REPORT TO

HAMMONDCARE

ON

HAZARDOUS BUILDING MATERIALS SURVEY

FOR

PROPOSED HOSPITAL REDEVELOPMENT

AT

NERINGAH HOSPITAL, 4-12 NERINGAH AVENUE SOUTH, WAHROONGA, NSW

Date: 2 November 2022
Ref: E35312BLrpt6-HAZ

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DOCUMENT REVISION RECORD

Report Reference	Report Status	Report Date
E35312BLrpt6-HAZ	Draft Report	18 October 2022
E35312BLrpt6-HAZ	Final Report	2 November 2022

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Attachments

Abbreviations

Asbestos Containing Material	**ACM**
Chain of Custody	**COC**
JK Environments	**JKE**
National Association of Testing Authorities	**NATA**
Personal Protective Equipment	**PPE**
Polychlorinated Biphenyls	**PCB**
Practical Quantitation Limit	**PQL**
Synthetic Mineral Fibre	**SMF**

1 INTRODUCTION

HammondCare ('the client') commissioned JK Environments (JKE) to undertake a hazardous building materials survey for the proposed hospital redevelopment at Neringah Hospital, 4-12 Neringah Avenue South, Wahroonga, NSW. The site location is shown on Figure 1 and the survey was confined to the development area as shown on Figure 2 attached in the appendices.

This hazardous building materials survey report is submitted to the Department of Planning and Environment (DPE) in support of a State Significant Development Application (SSD-45121248) for the redevelopment of part of the site at 4-12 Neringah Avenue South, Wahroonga for the purposes of delivering additional community health services, seniors housing, as well as upgraded palliative care facilities that will contribute to the broader operation of 'Neringah Hospital.' The extent of the development area subject to this shown on Figure A below. The extent of the development area subject to this hazardous building materials survey report is shown on the figures attached in the appendices.

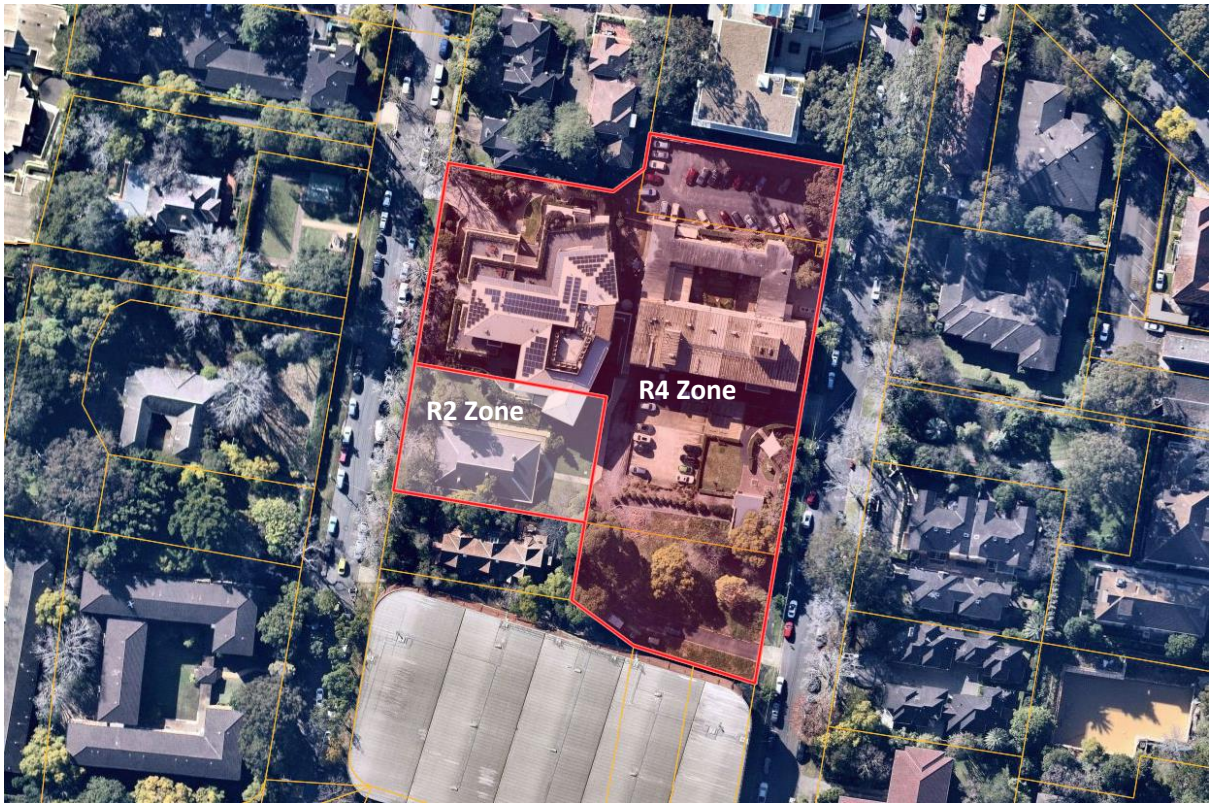


Figure A – Outline of the site, with the portion of the site subject to the SCC shaded dark red (R4 zone)

Specifically, this SSDA seeks approval for the following:

- Site preparation works comprising:
  - Demolition of the Neringah Hospital building, kiosk, and existing at-grade carparks;
  - Clearing of existing vegetation on the proposed development areas;
  - Bulk earthworks including basement excavation; and
  - Remediation works where necessary across the site.
- Construction and use of an integrated seniors housing and health services facility across two buildings ranging from 4-5 storeys above ground, comprising:

- 2 basement levels containing a minimum of 130 car parking spaces and service dock;
- 12 residential aged care facility beds (extension to existing Stage 1 provision);
- 18 palliative care hospice beds (Schedule 3 health services facility);
- Community healthcare services, including outpatient palliative care, centre for positive ageing and Hammond at Home;
- 57 seniors housing dwellings;
- On-site administration, amenities, and ancillary operation spaces.

- Ground level and on-building landscaping works, including the provision of a through site pedestrian link connecting Archdale Park and Balcombe Park;
- Public domain works, specifically, regrading of part of the pedestrian walkway known as 'Archdale Walk' to provide accessible connection; and
- Extension and augmentation of infrastructure and services as required including new site signage.

This report has been prepared to respond to the Secretary's Environmental Assessment Requirements (SEARs) for SSD-45121248 that were issued on 24 June 2022. A table referencing responses has been provided below.

SEAR	Relevant section of report
18. Waste Management If buildings are proposed to be demolished or altered, provide a hazardous materials survey.	This report relates to the survey of hazardous building materials within buildings that are to be demolished or altered as part of the proposed development. A summary of the results of the survey are presented in Section 5, with a full detailed hazardous materials register provided in Appendix B. The conclusions and recommendations of the survey are presented in Section 6.

This document was prepared specifically for the proposed site development works and should not be considered a hazardous building materials management plan or removal control plan.

The document does not contain information regarding an assessment of risk, safe work procedures or control measures associated with hazardous building materials. In the event that hazardous building materials remain within the buildings/structures at the site a hazardous building materials management plan must be prepared.

1.1 Scope of Work

The survey was undertaken generally in accordance with a JKE proposal (Ref: EP56645BR) of 27 May 2022 and written acceptance from the client in the form of a purchase order (PO No: 72359) issued by the client on 27 July 2022. The scope of work included the following:

- A detailed inspection of the existing building and structures shown on Figure 2;
- Sampling of representative materials in accordance with the assessment criteria and inspection procedure outlined in Section 4;

- Documentation of inspection finds including sample location, material type, condition, friability, photographic evidence and site location;
- Laboratory analysis of selected representative materials; and
- Preparation of a report presenting the results of the hazardous building materials survey.

2 SITE DESCRIPTION

Field work for this investigation was confined to the development area and undertaken between the 3rd and 5th August 2022. The site description at the time of the field work is outlined below. The site location is shown on Figure 1 and the general site layout is shown on Figure 2.

The site is located to the west of Neringah Avenue South, Wahroonga, NSW. The site included in the scope of this survey generally consists of a large multi-level hospital building covering the northern portion of the site and the separate Kiosk building located to the south, as shown on the attached Figure 2.

A general description of each building is outlined below:

Building	Description
Main Hospital Building	The main hospital building was constructed in the late 1950's as part of the original Greenwich Hospital development. The building is made up of several connected wings each with multiple levels around a central courtyard space. The lower ground, and ground levels contained several aspects of the hospital including patient rooms, palliative care, staff offices, kitchen, laundry services, storage, reception, plant rooms and maintenance areas. The upper levels were mostly vacant with the exception of a few rooms on Level 1 that were used for IT and communications. The roof level contained a garage plant room and separate lift motor room. Some internal areas of the ground level of the building where patients were present were not inspected in detail due to the constraints in access. The building was of brick, metal and concrete construction with fibre cement eaves and awnings, fibre cement infill panels, concrete floors, brick and concrete external walls, plaster and brick internal walls, plaster ceilings and a concrete and metal roof.
Kiosk Building	The Kiosk building consisted of a single-storey sandstone and brick building to the south of the main hospital building. The Kiosk building contained a central tea room with adjacent kitchenette, amenities and a storage garage at the rear (south). The building was constructed in the late 1950's in conjunction with the hospital. The Kiosk building was of sandstone and brick construction with rendered brick and sandstone external walls, plaster and rendered brick internal walls, plaster ceilings, concrete floors and a flat concrete roof.

2.1 Previous Assessment

An existing hazardous material register for a limited area of the hospital was provided by the client for information purposes during the survey. The register was reported by Greencap with an issue date of February 2013. The register confirmed various asbestos containing materials (ACM), SMF materials and lead containing paint within the internal and external areas of the main hospital building surveyed.

During the JKE inspection, items recorded in the register were reinspected and re-sampled for the purpose of completeness. Where relevant, materials listed in the 2013 register have been included in the current hazardous building materials register provided in Appendix B.

3 REGULATORY BACKGROUND INFORMATION

All work associated with the inspection and reporting of hazardous building materials is generally undertaken in accordance with the following legislation, guidelines and standards:

Table 3-1: Guidelines / Documents

GUIDELINES / REGULATIONS / DOCUMENTS
Asbestos
Code of Practice How to Manage and Control Asbestos in the Workplace, Safe Work NSW, August 2019
Code of Practice How to Safely Remove Asbestos, Safe Work NSW, August 2019
SMF
National Standard for the Safe Use of Synthetic Mineral Fibres [National Occupational Health and Safety Commission:1004 (1990)]
National Code of Practice for the Safe Use of Synthetic Mineral Fibres [National Occupational Health and Safety Commission:2006 (1990)]
Code of Practice for the Safe Use of Synthetic Mineral Fibres, WorkCover: 1993.
Lead
Guide to Lead Paint Management - Part 2: Residential and Commercial Buildings, Australian Standard AS4361.2, 1998
Guide to Hazardous Paint Management, Part 2: Lead Paint in Residential, Public and Commercial Buildings, Australian Standard AS4361.2, 2017
PCBs
Identification of PCB-Containing Capacitors, Australian and New Zealand Environment and Conservation Council (ANZECC), 1997
General
Work Health and Safety Act 2011 (NSW)
Work Health and Safety Regulation 2017 (NSW)
The Demolition of Structures, Australian Standard AS2601 (2001)

4 ASSESSMENT CRITERIA AND INSPECTION PROCEDURE

The survey included a visual inspection of the buildings/structures, sampling and laboratory analysis as described in the following sections.

4.1 Asbestos Fibre Containing Materials

Representative samples of construction materials identified as potentially containing asbestos were obtained using hand tools by personnel wearing suitable personal protective equipment (PPE). The samples were placed in sealed plastic bags and labelled with a unique job number, sampling location and date. All samples were recorded on the chain of custody (COC) record presented in Appendix C.

Following the completion of the field inspection, the samples were forwarded to a National Association of Testing Authorities (NATA) registered laboratory, Envirolab Services Pty Ltd (NATA Accreditation No. 2901), for analysis. The asbestos samples were analysed using stereo and polarising light microscopy methods with dispersion staining techniques.

4.2 Lead Containing Materials

Representative samples of deteriorated paint films and accumulated dust that potentially contain elevated lead concentrations were obtained using hand tools by personnel wearing suitable PPE.

Only significantly deteriorated paint systems that are considered likely to impact on demolition/refurbishment practices or that are considered a health or environmental hazard were sampled and recorded.

The paint flakes obtained included all layers of paint on a particular surface and so are considered to be composites of the materials at each location. The paint flake samples were placed in sealed plastic bags and labelled with a unique job number, sampling location and date. All samples were recorded on the COC record presented in Appendix C.

In accordance with the Australian Standard AS4361.2, 2017 *"Guide to Hazardous Paint Management, Part 2: Lead Paint in Residential, Public and Commercial Buildings,* a lead in paint concentration greater than 0.1% w/w is considered to be lead based paint.

Settled dust sampling involved the collection of settled dust from a known surface area by wet wipe. The area should preferably be 0.09m^2 (which corresponds to an area 30 cm × 30cm) and in any event not less than 0.01m^2, depending on the amount of dust present. A non-alcoholic moistened wipe is folded to form a firm swab. The swab is placed flat onto the surface in one corner of the area to be sampled and rubbed across the entire area in an 'S' pattern. The wipe is re-folded so that the collected dust is on the inside and is again rubbed across the area at 90° to the first 'S'. The wipe is again folded with the dust inside and placed in the sterile sample container.

The lead concentration per m^2 is calculated using the equation (µg/swab ÷ 0.09) ÷ 1000.

Following the completion of the field inspection, the samples were forwarded to a NATA registered laboratory for analysis. Analysis for lead content is performed using a nitric and hydrochloric acid digest followed by ICP-AES (Inductively Coupled Plasma – Atomic Emission Spectroscopy) quantification methods.

The result, when received from the laboratory, is converted to milligrams, and then divided by the area sampled (in square metres) to give a lead loading expressed in mg/m^2.

4.2.1 Lead Materials Assessment Criteria

As stated above, a lead in paint concentration greater than 0.1% w/w is considered to be lead based paint.

In the absence of current published lead levels in dust, the acceptance level of 8 mg/m^2 for exterior surfaces as published in *Australian Standard AS4361.2, 1998 Guide to Lead Paint Management - Part 2: Residential and Commercial Buildings*, is considered the most appropriate guideline for comparison for lead in ceiling dust, and has been adopted for the assessment.

4.3 Polychlorinated Biphenyls (PCBs) Containing Electrical Equipment

The major use of PCBs in the electrical industry has been inside transformers and capacitors. Transformers may include relatively small transformers inside electrical mains/fuse cabinets. Capacitors containing PCBs were installed in numerous types of fluorescent light fittings during the 1950's, 60's and 70's.

Representative samples of each type of electrical equipment identified within the existing structure were visually examined to assess whether the equipment is insulated with PCBs. Details on the make, type, capacitance, dimensions, date and power were recorded and checked with the ANZECC database of known PCB containing electrical equipment and the results of the review were noted.

4.4 Synthetic Mineral Fibre Containing Materials

Construction materials identified as potentially containing synthetic mineral fibre (SMF) were examined by site personnel and their location was noted. In the event that the materials were suspected to contain asbestos fibres, representative samples were obtained using hand tools by personnel wearing suitable PPE. The material samples were placed in sealed plastic bags and labelled with a unique job number, sampling location and date. All samples were recorded on the COC record presented in Appendix C.

Following the completion of the field inspection, the samples were forwarded to a NATA registered laboratory for asbestos fibre analysis. The samples were analysed using stereo and polarising light microscopy methods with dispersion staining techniques.

5 RESULTS OF THE INSPECTION

The results of the inspection and subsequent laboratory analysis are summarised in the following sections. For specific locations and details of materials identified during the inspection, please refer to the Hazardous Building Materials Register in Appendix B and the laboratory analysis report in Appendix C.

5.1 Asbestos

Asbestos containing materials were identified within the interior and the exterior of the existing buildings and structures at the site at the time of the inspection. Both friable and bonded asbestos containing materials were encountered at the site.

Refer to Section 6.1 of this report for recommendations on asbestos and the Hazardous Building Materials Register for details of material sampled and inspected for asbestos.

5.2 Lead in Paint

Lead containing paint systems were identified on the external timber framework, windows/door frames, internal walls and window frames of the main building and on the external timber fascia panels and internal walls of the Kiosk building. The paint systems were all deteriorated at the time of the inspection. Refer to Section 6.2 of this report for recommendations on lead paint systems.

5.3 Lead in Accumulated Dust

Not identified within the scope and limitations of the report.

5.4 Polychlorinated Biphenyls (PCBs)

Fluorescent light fittings potentially housing PCB containing capacitors were identified within the garage plant room and lift motor room located on the roof level of the main hospital building. The fittings were visually inspected at the time of the inspection. Refer to Section 6.4 of this report for recommendations on PCBs.

5.5 Synthetic Mineral Fibre (SMF)

Materials containing SMF were identified in the form of foil wrapped insulation, foil backed insulation, metal wrapped insulation, vinyl sheeting, bituminous pipework wrapping, hot water services and insulation batts at the site. All materials were in good condition at the time of the inspection. Refer to Section 6.5 of this report for recommendations on SMF containing materials.

5.6 Site Access Limitations

Due to restrictions associated with COVID-19 at the time of the survey, only limited inspections were conducted of patient and resident rooms on the ground level of the main hospital building. General

movement areas and staff area were inspected. This is not considered to impact the completeness of the survey; however, it is recommended that these areas are re-inspected when vacant and prior to demolition.

Access throughout the site was generally restricted due to furniture, fittings, floor coverings, stored materials and occupation by patients, residents, and staff of the hospital.

All electrical switchboards and mechanical equipment were operational at the time of the inspection and sampling was not undertaken.

6 COMMENTS AND RECOMMENDATIONS

6.1 Asbestos Materials

Asbestos fibre containing construction materials have been identified within the interior and the exterior of the existing building and structures at the site. Both friable and non-friable asbestos containing materials were identified.

Friable asbestos materials were identified in the form of wrapped lagging insulation debris within the services risers, plumbing ducts and pipework penetrations across all levels of the main hospital building. The debris is presumed to be remnant material following asbestos lagging removal works throughout the building. Access to the services risers, plumbing ducts and wall penetrations within ceiling spaces should be restricted until such time as the material can be appropriately removed.

Additional friable asbestos materials were identified as internal core insulation within fire doors through the main hospital building. The fire doors were in good condition and sealed at the time of the inspection, and therefore pose a low risk in the current condition. Access to these doors by trades or contractors to conduct activities that may disturb the internal core insulation should be restricted until such time as the doors can be removed.

Any materials presumed to contain asbestos must be treated as such. Prior to demolition or refurbishment work this document must be provided as a register to the demolition/building contractor.

As friable asbestos has been identified on site, all works associated with the disturbance and removal of asbestos containing materials must be undertaken by a Licenced *Class A* Asbestos Removalist.

The asbestos removalist must prepare an Asbestos Removal Control Plan for the proposed works. The control plan should include an allowance for asbestos air fibre monitoring during the removal and thorough clean up works upon completion of the removal works.

An asbestos management plan must be prepared for the proposed works in areas containing asbestos.

A clearance inspection must be undertaken on completion of works and prior to any other construction activities being undertaken.

If previously unidentified materials (suspected of containing asbestos) are identified during the demolition phase, works should cease and the material should be inspected and classified by an experienced consultant. The area should be isolated and barricaded until the material has been classified as non-hazardous or removed and the area cleared.

All asbestos containing materials (and materials presumed to contain asbestos) must be removed in accordance with the regulations and codes outlined in Section 3 and by an experienced asbestos removal contractor.

6.2 Lead in Paint

Deteriorated paint films containing elevated lead levels were identified on the external timber framework, windows/door frames, internal walls and window frames of the main building and on the external timber fascia panels and internal walls of the Kiosk building. All identified lead containing paint films must be removed / treated in accordance with the regulations and codes outlined in Section 3 and by an experienced hazardous materials removal contractor.

6.3 Lead in Accumulated Dust

Not identified within the scope and limitations of the report.

6.4 PCB Containing Electrical Equipment

Representative samples of each major type of fluorescent light fitting were visually inspected to determine which lights are fitted with PCB containing ballast capacitors.

Light fittings potentially housing a PCB containing metal capacitor were identified in the garage plant room and lift motor room on the roof level of the main hospital building. PCBs are a scheduled waste with strict guidelines regarding transport and handling. PCB work is to be conducted in accordance with the Environmental Protection & Heritage Council's *Polychlorinated Biphenyls Management Plan*, Revised Edition April 2003. This briefly includes:

- Prior to demolition when the power is disconnected, inspect the light fittings;
- Metal PCB containing capacitors are to be removed, placed in plastic lined 200 litre drums and disposed of as PCB Scheduled Waste. Any light fitting that shows signs of oil staining from capacitors is to be disposed of as PCB contaminated;
- Protective clothing including eye protection, PCB resistant gloves and overalls are to be worn;
- Contaminated gloves and disposable coveralls are to be disposed of as PCB contaminated waste; and
- Contractors licenced to transport and handle PCBs must be used for transport and disposal.

If any metal cased capacitors are found during demolition works that were previously unidentified they should be treated as containing PCBs. Details on storing, conveying and disposing of PCB material or PCB wastes can be found in *Polychlorinated Biphenyls Management Plan*, Environmental Protection & Heritage Council, Revised Edition April 2003.

6.5 SMF Materials

Sources of SMF containing materials are present as insulation material in the form of foil wrapped insulation, foil backed insulation, metal wrapped insulation, vinyl sheeting, bituminous pipework wrapping, hot water services and insulation batts at the site. These SMF materials were in a stable condition at the time of the site inspection.

All SMF containing materials must be removed in accordance with the national Standard and code outlined in Section 3 and by an experienced hazardous materials removal contractor.

7 LIMITATIONS

The conclusions developed in this report are based on site conditions which existed at the time of the survey. They are based on investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances, and visual observations of the site and vicinity, together with the interpretation of available documents reviewed as described in this report.

Surveys are conducted in a conscientious and professional manner. The nature of the task however, and the likely disproportion between any damage or loss which might arise from the work or reports prepared as a result, and the cost of our services, is such that JKE cannot guarantee that all hazardous building materials have been identified and/or addressed.

Due to the possibility of renovations and additions to the building structures over time, hazardous building materials may have been hidden behind new walls and ceilings. Such areas were inaccessible during the inspection. If any suspect materials are found during further renovation of the buildings, the material should be sent for identification and expert advice sought.

Therefore, while we carry out the work to the best of our ability, we totally exclude any loss or damages which may arise from services we have provided to our client and/or any other associated parties.

Unless specifically noted, the survey did not cover:

- Hidden and/or inaccessible locations such as in or under concrete slabs, wall cavities, hidden storage areas and the like;
- Lift wells and inaccessible/unidentified shafts, cavities and the like;
- Air conditioning, heating, mechanical, electrical or other equipment;
- General exterior ground surfaces and subsurface areas e.g. asbestos in fill/soil;
- Materials dumped, hidden, or otherwise placed in locations which one could not reasonably anticipate;
- Materials other than normal building fabric, materials in laboratories or special purpose facilities and building materials that cannot be reasonably and safely assessed without assistance;
- Areas where access was limited during the time of the site inspection as outlined in Section 6; and
- Materials other than asbestos, lead, PCBs and SMF are generally outside the scope as identification can require specialised analysis/inspection techniques.

Where other potentially hazardous materials are identified these are normally reported on to the best of the consultant's ability. Analysis is not normally included and there is no guarantee that all such materials have been identified and/or addressed.

All work conducted and reports produced by JKE are prepared for a particular Client's objective and are based on a specific scope, conditions and limitations, as agreed upon between JKE and the Client. Information and/or report(s) prepared by JKE may therefore not be suitable for any use other than the intended objective. No parties other than the Client should use any information and/or report(s) without first conferring with JKE.

Before passing on to a third party any information and/or report(s) prepared by JKE, the Client is to inform fully the third party of the objective and scope, and all limitations and conditions, including any other relevant information which applies to the information and/or report(s) prepared by JKE.

It is the responsibility of third parties to investigate fully to their satisfaction if any information and/or report(s) prepared by JKE are suitable for a specific objective. The report(s) and/or information produced by JKE should not be reproduced and/or presented/reviewed except in full.

This report has been prepared for the particular project described and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose. Copyright in this report is the property of JKE. JKE has used a degree of care, skill and diligence normally exercised by consulting engineers in similar circumstances and locality. No other warranty expressed or implied is made or intended. Subject to payment of all fees due for the investigation, the client alone shall have a licence to use this report.

If you have any questions concerning the contents of this letter please do not hesitate to contact us.

Important Information About This Report

These notes have been prepared by JKE to assist with the assessment and interpretation of this report.

The Report is based on a Unique Set of Project Specific Factors
This report has been prepared in response to specific project requirements as stated in the JKE proposal document which may have been limited by instructions from the client. This report should be reviewed, and if necessary, revised if any of the following occur:

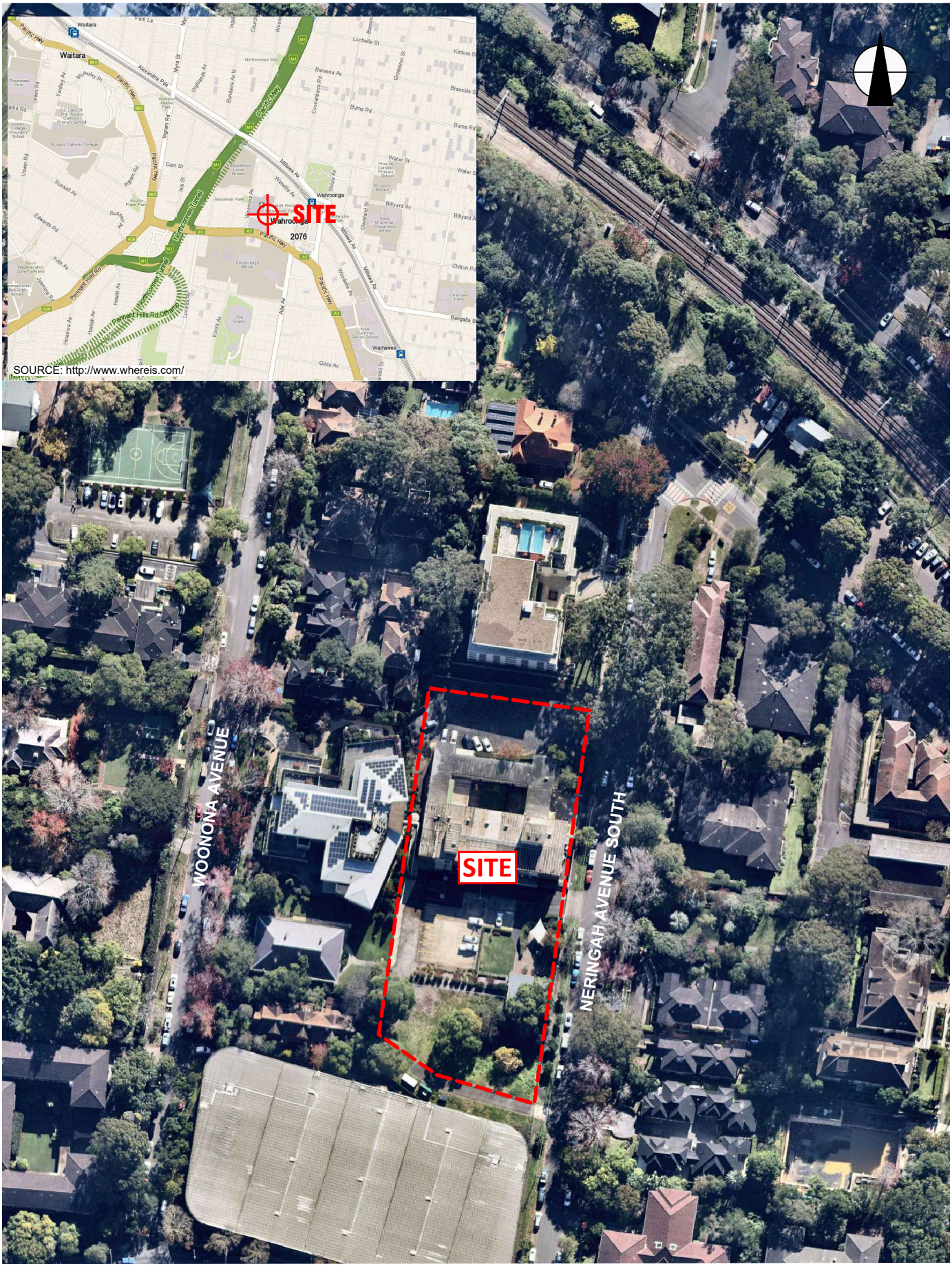
- The defined subject site is increased or sub-divided; or
- Ownership of the site changes.

JKE will not accept any responsibility whatsoever for situations where one or more of the above factors have changed since completion of the assessment. If the subject site is sold, ownership of the assessment report should be transferred by JKE to the new site owners who will be informed of the conditions and limitations under which the assessment was undertaken. No person should apply an assessment for any purpose other than that originally intended without first conferring with the consultant.

Misinterpretation of Site Assessments by Design Professionals
Costly problems can occur when other design professionals develop plans based on misinterpretation of an assessment report. To minimise problems associated with misinterpretations, the environmental consultant / asbestos assessor should be retained to work with appropriate professionals to explain relevant findings and to review the adequacy of plans and specifications relevant to hazardous building materials.

Read Responsibility Clauses Closely
Because an environmental site assessment is based extensively on judgement and opinion, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, model clauses have been developed for use in written transmittals. These are definitive clauses designed to indicate consultant responsibility. Their use helps all parties involved recognise individual responsibilities and formulate appropriate action. Some of these definitive clauses are likely to appear in the environmental site assessment, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to any questions.

Appendix A: Report Figures



AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

This plan should be read in conjunction with the Environmental report.

Title: **SITE LOCATION PLAN**

Location: NERINGAH HOSPITAL, 4-12 NERINGAH AVENUE SOUTH, WAHROONGA, NSW

Project No: E35312BL

Figure No: 1

JKEnvironments

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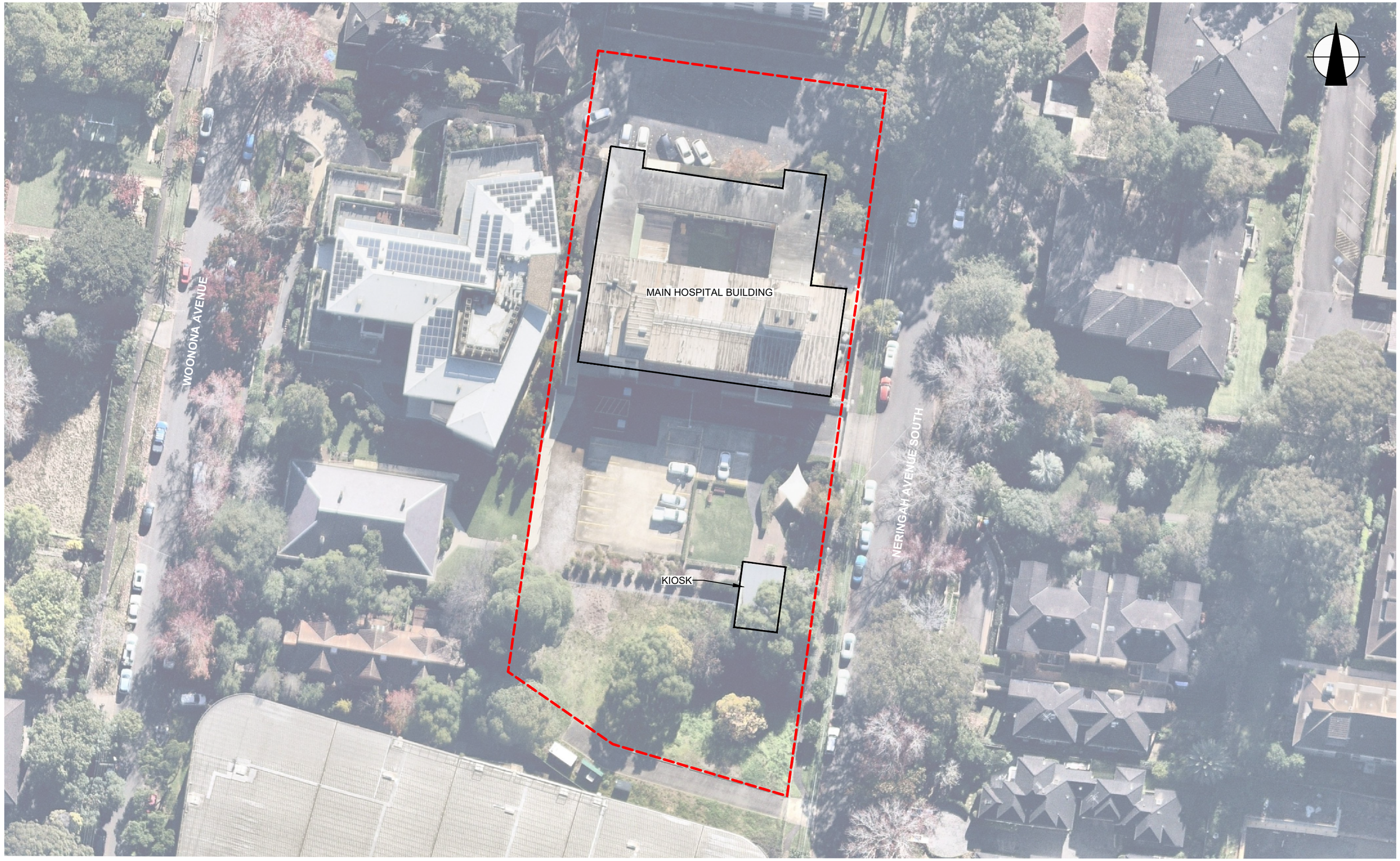

LEGEND

APPROXIMATE SITE BOUNDARY

BUILDINGS INCLUDED IN THE SURVEY

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 6 12 18 24 30

SCALE 1:600 @A3 METRES

This plan should be read in conjunction with the Environmental report.

Title: **SAMPLE LOCATION PLAN**

Location: NERINGAH HOSPITAL, 4-12 NERINGAH AVENUE SOUTH, WAHROONGA, NSW

Project No: E35312BL

Figure No: 2

JKEnvironments

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Appendix B: Hazardous Building Materials Register

Neringah Hospital, 4-12 Neringah Avenue South, Wahroonga, NSW
Hazardous Building Materials Register - September 2022

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
ASBESTOS MATERIALS									
Main Building, Roof level, Garage, Redundant dumb waiter lift motor	Brake pads	NA - Limited access	NA - Assumed to contain asbestos	Generally intact	Non-Friable	2 Units	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (limited access)	
Main Building, Roof level, Garage, Redundant switchboard	Bituminous backing board	S1	Chrysotile asbestos detected	Generally intact	Non-Friable	1m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Roof level, Lift motor room, Lift motor	Brake pads	NA - Live equipment	NA - Assumed to contain asbestos	Generally intact	Non-Friable	2 Units	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (live equipment)	
Main Building, Roof level, Garage, SW corner, Pipework	Bituminous wrap	S27	No asbestos detected: Synthetic mineral fibres detected	-	-	-	-	-	-
Main Building, Level 2, Internal, North perimeter, Metal window frames	Mastic	S28	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 2, Internal, Adjacent dumbwaiter, Riser cupboard, Internal lining	Flat fibre cement sheet	S29	No asbestos detected: Organic fibres detected	-	-	-	-	-	-

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
ASBESTOS MATERIALS (Cont.)									
Main Building, Level 2, Internal, Access to roof level, Fire door (Labelled 'installed 1998')	Internal core insulation	NA - Visually inspected	NA - Potential age to contain asbestos	Generally intact	Friable	1 Unit	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (sealed units)	
Main Building, Level 2, Internal, Hallways, Original ceilings, Eastern end	Sprayed vermiculite	S2	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 2, Internal, Hallways, Original ceilings, Western end	Sprayed vermiculite	S3	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 2, Internal, Hallways, Floor covering	Patterned light grey vinyl sheet	S4	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 2, Internal, Skirting boards and edging	Mottled beige vinyl sheet	S5	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 2, Lower wall covering	Light grey vinyl sheet	S6	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 2, Internal, Offices and meeting rooms, Beneath carpet, Floor covering	Patterned light grey vinyl sheet	Similar to sample S4	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 2, Western end toilets, Riser cupboards, Hot water pipework	Bituminous wrapped lagging	S7	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 2, Central toilets, Riser cupboards, Ceiling infill lining	Flat fibre cement sheet	S8	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 2, Internal, All toilets, Suspended ceiling tiles	Flat fibre cement sheet	S9	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 2, Internal, Double and single fire doors (Labelled 'installed 1998')	Internal core insulation	NA - Visually inspected	NA - Potential age to contain asbestos	Generally intact	Friable	>5 Units	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (sealed units)	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
ASBESTOS MATERIALS (Cont.)									
Main Building, Level 2, Internal, Eastern fire stairs, Entry level landings, Floor covering	Beige vinyl tile	S10	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Buiing, Level 2, Internal, Eastern fire stairs, Stairs and landings, Floor covering	A) Mottled grey vinyl tile B) Adhesive	S11	A)Chrysotile asbestos detected: B)No asbestos detected	Generally intact	Non-Friable	50m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Level 2, Internal, Hallway, Distribution board	Bituminous backing board	NA - Live equipment	NA - Presumed to contain asbestos	Generally intact	Non-Friable	1m²	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (live equipment)	
Main Building, Level 2, Internal, Plumbing ducts, Pipework insulation debris	Lagging debris	Similar to sample S16	Presumed to contain asbestos	Generally intact	Friable	Unknown	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (locked cupboard)	
Main Building, Level 2, External, East balcony, Eave lining	Flat fibre cement sheet	NA - Height restriction	NA - Presumed to contain asbestos	Generally intact	Non-Friable	6m²	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (height restricted)	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
ASBESTOS MATERIALS (Cont.)									
Main Building, Level 2, External, South-east, Infill panels	Flat fibre cement sheet	NA - Height restriction	NA - Presumed to contain asbestos	Generally intact	Non-Friable	12m²	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (height restricted)	
Main Building, Level 1, Internal, Double and single fire doors (Labelled 'installed 199_')	Internal core insulation	NA - Visually inspected	NA - Potential age to contain asbestos	Generally intact	Friable	>5 Units	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (sealed units)	
Main Building, Level 1, Internal, Hallways, Floor covering	Patterned light grey vinyl sheet	Similar to sample S4	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 1, Internal, Skirting boards and edging	Mottled beige vinyl sheet	Similar to sample S5	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 1, Lower wall covering	Light grey vinyl sheet	Similar to sample S6	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 1, Internal, Offices and meeting rooms, Beneath carpet, Floor covering	Patterned light grey vinyl sheet	Similar to sample S4	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 1, Internal, Hallways, Original ceilings, Eastern end	Sprayed vermiculite	S13	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 1, Internal, Hallways, Original ceilings, Western end	Sprayed vermiculite	S12	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 1, Western end toilets, Riser cupboards, Hot water pipework	Bituminous wrapped lagging	Similar to sample S7	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 1, Internal, Hallway, Distribution switchboard (DB2)	Bituminous backing board	NA - Live equipment	NA - Potential to contain asbestos	Unknown	Non-Friable	1m²	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (live equipment)	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
ASBESTOS MATERIALS (Cont.)									
Main Building, Level 1, Internal, All toilets, Suspended ceiling tiles	Flat fibre cement sheet	Similar to sample S9	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 1, Internal, Plumbing ducts, Pipework insulation debris	Lagging debris	Similar to sample S16	Presumed to contain asbestos	Generally intact	Friable	Unknown	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (locked cupboard)	
Main Building, Level 1, Internal, Adjacent dumbwaiter, Riser cupboard, Internal lining	Flat fibre cement sheet	Similar to sample S29	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 1, Internal, North perimeter, Metal window frames	Mastic	Similar to sample S28	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Level 1, Internal, Office, West dividing wall	Flat fibre cement sheet	NA - Locked room	NA - Presumed to contain asbestos	Unknown	Non-Friable	Unknown	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (locked room)	No photograph
Main Building, Level 1, External, South-east infill panels	Flat fibre cement sheet	NA - Height restriction	NA - Presumed to contain asbestos	Generally intact	Non-Friable	12m²	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (height restricted)	
Main Building, Ground level, Internal, Bathrooom/Shower room, Central cubicle wall	Fibre cement sheeting	NA - No access	NA - Presumed negative from 2013 register	-	-	-	-	-	-
Main Building, Ground level, Internal, Bedroom 16, Infill panels below windows	Flat fibre cement sheet	NA - No access	NA - Presumed negative from 2013 register	-	-	-	-	-	-
Main Building, Ground level, Internal, Cleaners room, Floor covering	Yellow vinyl sheet	S31	No asbestos detected: Synthetic mineral fibres detected	-	-	-	-	-	-
Main Building, Ground level, Internal, Northwest corridor, Floor covering	Green vinyl sheet	NA - No access	NA - Presumed negative from 2013 register	-	-	-	-	-	-

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
ASBESTOS MATERIALS (Cont.)									
Main Building, Ground Level, Internal, Throughout, Ceiling	Sprayed vermiculite	Similar to sample S2	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Ground level, Internal, Corridor, Metal window frames	Mastic	Similar to sample S28	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Ground level, Internal, Throughout, Fire doors (Labelled 'year of manufacture 200_')	Internal core insulation	NA - Visually inspected	Presumed not to contain asbestos	-	-	-	-	-	-
Main Building, Ground level, Internal, Fire stairs, Floor covering	Beige vinyl tile	Similar to sample S10	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Ground level, Internal, Equipment room, Plumbing duct	Lagging debris	S32	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Ground level, Internal, Link ramp, Ceiling	Sprayed vermiculite	Similar to sample S2	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Ground level, Internal, Plumbing ducts, Piepwork	Bituminous wrap	Similar to sample S27	No asbestos detected: Synthetic mineral fibres detected	-	-	-	-	-	-
Main Building, Ground level, Internal,Staff toilets, Plumbing duct	Lagging debris	Similar to sample S32	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Ground level, Internal, Fire stairs, Floor covering	Beige vinyl tile	Similar to sample S10	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Builing, Ground level, Internal, Stairwell to lower ground, Floor covering	Mottled grey vinyl tile	Similar to sample S11	Chrysotile asbestos detected	Generally intact	Non-Friable	50m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Ground level, External, Below windows, Infill panels	Flat fibre cement sheet	Similar to sample S18	A) Chrysotile asbestos detected	Generally intact	Non-Friable	12m²	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Ground level, External, Metal window frames	Mastic	Similar to sample S28	No asbestos detected: Organic fibres detected	-	-	-	-	-	-

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
ASBESTOS MATERIALS (Cont.)									
Main Building, Lower ground level, Internal, Room 1-LG-38, Floor covering	Patterned grey vinyl sheet	S14	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Lower ground level, Internal, Hallways, Floor covering	Patterned light grey vinyl sheet	Similar to sample S4	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Lower ground level, Internal, Skirting boards and edging	Mottled beige vinyl sheet	Similar to sample S5	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Lower ground level, Central hallway and southern storerooms throughout, Bulkhead	Flat fibre cement sheet	S15	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Buidling, Lower ground level, Throughout, Fire doors (asbestos labels on doors)	Internal core insulation	NA - Visually inspected	Presumed to contain asbestos	Generally intact	Friable	3 Units	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Lower ground level, Internal, Eastern end, Ceiling space, Plumbing wall penetrations, Debris *JKE note that lagging debris may be present in small quantities throughout the building where removals have taken place around wall penetrations and risers.	Lagging debris	S16	Amosite asbestos detected	Poor (debris)	Friable	<1m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Lower ground level, Internal, Electrical switchroom, Metal covered switchboards	Bituminous backing board	NA - Live equipment	NA - Potential to contain asbestos	Generally intact	Non-Friable	2m²	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (live equipment)	
Main Building, Lower ground level, Internal, Western hallway, South-west corner, Electrical distribution board DB2, Metal covered switchboard	Bituminous backing board	NA - Live equipment	NA - Potential to contain asbestos	Generally intact	Non-Friable	1m²	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (live equipment)	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
ASBESTOS MATERIALS (Cont.)									
Main Building, Lower ground level, Internal, Western fire stairs to Groun level, Floor covering	Dark beige vinyl sheet	S17	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, Lower ground level, External, Metal window frames	Mastic	Similar to sample S28	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, External, Above/beneath windows, Infill panels	Flat fibre cement sheet	S18	A) Chrysotile asbestos detected	Generally intact	Non-Friable	60m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, External, Eastern side, Oxygen store, Awning	Flat fibre cement sheet	NA - Restricted access (locked)	Presumed to contain asbestos	Generally intact	Non-Friable	1m²	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (restricted access)	
Main Building, External, Timber window frames	Mastic	S19	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, External, Eastern side, North of central driveway, Infiall panelling around doorway	Flat fibre cement sheet	S20	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, External, Clinical waste room, Internal, Floor covering	Patterned light grey vinyl sheet	Similar to sample S4	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, External, Eastern side, Air-conditioning exhaust outlet, Bulkhead	Flat fibre cement sheet	S21	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Main Building, External, Surrounding concrete pavements, Expansion joints	Bituminous mastic	S30	No asbestos detected: Organic fibres detected	-	-	-	-	-	-

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
SYNTHETIC MINERAL FIBRE (SMF)									
Main Building, Roof level, Garage, Water heaters	Internal insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	2 Units	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No (sealed units)	
Main Building, Roof level, Garage, SW corner, Pipework	Bituminous wrap	S27	No asbestos detected: Synthetic mineral fibres detected	Generally Intact	Non-Friable	3m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Level 2, Internal, Throughout, Ceiling space	Insulation batts	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	250m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No (access via ladder only)	
Main Building, Level 2, Internal, Services risers, Fire stop pillows	Insulation pillows	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	10 Units	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
SYNTHETIC MINERAL FIBRE (SMF) (Cont.)									
Main Building, Level 2, Internal, Kitchen utilities, Above sink, Water heater	Internal insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	1 Unit	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No (sealed units)	
Main Building, Level 2, External, Air-conditioning units	Internal insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	25m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No (sealed units)	
Main Building, Level 1, Internal, Services risers, Fire stop pillows	Insulation pillows	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	10 Units	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Level 1, Internal, Throughout, Ceiling space	Insulation batts	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	250m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No (access via ladder only)	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
SYNTHETIC MINERAL FIBRE (SMF) (Cont.)									
Main Building, Level 1, External, Air-conditioning units	Internal insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	25m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No (sealed units)	
Main Building, Ground level, Internal, Chapel, Kitchenette, Above sink, Hot water service	Internal insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	1 Unit	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Ground level, Internal, Equipment room, Ceiling space, Flexible air-conditioning ductwork	Internal insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	5m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Ground level, Internal, Tea room, Above sink, Hot water service	Internal insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	1 Unit	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
SYNTHETIC MINERAL FIBRE (SMF) (Cont.)									
Main Building, Ground level, Internal, Cleaners room, Floor covering	Yellow vinyl sheet	S31	SMF detected	Generally Intact	Non-Friable	5m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Ground level, Internal, Plumbing ducts, Pipework	Bituminous wrap	Similar to sample S27	NA - Assumed to contain SMF	Generally Intact	Non-Friable	12 L/m	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Ground level, External, Air-conditioning units	Internal insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	25m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No (sealed units)	
Main Building, Ground level, External, Walkway roof, Flexible air-conditioning ductwork	Internal insulation	NA - No access	NA - Assumed to contain SMF	Generally Intact	Non-Friable	10m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
SYNTHETIC MINERAL FIBRE (SMF) (Cont.)									
Main Building, Lower ground level, Internal, Kitchen, Above sink, Hot water service	Internal insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	1 Unit	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, External, Eastern side, Air-conditioning exhaust outlet, Ductwork	Internal insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	10m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, External, Courtyard, Western side, Underside of roof	Sarking insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	10m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No (access via ladder only)	
Main Building, External, Air-conditioning units	Internal insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	25m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No (sealed units)	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
LEAD IN PAINT									
Main Building, Roof level, External timber framework	Peeling green paint	LP1	0.13% (greater than the criteria of 0.1%)	Localised areas of deterioration	NA	40m²	Stabilisation / abatement by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Roof level, External walls	Peeling cream paint	LP2	0.18% (greater than the criteria of 0.1%)	Localised areas of deterioration	NA	80m²	Stabilisation / abatement by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Level 2, Internal, Walls and ceilings	Peeling cream paint	LP3	0.16% (greater than the criteria of 0.1%)	Localised section of deterioration	NA	250m²	Stabilisation / abatement by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, All levels (sampled from Level 1), Internal, Fire stairs (west), Walls	Peeling cream paint	LP4	0.063% (less than the criteria of 0.1%)	-	-	-	-	-	-
Main Building, Level 1, Internal, Walls	Peeling light blue paint	LP5	0.12% (greater than the criteria of 0.1%)	Localised section of deterioration	NA	200m²	Stabilisation / abatement by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Ground level, Internal, Throughout, Original swing windows, Window frames	Paint systems	NA - Limited access	NA - Presumed positive from 2013 register	No deterioration	NA	60m²	Stabilisation / abatement by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
LEAD IN PAINT (Cont.)									
Main Building, Ground level, Internal, Throughout, Skirting boards	Paint systems	NA - Limited access	NA - Presumed negative from 2013 register	-	-	-	-	-	-
Main Building, Ground level, Internal, Equipment room, Door frame	Paint systems	NA - Sealed with new paint	NA - Presumed positive from 2013 register	No deterioration	NA	10m²	Stabilisation / abatement by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Main Building, Ground level, Internal, Equipment room, Floor	Paint systems	NA	NA - Presumed negative from 2013 register	-	-	-	-	-	-
Main Building, Ground level, Staff toilets, Door frames	Paint systems	NA - Sealed with new paint	NA - Presumed positive from 2013 register	No deterioration	NA	10m²	Stabilisation / abatement by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	No photograph
Main Building, Lower ground level, Internal, Ceiling throughout	Peeling white paint	LP6	0.04% (less than the criteria of 0.1%)	-	-	-	-	-	-
Main Building, Lower ground level, Internal, Door frames	Lower layer orange paint	NA - Sealed with new paint	NA - Presumed positive from 2013 register	No deterioration	NA	50m²	Stabilisation / abatement by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	No photograph
Main Building, External, Timber windows and doors frames and infill panels	Peeling white paint	LP7	0.67% (greater than the criteria of 0.1%)	Localised section of deterioration	NA	60m²	Stabilisation / abatement by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Main Hospital Building									
LEAD IN DUST									
Main Building, Lift motor room, Internal surfaces	Settled Dust	D1	6.11mg/m² (lower than the adopted criteria of 8mg/m²)	-	-	-	-	-	-
POLYCHLORINATED BIPHENYLS									
Main Building, Roof level, Garage	Twin tube fluroscent light fittings	NA - Visually inspected	Of an age indicative of housing PCB containing capacitors	Generally intact	NA	2 Units	Undertake detailed inspection following isolation of electricity supply, OR Handle in accordance with relevant standard/code of practice/guidelines.	No (access via ladder only)	
Main Building, Roof level, Lift motor room	Single fluorescent light fittings	NA - Visually inspected	Of an age indicative of housing PCB containing capacitors	Generally intact	NA	2 Units	Undertake detailed inspection following isolation of electricity supply, OR Handle in accordance with relevant standard/code of practice/guidelines.	No (access via ladder only)	

JKEnvironments

Neringah Hospital, 4-12 Neringah Avenue South, Wahroonga, NSW
Hazardous Building Materials Register - September 2022

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Kiosk Building									
ASBESTOS MATERIALS									
Kiosk Building, Internal, Main room, Ceiling	Sprayed vermiculite coating	S22	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Kiosk Building, Internal, Floor covering	Vinyl sheeting	NA - Not sampled ; newer age material	NA - Presumed not to contain asbestos	-	-	-	-	-	-
Kiosk Building, External, Roof covering Waterproofing membrane	Bituminous membrane	S23	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Kiosk Building, External, Fascia panels and infill panels beneath windows	Flat fibre cement sheet	S24	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Kiosk Building. External, Timber window frames	Mastic	S25	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Kiosk Building, External, Northern eave lining	Flat fibre cement sheet	S26	Chrysotile asbestos detected: Amosite asbestos detected	Generally intact	Non-Friable	3m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
SYNTHETIC MINERAL FIBRE (SMF)									
Kiosk Building, Internal, Storage room, North-east croner, Water heater	Internal insulation	NA - Visually inspected	NA - Assumed to contain SMF	Generally Intact	Non-Friable	1 Unit	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No (sealed unit)	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
Kiosk Building									
LEAD IN PAINT									
Kiosk Building, Internal, Plaster ceilings	White paint	LP8	0.069% (less than the criteria of 0.1%)	-	-	-	-	-	-
Kiosk Building, Internal, Walls	Cream paint	LP9	0.15% (greater than the criteria of 0.1%)	Localised section of deterioration	NA	90m²	Stabilisation / abatement by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Kiosk Building, External, Walls	Peeling cream paint	LP10	0.079% (less than the criteria of 0.1%)	-	-	-	-	-	-
Kiosk Building, External, Timber fascia and framework	Peeling green paint	LP11	0.23% (greater than the criteria of 0.1%)	Localised section of deterioration	NA	15m²	Stabilisation / abatement by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Kiosk Building, External/Internal, Timber windows and doors	Peeling white paint	LP12	0.088% (less than the criteria of 0.1%)	-	-	-	-	-	-
LEAD IN DUST									
Kiosk Building, Internal, Roof space, Upper surface of ceiling	Settled Dust	D2	1.56mg/m² (lower than the adopted criteria of 8mg/m²)	-	-	-	-	-	-
POLYCHLORINATED BIPHENYLS									
Not identified within the scope of the survey									

Appendix C: Laboratory Report & COC Documents

Envirolab Services Pty Ltd
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CERTIFICATE OF ANALYSIS 302401

Client Details

Client	JK Environments
Attention	Harry Leonard
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E35312BL, Wahroonga**
Number of Samples	32 Material, 12 Paint, 2 Swab
Date samples received	05/08/2022
Date completed instructions received	05/08/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	12/08/2022
Date of Issue	12/08/2022

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Asbestos Approved By
Analysed by Asbestos Approved Analyst: Wonnie Condos
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Giovanni Agosti, Group Technical Manager
Loren Bardwell, Development Chemist
Lucy Zhu, Asbestos Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Asbestos ID - materials						
Our Reference		302401-1	302401-2	302401-3	302401-4	302401-5
Your Reference	UNITS	S1	S2	S3	S4	S5
Date Sampled		3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Mass / Dimension of Sample	-	30x30x5mm	40x40x2mm	30x30x2mm	70x20x2mm	50x25x2mm
Sample Description	-	Brown fibre cement material	Pink mica vermiculite	Pink mica vermiculite	Beige vinyl sheet & adhesive	Beige vinyl sheet & adhesive
Asbestos ID in materials	-	Chrysotile asbestos detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected
Trace Analysis	-	[NT]	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - materials						
Our Reference		302401-6	302401-7	302401-8	302401-9	302401-10
Your Reference	UNITS	S6	S7	S8	S9	S10
Date Sampled		3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Mass / Dimension of Sample	-	70x20x2mm	50x50x1mm	40x20x3mm	15x10x6mm	70x40x2mm
Sample Description	-	White vinyl sheet & adhesive	Brown fibrous material	Grey fibre cement material & paint	Grey fibre cement material & paint	Beige vinyl sheet & adhesive
Asbestos ID in materials	-	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - materials						
Our Reference		302401-11	302401-12	302401-13	302401-14	302401-15
Your Reference	UNITS	S11	S12	S13	S14	S15
Date Sampled		3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Mass / Dimension of Sample	-	80x50x3mm	40x40x2mm	50x50x2mm	110x20x2mm	40x35x6mm
Sample Description	-	A)Grey vinyl tile B)Adhesive	Beige mica vermiculite	Beige mica vermiculite	White vinyl tile & adhesive	Grey fibre cement material & paint
Asbestos ID in materials	-	A)Chrysotile asbestos detected B)No asbestos detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - materials						
Our Reference		302401-16	302401-17	302401-18	302401-19	302401-20
Your Reference	UNITS	S16	S17	S18	S19	S20
Date Sampled		3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Mass / Dimension of Sample	-	40x30x2mm	50x10x2mm	5x3x1mm	70x10x10mm	30x25x10mm
Sample Description	-	White fibrous material	Beige vinyl sheet & adhesive	A)Grey fibre cement material B)Paint	Beige hardened mastic & paint	Beige fibre cement material
Asbestos ID in materials	-	Amosite asbestos detected	No asbestos detected Organic fibres detected	A)Chrysotile asbestos detected B)No asbestos detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected
Trace Analysis	-	[NT]	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - materials						
Our Reference		302401-21	302401-22	302401-23	302401-24	302401-25
Your Reference	UNITS	S21	S22	S23	S24	S25
Date Sampled		3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Mass / Dimension of Sample	-	50x20x5mm	20x20x2mm	40x15x3mm	20x15x3mm	40x10x5mm
Sample Description	-	Beige fibre cement material & paint	White mica vermiculite	Black bituminous material	Beige fibre cement material	Beige hardened mastic
Asbestos ID in materials	-	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - materials						
Our Reference		302401-26	302401-27	302401-28	302401-29	302401-30
Your Reference	UNITS	S26	S27	S28	S29	S30
Date Sampled		3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Mass / Dimension of Sample	-	8x5x5mm	60x50x10mm	5x3x1mm	40x30x3mm	60x20x3mm
Sample Description	-	Beige fibre cement material	Brown fibrous insulation	Beige hardened mastic	Grey fibre cement material & paint	Black foam material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected	No asbestos detected Synthetic mineral fibres detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected
Trace Analysis	-	[NT]	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - materials			
Our Reference		302401-31	302401-32
Your Reference	UNITS	S31	S32
Date Sampled		3/8/2022-5/8/2022	3/8/2022-5/8/2022
Type of sample		Material	Material
Date analysed	-	08/08/2022	08/08/2022
Mass / Dimension of Sample	-	90x20x2mm	8x5x2mm
Sample Description	-	Beige vinyl sheet & adhesive	Beige mica vermiculite
Asbestos ID in materials	-	No asbestos detected Synthetic mineral fibres detected	No asbestos detected Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected

Lead in Paint						
Our Reference		302401-33	302401-34	302401-35	302401-36	302401-37
Your Reference	UNITS	LP1	LP2	LP3	LP4	LP5
Date Sampled		3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022
Type of sample		Paint	Paint	Paint	Paint	Paint
Date prepared	-	11/08/2022	11/08/2022	11/08/2022	11/08/2022	11/08/2022
Date analysed	-	11/08/2022	11/08/2022	11/08/2022	11/08/2022	11/08/2022
Lead in paint	%w/w	0.13	0.18	0.16	0.063	0.12

Lead in Paint						
Our Reference		302401-38	302401-39	302401-40	302401-41	302401-42
Your Reference	UNITS	LP6	LP7	LP8	LP9	LP10
Date Sampled		3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022	3/8/2022-5/8/2022
Type of sample		Paint	Paint	Paint	Paint	Paint
Date prepared	-	11/08/2022	11/08/2022	11/08/2022	11/08/2022	11/08/2022
Date analysed	-	11/08/2022	11/08/2022	11/08/2022	11/08/2022	11/08/2022
Lead in paint	%w/w	0.04	0.67	0.069	0.15	0.079

Lead in Paint			
Our Reference		302401-43	302401-44
Your Reference	UNITS	LP11	LP12
Date Sampled		3/8/2022-5/8/2022	3/8/2022-5/8/2022
Type of sample		Paint	Paint
Date prepared	-	11/08/2022	11/08/2022
Date analysed	-	11/08/2022	11/08/2022
Lead in paint	%w/w	0.23	0.088

Lead in swab			
Our Reference		302401-45	302401-46
Your Reference	UNITS	D1	D2
Date Sampled		3/8/2022-5/8/2022	3/8/2022-5/8/2022
Type of sample		Swab	Swab
Date prepared	-	10/08/2022	10/08/2022
Date analysed	-	10/08/2022	10/08/2022
Lead in Swabs	µg/swab	550	140

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-020/021/022	Digestion of Paint chips/scrapings/liquids for Metals determination by ICP-AES/MS and or CV/AAS.
Metals-020/021/022	Digestion of Dust wipes/swabs and /or miscellaneous samples for Metals determination by ICP-AES/MS and/or CV-AAS

QUALITY CONTROL: Lead in Paint						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			11/08/2022	33	11/08/2022	11/08/2022		11/08/2022	[NT]
Date analysed	-			11/08/2022	33	11/08/2022	11/08/2022		11/08/2022	[NT]
Lead in paint	%w/w	0.005	Metals-020/021/022	<0.005	33	0.13	0.14	7	95	[NT]

QUALITY CONTROL: Lead in Paint						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	34	11/08/2022	11/08/2022		[NT]	[NT]
Date analysed	-			[NT]	34	11/08/2022	11/08/2022		[NT]	[NT]
Lead in paint	%w/w	0.005	Metals-020/021/022	[NT]	34	0.18	0.19	5	[NT]	[NT]

QUALITY CONTROL: Lead in swab					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			10/08/2022	[NT]	[NT]	[NT]	[NT]	10/08/2022	[NT]
Date analysed	-			10/08/2022	[NT]	[NT]	[NT]	[NT]	10/08/2022	[NT]
Lead in Swabs	µg/swab	1	Metals-020/021/022	<1	[NT]	[NT]	[NT]	[NT]	111	[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.

Report Comments

Samples 302401-11 & 18; The supplied samples were sub-sampled (A & B) in order to accurately report the analytical results representative of the entire sample, as per AS4964-2004.

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SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Harry Leonard

Sample Login Details

Your reference	E35312BL, Wahroonga
Envirolab Reference	302401
Date Sample Received	05/08/2022
Date Instructions Received	05/08/2022
Date Results Expected to be Reported	12/08/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	32 Material, 12 Paint, 2 Swab
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	18
Cooling Method	None
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	Asbestos ID - materials	Lead in Paint	Lead in swab
S1	✓		
S2	✓		
S3	✓		
S4	✓		
S5	✓		
S6	✓		
S7	✓		
S8	✓		
S9	✓		
S10	✓		
S11	✓		
S12	✓		
S13	✓		
S14	✓		
S15	✓		
S16	✓		
S17	✓		
S18	✓		
S19	✓		
S20	✓		
S21	✓		
S22	✓		
S23	✓		
S24	✓		
S25	✓		
S26	✓		
S27	✓		
S28	✓		
S29	✓		
S30	✓		
S31	✓		
S32	✓		

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Sample ID	Asbestos ID - materials	Lead in Paint	Lead in swab
LP1		✓	
LP2		✓	
LP3		✓	
LP4		✓	
LP5		✓	
LP6		✓	
LP7		✓	
LP8		✓	
LP9		✓	
LP10		✓	
LP11		✓	
LP12		✓	
D1			✓
D2			✓

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.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E35312BL Date Results Required: STANDARD Page: 1 of	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Harry Leonard hleonard@jkenvironments.com.au

Location: Wahroonga

Sampler: HL

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Sample Container	Sample Description	Asbestos	Lead (mg/kg)	Lead (µg/swab)
3-5/8/22	1	S1	P	material	X		
	2	S2	P		X		
	3	S3	P		X		
	4	S4	P		X		
	5	S5	P		X		
	6	S6	P		X		
	7	S7	P		X		
	8	S8	P		X		
	9	S9	P		X		
	10	S10	P		X		
	11	S11	P		X		
	12	S12	P		X		
	13	S13	P		X		
	14	S14	P		X		
	15	S15	P		X		
	16	S16	P		X		
	17	S17	P		X		
	18	S18	P		X		
	19	S19	P		X		
	20	S20	P		X		
	21	S21	P		X		
	22	S22	P		X		
	23	S23	P		X		
	24	S24	P		X		
▼	25	S25	P	▼	X		

ENVIROLAB GROUP

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 302401 1310

Date Received: 5-8-22

Time Received: AP

Received By:

Temp: Cool/(Ambient)

Cooling: Ice/Icepack

Security: Intact/Broken/(None)

Remarks (comments/detection limits required):

PLEASE REPORT LEAD IN PAINT AS mg/kg

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
[signature]	5/8/22 13:25	1310	AP / ELSSYD	5-8-22

SAMPLE AND CHAIN OF CUSTODY FORM

TO:	JKE Job Number: E35312BL	FROM: JKEnvironments
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	Date Results Required: STANDARD Page: 2 of	REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Harry Leonard hleonard@jkenvironments.com.au

Location:	Wahroonga	Sample Preserved in Esky on Ice											
Sampler:	HL	Tests Required											
Date Sampled	Lab Ref:	Sample Number	Sample Container	Sample Description	Asbestos	Lead (mg/kg)	Lead (µg/swab)						
3-5/8/22	26	S26	P	material	X								
	27	S27	P		X								
	28	S28	P		X								
	29	S29	P		X								
	30	S30	P		X								
	31	S31	P		X								
	32	S32	P		X								
	33	LP1	P	paint		X							
	34	LP2	P			X							
	35	LP3	P			X							
	36	LP4	P			X							
	37	LP5	P			X							
	38	LP6	P			X							
	39	LP7	P			X							
	40	LP8	P			X							
	41	LP9	P			X							
	42	LP10	P			X							
	43	LP11	P			X							
	44	LP12	P			X	X						
	45	D1	P	dust (swab)			X						
	46	D2	P	dust (swab)			X						

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar; A - Ziplock Asbestos Bag; P - Plastic Bag	802401
PLEASE REPORT LEAD IN PAINT AS mg/kg		

Relinquished By:	Date: 5/8/22 13:25	Time:	Received By:	Date:
[signature]				