

While work is undertaken in a professional manner the nature of HBM and the limitations of the method(s) used mean that we cannot guarantee that all HBM have been identified. This report should therefore not be considered a definitive account of all HBM that may be present at the site.

DP personnel not licenced or accredited quantity surveyors. Any quantities quoted in this report are provided for general guidance only and should not be relied upon. The services of a licenced quantity surveyor should be engaged in order to determine reliable quantities.

The recommendations and conclusions contained in this report shall not abrogate a person of their responsibility to work in accordance with statutory requirements, codes of practice, standards, guidelines, safety data sheets, work instructions or industry best practice.

The contents of this report do not constitute formal design components such as are required, by the Health and Safety Legislation and Regulations, to be included in a Safety Report specifying the hazards likely to be encountered during construction and the controls required to mitigate risk. This design process requires risk assessment to be undertaken, with such assessment being dependent upon factors relating to likelihood of occurrence and consequences of damage to property and to life. This, in turn, requires project data and analysis presently beyond the knowledge and project role respectively of DP. DP may be able, however, to assist the client in carrying out a risk assessment of potential hazards contained in this report, as an extension to the current scope of works, if so requested, and provided that suitable additional information is made available to DP. Any such risk assessment would, however, be necessarily restricted to the environmental components set out in this report and to their application by the project designers to project design, construction, maintenance and demolition.

Douglas Partners Pty Ltd

Appendix A

About This Report

About this Report

Douglas Partners



Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

This report is the property of Douglas Partners Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Conditions of Engagement for the commission supplied at the time of proposal. Unauthorised use of this report in any form whatsoever is prohibited.

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;

- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

Appendix B


Plates



Photograph 1: 2 Dee Why Parade, Dee Why, external, southeast corner, electrical box, electrical backing board(s), suspected asbestos.



Photograph 2: 2 Dee Why Parade, Dee Why, external, southeast corner and throughout, A/C unit(s), bulk internal insulation, suspected SMF.

	Site Photographs	PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register	PLATE No: 1
	2 Dee Why Parade, Dee Why	REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20



Photograph 3: 2 Dee Why Parade, Dee Why, external, south east corner, ground debris, fibre cement sheeting, asbestos detected by analysis.



Photograph 4: 2 Dee Why Parade, Dee Why, external, southern elevation, service pit, suspected non-asbestos.

 Douglas Partners Geotechnics Environment Groundwater	Site Photographs	PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register	PLATE No: 2
	2 Dee Why Parade, Dee Why	REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20



Photograph 5: 2 Dee Why Parade, Dee Why, external, surface throughout, paint covering, white paint, lead paint (>0.1% lead w/w).



Photograph 6: 2 Dee Why Parade, Dee Why, external, surfaces throughout, paint covering, light red paint, lead paint (>0.1% lead w/w).

	Site Photographs	PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register	PLATE No: 3
	2 Dee Why Parade, Dee Why	REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20



Photograph 7: 2 Dee Why Parade, Dee Why, external, surfaces throughout, paint covering, typical off-white paint, non-lead paint ($\leq 0.1\%$ lead w/w)



Photograph 8: 2 Dee Why Parade, Dee Why, external, western elevation, ramp to hair salon, ground debris, fibre cement sheeting, no asbestos detected by analysis.

	Site Photographs		PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register		PLATE No: 4
	2 Dee Why Parade, Dee Why		REV: A
	CLIENT: Dee Why RSL		DATE: Jul-20



Photograph 9: 2 Dee Why Parade, Dee Why, external, throughout, wall material, fibre cement sheeting, no asbestos detected by analysis.



Photograph 10: 2 Dee Why Parade, Dee Why, external, eastern elevation, entrance to subfloor and throughout subfloor, ground debris, fibre cement sheeting, asbestos detected by analysis.

 Douglas Partners Geotechnics Environment Groundwater	Site Photographs		PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register		PLATE No: 5
	2 Dee Why Parade, Dee Why		REV: A
	CLIENT: Dee Why RSL		DATE: Jul-20



Photograph 11: 2 Dee Why Parade, Dee Why, external, subfloor areas, infill panels, throughout, fibre cement sheeting, asbestos detected by analysis.



Photograph 12: 2 Dee Why Parade, Dee Why, external, subfloor areas, packing material, fibre cement sheeting, asbestos detected by analysis.

 Douglas Partners Geotechnics Environment Groundwater	Site Photographs	PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register	PLATE No: 6
	2 Dee Why Parade, Dee Why	REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20



Photograph 13: 2 Dee Why Parade, Dee Why, external, subfloor areas, central subfloor area, suspect insulation material, no asbestos detected by analysis.



Photograph 14: 2 Dee Why Parade, Dee Why, external, subfloor areas, rheem hot water system, bulk internal insulation, suspected SMF.

	Site Photographs		PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register		PLATE No: 7
	2 Dee Why Parade, Dee Why		REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20	



Photograph 15: 2 Dee Why Parade, Dee Why, external, north elevation, stair handrail to level 2, paint covering, typical grey paint, non-lead paint ($\leq 0.1\%$ lead w/w)



Photograph 16: 2 Dee Why Parade, Dee Why, external, level 2, adjacent apartment front doors, partition and walls, fibre cement sheeting, no asbestos detected by analysis.

	Site Photographs		PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register		PLATE No: 8
	2 Dee Why Parade, Dee Why		REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20	



Photograph 17: 2 Dee Why Parade, Dee Why, external, level 2, adjacent apartment front doors, partition and walls, paint covering, typical gloss cream paint, non-lead paint ($\leq 0.1\%$ lead w/w)



Photograph 18: 2 Dee Why Parade, Dee Why, external, walls throughout, undercoat paint covering, typical cream paint, non-lead paint ($\leq 0.1\%$ lead w/w)

	Site Photographs		PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register		PLATE No: 9
	2 Dee Why Parade, Dee Why		REV: A
	CLIENT: Dee Why RSL		DATE: Jul-20



Photograph 19: 2 Dee Why Parade, Dee Why, internal, level 2, apartment 1 and 2, kitchen floor covering, beige dappled grey vinyl floor tile, no asbestos detected by analysis.



Photograph 20: 2 Dee Why Parade, Dee Why, internal, level 2, apartment 1 and 2, wall paint covering, throughout, typical white paint, non-lead paint ($\leq 0.1\%$ lead w/w)

	Site Photographs	PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register	PLATE No: 10
	2 Dee Why Parade, Dee Why	REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20



Photograph 21: 2 Dee Why Parade, Dee Why, internal, level 2, apartment 1 and 2, wall paint covering, throughout, typical white paint, non-lead paint ($\leq 0.1\%$ lead w/w).



Photograph 22: 2 Dee Why Parade, Dee Why, internal, level 2, apartment 1, main bedroom, cavity below floorboards (possibly throughout), fibre cement sheeting, asbestos (assumed).

	Site Photographs		PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register		PLATE No: 11
	2 Dee Why Parade, Dee Why		REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20	



Photograph 23: 2 Dee Why Parade, Dee Why, internal, level 2 apartment 1 and 2, fireplaces, throughout, internal component(s), inaccessible.



Photograph 24: 2 Dee Why Parade, Dee Why, internal, level 2, apartment 1, roof space, ceiling dust, elevated lead (10.2 mg/m2).

	Site Photographs		PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register		PLATE No: 12
	2 Dee Why Parade, Dee Why		REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20	



Photograph 25: 2 Dee Why Parade, Dee Why, internal, level 2, apartment 2, SE bedroom, north wall, fibre cement sheeting, asbestos detected by analysis.



Photograph 26: 2 Dee Why Parade, Dee Why, internal, level 2, apartment 2, internal walls, paint covering, typical cream paint, non-lead paint ($\leq 0.1\%$ lead w/w)

	Site Photographs	PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register	PLATE No: 13
	2 Dee Why Parade, Dee Why	REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20



Photograph 27: 2 Dee Why Parade, Dee Why, internal, level 2, apartment 1 and 2, window mastic to non-sliding windows, bituminous material, no asbestos detected by analysis.



Photograph 28: 2 Dee Why Parade, Dee Why, internal, level 2, apartment 2, roof space, ceiling dust, elevated lead (77.8 mg/m²).

	Site Photographs		PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register		PLATE No: 14
	2 Dee Why Parade, Dee Why		REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20	



Photograph 29: 2 Dee Why Parade, Dee Why, internal, ground floor, A/C units, throughout, bulk internal insulation, suspected SMF.



Photograph 30: 2 Dee Why Parade, Dee Why, internal, ground floor, kitchenette, aqua max hot water system, bulk internal insulation, suspected SMF.

 Douglas Partners Geotechnics Environment Groundwater	Site Photographs	PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register	PLATE No: 15
	2 Dee Why Parade, Dee Why	REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20



Photograph 31: 2 Dee Why Parade, Dee Why, internal, ground floor, mezzanine area, SW corner, bituminous material, no asbestos detected by analysis.



Photograph 32: 2 Dee Why Parade, Dee Why, internal, basement storage area, north elevation, in floor safe, safe lining, suspected non-asbestos.

	Site Photographs	PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register	PLATE No: 16
	2 Dee Why Parade, Dee Why	REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20



Photograph 33: 2 Dee Why Parade, Dee Why, internal, basement storage area, west elevation, chubb safety deposit box, safe lining, suspected non-asbestos.

	Site Photographs	PROJECT: 99758.00
	Hazardous Building Materials (HBM) Register	PLATE No: 17
	2 Dee Why Parade, Dee Why	REV: A
	CLIENT: Dee Why RSL	DATE: Jul-20

Appendix C

Hazardous Building Materials (HBM) Register

DP Project No: 99758.00
 Hazardous Building Materials (HBM) Register
 2 Dee Why Parade, Dee Why

Building	Location (General)	Location (Specific)	Material	Sample No.	Material Status	Asbestos Risk Assessment								Photo No.	Summary Recommendation (Management Survey)
						Friability	Condition	Treatment	Accessibility	Activity	Ventilation	Risk Score	Action Priority		
2 Dee Why Parade, Dee Why	external	southeast corner, electrical box	electrical backing board(s)	-	suspected asbestos	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	Asbestos should be removed in full by a licensed asbestos removalist, and an asbestos clearance certificate obtained, prior to general demolition work commencing.
2 Dee Why Parade, Dee Why	external	southeast corner and throughout, A/C unit(s)	bulk internal insulation	-	suspected SMF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	Material should be removed by a suitably qualified and experienced contractor prior to general demolition proceeding. Dispose material in accordance with requirements of the local waste disposal authority.
2 Dee Why Parade, Dee Why	external	south east corner, ground debris	fibre cement sheeting	01	asbestos detected by analysis	1	3	3	2	1	0	10	Moderate	3	Restrict access. Asbestos should be removed in full by a licensed asbestos removalist, and an asbestos clearance certificate obtained, prior to general demolition work commencing.
2 Dee Why Parade, Dee Why	external	southern elevation	service pit	-	suspected non-asbestos	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	external	surface throughout, paint covering	white paint	P01	lead paint (>0.1% lead w/w)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	Any areas of damaged/flaking lead paint and any associated debris should be removed by a competent person. Classify (and segregate if required) all lead paint material for disposal in accordance with the NSW EPA Waste Classification Guidelines. Avoid disturbance of paints to the extent reasonably practicable and implement controls to prevent exposure and dispersal during building work (including any paint abatement or demolition work).
2 Dee Why Parade, Dee Why	external	surfaces throughout, paint covering	light red paint	P02	lead paint (>0.1% lead w/w)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6	Any areas of damaged/flaking lead paint and any associated debris should be removed by a competent person. Classify (and segregate if required) all lead paint material for disposal in accordance with the NSW EPA Waste Classification Guidelines. Avoid disturbance of paints to the extent reasonably practicable and implement controls to prevent exposure and dispersal during building work (including any paint abatement or demolition work).

DP Project No: 99758.00
 Hazardous Building Materials (HBM) Register
 2 Dee Why Parade, Dee Why

Building	Location (General)	Location (Specific)	Material	Sample No.	Material Status	Asbestos Risk Assessment								Photo No.	Summary Recommendation (Management Survey)
						Friability	Condition	Treatment	Accessibility	Activity	Ventilation	Risk Score	Action Priority		
2 Dee Why Parade, Dee Why	external	surfaces throughout, paint covering	typical off-white paint	P03	non-lead paint (≤0.1% lead w/w)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	external	western elevation, ramp to hair salon	ground debris, fibre cement sheeting	02	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	external, throughout	wall material	fibre cement sheeting	03	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	external, eastern elevation	entrance to subfloor and throughout subfloor	ground debris, fibre cement sheeting	04	asbestos detected by analysis	1	3	2	2	1	0	9	Low	10	Restrict access. Asbestos should be removed in full by a licensed asbestos removalist, and an asbestos clearance certificate obtained, prior to general demolition work commencing.
2 Dee Why Parade, Dee Why	external, subfloor areas	infill panels, throughout	fibre cement sheeting	05	asbestos detected by analysis	1	2	2	2	1	0	8	Low	11	Asbestos should be removed in full by a licensed asbestos removalist, and an asbestos clearance certificate obtained, prior to general demolition work commencing.
2 Dee Why Parade, Dee Why	external, subfloor areas	packing material	fibre cement sheeting	06	asbestos detected by analysis	1	2	2	2	1	0	8	Low	12	Asbestos should be removed in full by a licensed asbestos removalist, and an asbestos clearance certificate obtained, prior to general demolition work commencing.
2 Dee Why Parade, Dee Why	external, subfloor areas	central subfloor area	suspect insulation material	07	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	external, subfloor areas	rheem hot water system	bulk internal insulation	-	suspected SMF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14	Material should be removed by a suitably qualified and experienced contractor prior to general demolition proceeding. Dispose material in accordance with requirements of the local waste disposal authority.

DP Project No: 99758.00
 Hazardous Building Materials (HBM) Register
 2 Dee Why Parade, Dee Why

Building	Location (General)	Location (Specific)	Material	Sample No.	Material Status	Asbestos Risk Assessment								Photo No.	Summary Recommendation (Management Survey)
						Friability	Condition	Treatment	Accessibility	Activity	Ventilation	Risk Score	Action Priority		
2 Dee Why Parade, Dee Why	external, north elevation	stair handrail to level 2, paint covering	typical grey paint	P04	non-lead paint (≤0.1% lead w/w)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	external, level 2	adjacent apartment front doors, partition and walls	fibre cement sheeting	08	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	16	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	external, level 2	adjacent apartment front doors, partition and walls, paint covering	typical gloss cream paint	P05	non-lead paint (≤0.1% lead w/w)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	external, walls throughout	undercoat paint covering	typical cream paint	P06	non-lead paint (≤0.1% lead w/w)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	internal, level 2, apartment 1 and 2	kitchen floor covering	beige dappled grey vinyl floor tile	09	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	internal, level 2, apartment 1	floorboard paint covering, throughout	dark grey	refer P04	suspected non-lead paint (≤0.1% lead w/w)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	internal, level 2, apartment 1 and 2	wall paint covering, throughout	typical white paint	P07	non-lead paint (≤0.1% lead w/w)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	internal, level 2, apartment 1	main bedroom, cavity below floorboards (possibly throughout)	fibre cement sheeting	-	asbestos (assumed)	1	0	1	1	2	1	6	Low	22	Limited access - confirm asbestos content and extent of material prior to disturbance. Asbestos should be removed in full by a licensed asbestos removalist, and an asbestos clearance certificate obtained, prior to general demolition work commencing.

DP Project No: 99758.00
 Hazardous Building Materials (HBM) Register
 2 Dee Why Parade, Dee Why

Building	Location (General)	Location (Specific)	Material	Sample No.	Material Status	Asbestos Risk Assessment								Photo No.	Summary Recommendation (Management Survey)
						Friability	Condition	Treatment	Accessibility	Activity	Ventilation	Risk Score	Action Priority		
2 Dee Why Parade, Dee Why	internal, level 2 apartment 1 and 2	fireplaces, throughout	internal component(s)	-	inaccessible	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23	Inaccessible area/material - Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
2 Dee Why Parade, Dee Why	internal, level 2, apartment 1	roof space	ceiling dust	D01	elevated lead (10.2 mg/m³)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24	Ensure access to building cavities is adequately restricted and entry is only made under controlled conditions. Classify material (and segregate material if required) for disposal in accordance with the NSW EPA Waste Classification Guidelines. Remove contamination if reasonably practicable to do so and prior to any substantive disturbance. Implement appropriate controls to prevent exposure and dispersal during building work including abatement and demolition.
2 Dee Why Parade, Dee Why	internal, level 2, apartment 2	SE bedroom, north wall	fibre cement sheeting	10	asbestos detected by analysis	1	0	1	3	2	2	9	Low	25	Asbestos should be removed in full by a licensed asbestos removalist, and an asbestos clearance certificate obtained, prior to general demolition work commencing.
2 Dee Why Parade, Dee Why	internal, level 2, apartment 2	internal walls, paint covering	typical cream paint	P08	non-lead paint (≤0.1% lead w/w)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	26	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	internal, level 2, apartment 1 and 2	window mastic to non-sliding windows	bituminous material	11	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	27	No asbestos/hazardous material identified.
2 Dee Why Parade, Dee Why	internal, level 2, apartment 2	roof space	ceiling dust	D02	elevated lead (77.8 mg/m³)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28	Ensure access to building cavities is adequately restricted and entry is only made under controlled conditions. Classify material (and segregate material if required) for disposal in accordance with the NSW EPA Waste Classification Guidelines. Remove contamination if reasonably practicable to do so and prior to any substantive disturbance. Implement appropriate controls to prevent exposure and dispersal during building work including abatement and demolition.
2 Dee Why Parade, Dee Why	internal, ground floor	A/C units, throughout	bulk internal insulation	-	suspected SMF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	29	Material should be removed by a suitably qualified and experienced contractor prior to general demolition proceeding. Dispose material in accordance with requirements of the local waste disposal authority.

DP Project No: 99758.00
 Hazardous Building Materials (HBM) Register
 2 Dee Why Parade, Dee Why

Building	Location (General)	Location (Specific)	Material	Sample No.	Material Status	Asbestos Risk Assessment								Photo No.	Summary Recommendation (Management Survey)
						Friability	Condition	Treatment	Accessibility	Activity	Ventilation	Risk Score	Action Priority		
2 Dee Why Parade, Dee Why	internal, ground floor	kitchenette, aqua max hot water system	bulk internal insulation	-	suspected SMF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	Inaccessible area/material - Confirm status of hazardous material(s) when safe access available and prior to any disturbance.
2 Dee Why Parade, Dee Why	internal, ground floor	mezzanine area, SW corner	bituminous material	12	no asbestos detected by analysis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31	No asbestos/hazardous material identified.

DP Project No: 99758.00
Hazardous Building Materials (HBM) Register
2 Dee Why Parade, Dee Why

																Asbestos Risk Assessment									
Building	Location (General)	Location (Specific)	Material	Sample No.	Material Status	Friability	Condition	Treatment	Accessibility	Activity	Ventilation	Risk Score	Action Priority	Photo No.	Summary Recommendation (Management Survey)										
2 Dee Why Parade, Dee Why	internal, basement storage area	north elevation, in floor safe	safe lining	-	suspected non-asbestos	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32	Inaccessible area/material - Confirm status of hazardous material(s) when safe access available and prior to any disturbance.										
2 Dee Why Parade, Dee Why	internal, basement storage area	west elevation, chubb safety deposit box	safe lining	-	suspected non-asbestos	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33	Inaccessible area/material - Confirm status of hazardous material(s) when safe access available and prior to any disturbance.										
2 Dee Why Parade, Dee Why	ceiling cavities in general	throughout	insulation batts or similar	-	SMF identified visually	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	refer 28	Material should be removed by a suitably qualified and experienced contractor prior to general demolition proceeding. Dispose material in accordance with requirements of the local waste disposal authority.										
2 Dee Why Parade, Dee Why	throughout building	locations in general	paints	refer P01 and P02	may comprise lead paint	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<p>Any areas of damaged/flaking lead paint and any associated debris should be removed by a competent person.</p> <p>Classify (and segregate if required) all lead paint material for disposal in accordance with the NSW EPA Waste Classification Guidelines.</p> <p>Avoid disturbance of paints to the extent reasonably practicable and implement controls to prevent exposure and dispersal during building work (including any paint abatement or demolition work).</p>										

Appendix D

Laboratory Certificate(s) of Analysis



CERTIFICATE OF ANALYSIS 247671

Client Details

Client	Douglas Partners Pty Ltd
Attention	Jack Snowden
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	99758.00 Dee Why RSL HAZMAT
Number of Samples	11 Material, 1 Powder, 8 Paint, 2 Dust
Date samples received	24/07/2020
Date completed instructions received	24/07/2020

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.

Report Details

Date results requested by	31/07/2020
Date of Issue	29/07/2020
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Asbestos Approved By

Analysed by Asbestos Approved Identifier: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By

Hannah Nguyen, Senior Chemist
Jaimie Loa-Kum-Cheung, Metals Supervisor
Lucy Zhu, Asbestos Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Asbestos ID - materials						
Our Reference		247671-1	247671-2	247671-3	247671-4	247671-5
Your Reference	UNITS	01	02	03	04	05
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	29/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020
Mass / Dimension of Sample	-	95x52x5mm	60x50x5mm	25x10x2mm	50x35x5mm	30x13x2mm
Sample Description	-	Grey fibre cement material	Beige fibre cement material	Beige fibre cement material	Grey fibre cement material	Beige fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Crocidolite asbestos detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	Chrysotile asbestos detected	Chrysotile asbestos detected Organic fibres detected
Trace Analysis	-	[NT]	No asbestos detected	No asbestos detected	[NT]	[NT]

Asbestos ID - materials						
Our Reference		247671-6	247671-7	247671-8	247671-9	247671-10
Your Reference	UNITS	06	07	08	09	10
Type of sample		Material	Powder	Material	Material	Material
Date analysed	-	29/07/2020	29/07/2020	29/07/2020	29/07/2020	29/07/2020
Mass / Dimension of Sample	-	55x20x5mm	30x30x1mm	12x10x4mm	15x11x3mm	25x8x2mm
Sample Description	-	Grey fibre cement material	White powdery material	Beige fibre cement material	Beige vinyl tile	Grey fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Crocidolite asbestos detected	No asbestos detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	Chrysotile asbestos detected
Trace Analysis	-	[NT]	No asbestos detected	No asbestos detected	No asbestos detected	[NT]

Asbestos ID - materials			
Our Reference		247671-11	247671-12
Your Reference	UNITS	11	12
Type of sample		Material	Material
Date analysed	-	29/07/2020	29/07/2020
Mass / Dimension of Sample	-	13x10x1mm	27x15x2mm
Sample Description	-	White paint & debris	Black bituminous membrane
Asbestos ID in materials	-	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected

Lead in Paint						
Our Reference		247671-13	247671-14	247671-15	247671-16	247671-17
Your Reference	UNITS	P01	P02	P03	P04	P05
Type of sample		Paint	Paint	Paint	Paint	Paint
Date prepared	-	27/07/2020	27/07/2020	27/07/2020	27/07/2020	27/07/2020
Date analysed	-	27/07/2020	27/07/2020	27/07/2020	27/07/2020	27/07/2020
Lead in paint	%w/w	0.54	1.6	0.061	<0.005	<0.005

Lead in Paint				
Our Reference		247671-18	247671-19	247671-20
Your Reference	UNITS	P06	P07	P08
Type of sample		Paint	Paint	Paint
Date prepared	-	27/07/2020	27/07/2020	27/07/2020
Date analysed	-	27/07/2020	27/07/2020	27/07/2020
Lead in paint	%w/w	0.01	0.053	0.01

Lead (dust)			
Our Reference		247671-21	247671-22
Your Reference	UNITS	D01	D02
Type of sample		Dust	Dust
Date prepared	-	27/07/2020	27/07/2020
Date analysed	-	27/07/2020	27/07/2020
Lead	mg/kg	920	7,000

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Metals-020	Determination of various metals by ICP-AES.
Metals-020/021/022	Digestion of Paint chips/scrapings/liquids for Metals determination by ICP-AES/MS and or CV/AAS.

Client Reference: 99758.00 Dee Why RSL HAZMAT

QUALITY CONTROL: Lead in Paint				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			27/07/2020	13	27/07/2020	27/07/2020		27/07/2020	[NT]
Date analysed	-			27/07/2020	13	27/07/2020	27/07/2020		27/07/2020	[NT]
Lead in paint	%w/w	0.005	Metals-020/021/022	<0.005	13	0.54	0.66	20	102	[NT]

Client Reference: 99758.00 Dee Why RSL HAZMAT

QUALITY CONTROL: Lead (dust)				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			27/07/2020	[NT]	[NT]	[NT]	[NT]	27/07/2020	[NT]
Date analysed	-			27/07/2020	[NT]	[NT]	[NT]	[NT]	27/07/2020	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

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.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

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: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-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.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Jack Snowden

Sample Login Details

Your reference	99758.00 Dee Why RSL HAZMAT
Envirolab Reference	247671
Date Sample Received	24/07/2020
Date Instructions Received	24/07/2020
Date Results Expected to be Reported	31/07/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	11 Material, 1 Powder, 8 Paint, 2 Dust
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	na
Cooling Method	None
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	Asbestos ID - materials	Lead in Paint	Lead (dust)
01	✓		
02	✓		
03	✓		
04	✓		
05	✓		
06	✓		
07	✓		
08	✓		
09	✓		
10	✓		
11	✓		
12	✓		
P01		✓	
P02		✓	
P03		✓	
P04		✓	
P05		✓	
P06		✓	
P07		✓	
P08		✓	
D01			✓
D02			✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.