

Hazardous Construction Materials Survey

Buildings to be Demolished within the

St John of God Richmond Hospital

177 Grose Vale Road, North Richmond NSW



Prepared for:
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Level 3, 4 Broadcast Way
Artarmon NSW 2064

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DISTRIBUTION

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177 Grose Vale Road, North Richmond NSW**

27 July 2022

Recipient

Richard Crookes Constructions

Level 3, 4 Broadcast Way
Artarmon NSW 2064

Att: Mr John Sabbouh

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1 INTRODUCTION

On Thursday 21 July 2022, P. Clifton & Associates Pty Ltd undertook a visual inspection of accessible construction materials within the existing buildings that are to be demolished within the St John of God Richmond Hospital located at 177 Grose Vale Road, North Richmond NSW (the site). The buildings to be demolished are within the red outline on the aerial photograph on the front page of this report.

This inspection was undertaken to identify hazardous construction materials that are present within accessible areas in the existing buildings that are to be demolished to allow for new hospital facilities to be constructed. For the purpose of this report hazardous construction materials are building materials and components thereof that contain asbestos, synthetic mineral fibre (SMF), polychlorinated biphenyl (PCB), typical lead based paint finishes and lead in cavity dust.

The following buildings located on the site were inspected for this work. The locations of these building are shown on the site plan ion Appendix 1.

CTC Building – The CTC (Consulting and Therapy Centre) Building is a single and two storey timber framed and full masonry former hospital building that has tray profile and concrete tile roofs, face brick masonry walls, timber and aluminium framed windows and entry doors, timber fascias and metal eaves guttering and downpipes.

Within the main level in the building the ceilings are either plasterboard or drop in Stramit straw tiles, the walls are all masonry which are either painted brickwork, painted cement render or ceramic tiled and the floor is concrete. Floor coverings include carpet, asbestos backed sheet vinyl and ceramic tile.

The lower north eastern area contains a gymnasium and staff canteen. Within this area the ceilings and framed walls are lined with flat fibrous cement sheet and plasterboard and the concrete floor is covered with carpet and asbestos free sheet vinyl.

In the sub floor area are various plumbing pipes and gas hot water storage heaters.

Attached to the south west end of the building is a metal framed and roofed carport.

Mortuary – Small single storey building with metal tray profile roof cladding, metal fascias, face brick walls and steel framed entry door. Within the building the ceiling is lined with fibrous cement sheet, the walls are finished with painted cement render and the floor is concrete.

Medical Centre and Education Room – Large single storey building extending from the Mortuary building to the Chapel. This building has metal and concrete tile roofs, asbestos free fibrous cement weatherboard cladding to the north west end gables, asbestos free fibrous cement sheet eaves linings and face brick walls. The windows and entry doors are aluminium framed.

Within the building there are set plasterboard and hardboard ceiling linings, painted cement rendered and ceramic tiled masonry walls and the floors are concrete with a range of floor finishes including carpet, ceramic tile and vinyl tile.

Consulting Rooms – The Consulting Rooms building is located to the north east of the Chapel and is a single storey building that has concrete roof tiles, face brick walls, asbestos cement sheet eaves linings and aluminium and timber framed windows and entry doors.

Within the building the ceiling linings are plasterboard, the walls are full masonry and the floors are timber or concrete slabs.

Chapel – The Chapel is located in the western part of the proposed demolition area and is a large full masonry building with concrete roof tiles, face brick walls, aluminium and timber framed windows and entry doors, metal gutters and downpipes.

Within the building the main area has a high level timber lining board ceiling whilst in the sacristy rooms and seating areas in the south west part of the building there are fibrous plaster and flat asbestos cement sheet ceiling linings. The walls in the building are all masonry and the concrete floor is covered with timber boards or ceramic tiles.

Monastery – The Monastery building is a large two and three storey building that has terracotta roof tiles, face brick external walls, timber framed windows and entry doors, timber fascias and metal eaves gutters and downpipes.

Within the building the framed ceilings are lined with plasterboard and flat asbestos cement sheet, the masonry walls are finished with painted cement render and the floors are either suspended concrete slabs or timber boards.

Arts Building (St Augustine's) – This large single storey building has terracotta tile and metal roof cladding, face brick walls, timber framed windows and entry doors, timber fascias and metal eaves guttering and downpipes. Infill cladding on the rear side of the building is flat asbestos cement sheet.

Within the building there are plasterboard and fibrous cement sheet linings to the ceilings and framed walls, painted cement render finishes to the masonry walls and timber or concrete floors. Floor finishes include carpet, sheet vinyl and ceramic tile.

Archives Building – The Archives Building is a full masonry structure with terracotta tile roof cladding, face brick walls and timber framed windows and entry doors. Within the upper level area there is a corrugated metal ceiling lining fixed to the underside of the raked roof framing, painted cement rendered masonry walls and concrete floor.

The lower level area which is located below the south east end of the building has concrete soffit and floor and brick walls.

2 ASBESTOS CONTAINING MATERIALS

Asbestos is the fibrous form of mineral silicates belonging to the serpentine and amphibole groups of rock-forming materials. The most significant types include chrysotile, crocidolite and amosite (white blue and brown or grey asbestos respectively). After mining asbestos rock is broken down by crushing and milling to loose fibres which were then incorporated into a large variety of construction materials.

During the 1950's, 1960's and early 1970's asbestos was widely used in the building and construction industries. It was commonly used as fireproofing and its excellent thermal energy conservation properties meant that it was extensively used to insulate steam and hot water pipes and air ductwork.

Asbestos was also used in cement, bitumen and vinyl-based products to increase their compressive and tensile strength. These products include asbestos cement sheeting, bituminous mastic and membrane, vinyl tiles, 'Zelemite' electrical boards and numerous other building and construction materials.

The consequences of prolonged or heavy exposure to airborne asbestos fibres are widely documented and can lead to diseases such as mesothelioma, lung cancer or pleural plaques.

The National Occupational Health and Safety Commission set exposure levels for contaminants in the workplace and have specified maximum (safe) levels for exposure to airborne asbestos fibres.

These levels are also recorded in the NSW Work Health and Safety Regulation 2017. In NSW the recommended exposure level for airborne asbestos fibres in the workplace is presently set at 0.1 fibres per millilitre of air.

3 SYNTHETIC MINERAL FIBRE (SMF)

Synthetic Mineral Fibre (SMF) is a general term used to describe a number of fibrous materials made from glass, rock, alumina and silica. Some of these products are composed of a mixture of fibres in a multitude of sizes.

SMF have been widely used as alternatives to asbestos in insulation and fire-rating products and as reinforcement in cement, plaster and plastic materials. SMF products are used extensively in commercial and residential buildings for insulation from temperature and sound.

There are four main groups of SMF:

1. **Continuous Glass Filaments** which used in textiles, reinforced plastics and concrete, and as electrical insulation and plumbing materials.
2. **Fibreglass, glass fibre or glasswool** which used mainly in insulation mats or batts.
3. **Rockwool** which is used in formed insulation, in sprayed materials, such as acoustic insulation and fire-rating materials.
4. **Ceramic Fibres** used as insulation blankets and for high temperature applications and fire-rated products.

For some years, there were concerns that SMF may be associated with health effects similar to those found with asbestos. This was because of the similarities of appearance, as well as the industrial application, of SMFs and asbestos. Now there is a large amount of scientific data from various studies, including epidemiological studies of workers in SMF industries. Reviews of these results show a number of health effects from exposure to various SMF.

Short term exposure can result in skin and eye irritation which is more likely in workers having direct contact with SMF products for the first time or after a period of absence. It may also involve reddening, burning, itching, prickling, scaling, thickening and inflammation around the fingernails. Upper respiratory tract irritation is likely during exposure to very high concentrations of SMF in the air.

Long term exposure to SMF was shown to be associated with a slightly increased risk of lung cancer among exposed workers in early SMF industries. Animal studies have shown the potential of SMF to cause mesothelioma, but no cases of this lung disease were reported from studies in the fibreglass and rockwool manufacturing industries.

Animal studies and epidemiological results have led the World Health Organisation (WHO) International Agency for Research on Cancer to classify fibres such as rockwool, ceramic and glass fibre as *Class 2B carcinogens*. That is, they are possibly carcinogenic to humans.

With other cancer-causing substances (carcinogens), we know that there is no safe level of exposure -that is, there is no low level that can be guaranteed not to cause an increased cancer risk. However, current scientific opinion is that SMF caused chronic health effects will not occur under typical “modern-day” operations, provided adequate precautions are taken in the workplace.

4 POLYCHLORINATED BIPHENYL (PCB)

The extent of the use of Polychlorinated Biphenyls (PCB) is varied. They were used in fluorescent light capacitors for power factor correction on an inductive ballast circuit. They have also been used in transformers, vacuum pumps and gas – transmission turbines, and in the United States as plasticisers, adhesives and pesticide extenders and as well as many other products.

The most commonly observed health effects in people exposed to PCBs are skin conditions such as chloracne and rashes, but these were known to be symptoms of systemic poisoning dating back to the 1920s. Studies in workers exposed to PCBs have shown changes in blood and urine that may indicate liver damage.

A few studies of workers indicate that PCBs were associated with specific kinds of cancer in humans, such as cancer of the liver and biliary tract. The Department of Health and Human Services (DHHS) in the US has concluded that PCBs may reasonably be anticipated to be carcinogens.

The US Environmental Protection Agency (EPA) and the International Agency for Research on Cancer (IARC) have determined that PCBs are probably carcinogenic to humans. PCBs are also classified as probable human carcinogens by the National Cancer Institute, World Health Organization, and the Agency for Toxic Substances and Disease Registry. Recent research by the National Toxicology Program has confirmed that PCB126 (Technical Report 520) and a binary mixture of PCB126 and PCB153 (Technical Report 531) are carcinogens.

5 LEAD BASED PAINTS

Lead paint or lead-based paint is paint containing lead. As pigment, lead (II) chromate (chrome yellow) and lead (III) carbonate (white lead) are the most common forms. Lead was added to paint to speed up drying, increase durability, maintain a fresh appearance, and resist moisture that causes corrosion.

Lead paint is hazardous. It can cause nervous system damage, stunted growth, kidney damage, and delayed development. It is dangerous to children because it tastes sweet, therefore encouraging children to put lead chips and toys with lead dust in their mouths. Lead paint is dangerous to adults and can cause reproductive problems in men or women.

In Australia, the recommended amount of lead in domestic paint has declined from 50% before 1965, to 1% in 1965. In 1992, it was reduced to 0.25%, and in 1997 it was further reduced to 0.1%.

AS 4361.2-2017 Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings defines a lead based paint as '*A paint film that contains greater than 0.1% lead by mass in the dry film*'. Lead-free paint is defined as '*a paint film having a lead content that is equal to or less than 0.1% lead by mass in the dry film*'.

6 SURVEY METHODOLOGY, SAMPLE COLLECTION AND ANALYSIS

The inspection of the buildings that are to be demolished at the site was undertaken by way of a visual assessment of construction materials located in accessible internal areas. Information contained in the existing Airsafe Hazardous materials report was used as a guide during the site inspection and results of samples collected by Airsafe for their report were assumed to be correct and these results have been used (where applicable) in this report.

During the site inspection, twelve samples of suspected asbestos containing / contaminated construction materials were collected for laboratory analysis to ascertain the presence / absence of asbestos fibres in the sampled materials.

Following collection, each sample was placed into a clean resealable plastic sample bag which were marked with the site details and sample location. The samples were forwarded to ESP Laboratories, a NATA accredited laboratory located in Footscray VIC for asbestos content analysis. The samples were analysed using polarised light microscopy supplemented with dispersion oil staining using ESP's NATA accredited in-house method No. 2 and methodology consistent with AS 4964-2004.

Five paint samples were taken from typical painted surfaces in the CTC Building for lead content analysis. The paint samples were collected for the full depth of the paint coating and following collection, the paint samples were placed into individual clean resealable plastic bags that were marked with the sample number, location and date. These samples were delivered to Envirolab Services NATA accredited laboratory in Chatswood NSW. The samples were analysed in accordance with Envirolab Services NATA approved method 'Metals-020/021/022 Digestion of paint chips/scrapings/liquids for metals determination by ICP-AES/MS and or CV/AAS'.

The NATA endorsed laboratory reports of the asbestos and lead sample analysis are attached in Appendix 2.

7 EXTENT OF SURVEY

Fundamental to the entire basis of an inspection of this type, where the constraints of a “non-destructive” survey are imposed, is the fact that no matter how thorough or professionally it is conducted, not all hazardous construction materials (construction materials containing asbestos, synthetic mineral fibre, polychlorinated biphenyl, lead based paints and lead contaminated cavity dust) might be found and recorded.

Whilst one can be reasonably confident that hazardous construction materials that might be routinely encountered in the normal day-to-day activities undertaken within the accessible areas of the buildings at the site can be identified and assessed, no guarantees can be made that all hazardous construction materials have been identified since demolition activities may well reveal hazardous construction materials in areas inaccessible to this inspection.

This report is confined to reporting the discovery (or non-discovery as the case may be) and presence of hazardous construction materials by visual inspection and non-destructive methods of those accessible areas in the buildings accessible to and inspected by P. Clifton & Associates on the date of the inspection.

P. Clifton & Associates will not be liable in the event the report fails to notify the presence of any hazardous construction materials in any area in the buildings which were, on the date of inspection, physically inaccessible for inspection using the methods employed (hand tools to gain access to ceiling spaces and wall cavities) or which was not otherwise inspected on that day. Nothing herein contained implies that any inaccessible or uninspected areas in the building contain or do not contain hazardous construction materials.

The survey was limited to accessible areas of the building structures and associated building elements only and does not include any hazardous construction materials or contamination that may be in inaccessible areas such as the roof spaces, buried beneath the concrete floor slabs or in the soil on the site.

PCA have exercised reasonable care, skill and diligence in the preparation of this report. However, except for any non-excludable statutory provision, PCA gives no warranty in relation to its services or this report and is not liable for any loss, injury or death suffered by any party (whether caused by negligence or otherwise) arising from or in relation to the services provided or the use of this report.

Where the client has the benefit of any non-excludable condition or warranty, the liability of PCA is, to the extent permitted by law, limited to re-performing the services or refunding the fees paid in relation to the services or sections of the report not complying with the conditions or warranty.

8 REFERENCES

The removal and disposal of asbestos containing and other hazardous construction materials in NSW is overseen by various authorities including SafeWork NSW (SafeWork), the NSW Environment Protection Authority (NSW EPA), local government (council) by administering various legislation, regulations and codes of practice. Statutory documents that are applicable to the proposed work at the site include (but are not limited to) the following:

- NSW Work Health & Safety Act 2011.
- NSW Work Health & Safety Regulation 2017.
- How To Safely Remove Asbestos Code of Practice issued by the NSW Government in August 2019.
- How To Manage and Control Asbestos in the Workplace issued by the NW Government in August 2019.
- NSW Protection of the Environment Operations (General) Regulation 2009: Reg 92.
- NSW Protection of the Environment Operations (Waste) Regulation 2014: 'Sections 77 - 81.
- National Environment Protection (Assessment of Site Contamination) Measure. Schedule B (1) - Guideline on Investigation Levels for Soil and Groundwater (May 2013).
- enHEALTH Management of Asbestos in the Non-Occupational Environment (2005).
- NSW Environment Protection Authority (EPA) Waste Classification Guidelines – Part 1: Classification of waste (November 2014).
- National Occupational Health and Safety Commission (NOHSC) Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)].

9 RESULTS OF SURVEY

9.1 CTC Building

The CTC (Consulting and Therapy Centre) Building is a single and two storey timber framed and full masonry former hospital building that has metal tray profile roof cladding over the centre and side corridor areas, concrete roof tiles over the various rooms, face brick masonry walls, timber and aluminium framed windows and entry doors, timber and metal fascias and metal or box gutters and downpipes. The eave linings to the upper and lower external areas are flat asbestos cement sheet. See photograph No. 1

Over most of the centre flat roof area is a high level curved steel framed roof structure that has polycarbonate roof cladding. Infill panels to the high level windows along this area are flat asbestos cement sheet. See photograph No. 2. A sample of this infill material was analysed and found to contain chrysotile asbestos.

Located below the floor on the south eastern side of the building there is flat asbestos cement sheet fixed to timber framing. See photograph No. 3.

Within the main level in the building the timber ceilings are either set plasterboard or drop in Stramit straw tiles. There is plastic wrapped SMF insulation below the metal roofing and there is likely to be foil sisalation paper below the roof tiles (ceiling spaces inaccessible). Throughout the main level the walls are all masonry which are either finished with paint, painted cement render or ceramic tiles and the floor is a suspended and on ground concrete slab. Floor coverings include carpet, asbestos backed sheet vinyl and ceramic tile.

Within each of the bathrooms there are plumbing ducts that contain hot and cold water pipes, waste and vent pipework. In two of the ducts (Ducts 5 and 6) there are moulded asbestos cement flue pipes extending from the basement. See photograph No. 4. Hot water pipe work is generally insulated with green coloured plastic sheathing. No asbestos pipe insulation was sighted in these plumbing ducts. Former openings in the walls of these ducts located in the bathrooms have been covered with small panels of fibrous cement sheet. A sample of this material was analysed and found to be free of asbestos. A number of these panels have asbestos warning labels or handwriting warning of asbestos on them on the inner duct side. See photograph No. 6.

The inner side of the doors to the various electrical, data / communications and hot water service are lined with flat asbestos cement sheet. The ceiling linings in these cupboards are also flat asbestos cement sheet.

The various electrical cabinets were live and unable to be accessed. There may be asbestos based backing boards in these cabinets.

The lower north eastern area contains a gymnasium and staff canteen. Within this area the ceilings and framed walls are lined with flat fibrous cement sheet (asbestos free) and plasterboard and the concrete floor is covered with carpet and asbestos free sheet vinyl.

Within the gymnasium there is a gas fired heater within the cabinet near the entry door. See photograph No. 7. This heater has a moulded asbestos cement flue pipe attached which extends through the service duct on the main level and exits through the roof.

In the sub floor area are various plumbing pipes and gas hot water storage heaters. The two flues extending from the gas hot water storage heaters are combined into a single pipe in the sub floor area below the soffit. These flues are moulded asbestos cement and extends through the service duct on the main level and exits through the roof.

Attached to the south west end of the building is a metal framed and roofed carport. There are no hazardous construction materials on the carport structure.

Fluorescent light fittings within the building were all live and unable to be internally inspected. These light fittings are likely to contain plastic canister capacitors that do not contain PCB.

Five samples of paint finishes on typical construction materials in the building were collected for laboratory analysis to ascertain the percentage lead content of these paints. The results of the analysis of these samples is as follows:

- 1 – Light cream paint on typical cement rendered masonry walls in north east area of main level - <0.005% lead.
- 2 – Turquoise paint finish on wall and infill panel in room near walkway to the Belmont House Building – 0.006% lead.
- 3 – Blue paint on typical timber door - <0.005% lead.
- 4 – Light yellow paint on typical cement rendered masonry walls in southern area of main level - <0.005% lead.
- 5 – Light green paint on paint on typical cement rendered masonry walls in southern area of main level - <0.005% lead.

Based on these results, the various paint finishes in the CTC Building are NOT lead based paints.

The ceiling and wall cavities and various service cupboards within the building contain only a very small quantity of settled dust due to there being minimal openings between the roofs and walls. This dust is to be removed in conjunction with the removal of the asbestos and SMF materials from the building and does not require further specialist removal prior to the demolition of the building.

The following hazardous construction materials were found to be present in accessible areas of the CTC Building at the site:

Asbestos

- The eaves linings in the roof area and to the external perimeter areas and the various covered area soffit linings on the exterior of the building are flat asbestos cement sheet.
- The verge tiles along each of the gable roof ends are supported on narrow strips of flat asbestos cement sheet.
- The high level windows through the centre corridor areas have infill panels of flat asbestos cement sheet.
- The infill panels around the window mounted air conditioning unit adjacent to the walkway to Belmont House is flat asbestos cement sheet. This material is painted turquoise colour.
- The sub floor area near the north east exterior of the St Raphaels Unit has asbestos cement sheet material fixed to timber framing.
- Within the main internal level there is asbestos backed sheet vinyl covering the concrete floor in the various hall areas and also in most of the offices and ward rooms.
- Each of the electrical cupboards, communications and hot water service cupboards accessed from the centre hall areas have flat asbestos cement sheet backing to the timber access doors. The ceiling linings in these cupboards are also flat asbestos cement sheet.
- The patient lounge area at the eastern end of the St Raphaels Unit has a flat asbestos cement sheet ceiling lining.
- Within the Duct 5 and 6 cupboards located towards the northern end of the main centre corridor there are moulded asbestos cement flue pipes. These pipes extend through the roof space and exit through the roof of the building.
- The backing board in the various electrical cabinet are assumed to be asbestos based 'Zelemite' boards.
- Within the lower level gymnasium there is a moulded asbestos cement flue pipe attached to the gas heating unit.
- Within the sub floor area adjacent to the lower level entry from Belmont House there are moulded asbestos cement flue pipes attached to the gas hot water storage heaters.
- There are some randomly located fragments of asbestos cement sheet debris on the unpaved ground surface in the south western sub floor area.

SMF

- Located below the metal roof cladding through the corridor areas in the main level ceiling space there is plastic wrapped SMF insulation.

9.2 Mortuary

The mortuary is a small single storey building with metal tray profile roof cladding, metal fascias, face brick walls and steel framed entry door. Within the building the set ceiling is lined with fibrous cement sheet, the masonry walls are finished with painted cement render and the floor is an on-ground concrete slab.

A sample of the fibrous cement sheet ceiling lining from within the building was analysed and found to be free of asbestos.

No asbestos containing materials are present in the building.

Within the roof space there is plastic wrapped SMF insulation to the underside of the metal roof cladding.

The fluorescent light fitting in the building contains a plastic canister that does not contain PCB. The paint finish of the metal roof and fascia cladding is factory applied and is not a lead based paint. There are no lead based paint finishes on or in the building.

The ceiling cavity within the building contains only a very small quantity of settled dust due to there being minimal openings between the roof and walls / ceiling. This dust is to be removed in conjunction with the removal of the SMF materials from the building and does not require further specialist removal prior to the demolition of the building.

The following hazardous construction materials were found to be present in accessible areas of the Mortuary Building at the site:

SMF

- Located below the metal roof cladding through the corridor areas in the main level ceiling space there is plastic wrapped SMF insulation.

9.3 Medical Centre and Education Room

This large single storey building extends from the Mortuary Building to the Chapel. This building has metal and concrete tile roofs, compressed asbestos free fibrous cement fascia cladding to the south west area of the building, hardboard 'Weathertex' weatherboard cladding to the north west end gables, flat asbestos free fibrous cement sheet eaves linings, face brick walls and metal eaves and box gutters and down pipes. The windows and entry doors are aluminium framed.

The large square compressed fibrous cement sheet fascia cladding panels on the south east end of the building are an asbestos free material.

A sample of the fibrous cement sheet supporting strip material below the verge tiles along the gable roof ends at the north western Medical Centre end of the building (near the chapel) was analysed and found to be free of asbestos. See photograph No. 8.

A sample of the fibrous cement sheet eave lining material at the north western Medical Centre end of the building (near the chapel) was analysed and also found to be free of asbestos. See photograph No. 8.

Within the building there are set plasterboard and hardboard ceiling linings, suspended exposed metal grid ceilings with drop in acoustic tiles, painted cement rendered and ceramic tiled masonry walls and the floors are concrete with a range of floor finishes including carpet, ceramic tile and vinyl tile and sheet vinyl.

A sample of the olive green coloured vinyl tiles in the corridor behind the education room was analysed and found to be free of asbestos. These tiles are also present in the data communications cupboard adjacent to the amenities rooms at the top of the corridor ramp.

The sheet vinyl floor coverings in the electrical switch room and in the amenities room are free of asbestos.

The compressed fibrous cement sheet cubicle partitions within the amenities rooms behind the education room are free of asbestos.

No asbestos containing materials were found to be present in accessible areas in the building.

Fluorescent light fittings within the building contain plastic canister capacitors that do not contain PCB.

The ceiling cavity within the building contains only a very small quantity of settled dust as there is foil sisalation below the roof cladding. Where SMF materials are present, this dust is to be removed in conjunction with the removal of the SMF materials from the building. No further specialist dust removal is required prior to the demolition of the building.

Based on the age of the building the paint finishes within the building will not be lead based paints.

The following hazardous construction materials were found to be present in accessible areas of the Medical Centre and Education Room building at the site:

SMF

- Located below the metal roof cladding in the south eastern part of the building, there is SMF insulation.
- Air conditioning duct work in the roof spaces is insulated with plastic wrapped SMF.
- The acoustic ceiling tiles in the suspended grid ceilings contain SMF.

9.4 Consulting Rooms

The Consulting Rooms building is located to the north east of the Chapel and is a single storey building that has concrete roof tiles, face brick walls, asbestos cement sheet eaves linings and aluminium and timber framed windows and entry doors.

A sample of the upper asbestos cement sheet material below the roof tiles (anti ponding boards and below verge tiles) was analysed and found to contain chrysotile asbestos. See photograph No. 9. The lower eaves linings is also asbestos cement sheet.

Infill panels in the lower parts of the windows noted in the Airsafe report as being presumed to contain asbestos are not in the area of this building which was covered by our inspection.

Within the building the ceiling linings are plasterboard, the walls are full masonry and the floors are timber or concrete slabs. Inspection below the carpet tiles found there to be no vinyl tiles present. An inspection of the sub floor area below the north west office did not find any asbestos material or debris to be present where the ground area was able to be inspected. The Airsafe report states that there is fibro cement sheet debris within the sub floor area which is presumed to be asbestos containing material. We did not sight this material during our site inspection.

The ceiling space was unable to be accessed and there is likely to be SMF insulation batts on top of the ceiling linings.

Fluorescent light fittings within the building contain plastic canister capacitors that do not contain PCB.

Paint finishes on and in the building are either factory applied finishes on aluminium window and door frames or water based paints on ceilings and walls. These paint finishes are not lead based paints.

The ceiling space was unable to be accessed to ascertain if there is settled cavity dust present.

The following hazardous construction materials were found to be present in accessible areas of the Consulting Rooms building at the site:

Asbestos

- The eaves linings on the exterior of the building are flat asbestos cement sheet.
- The upper anti-ponding boards below the lowest row of roof tiles are flat asbestos cement sheet.
- The verge tiles along each of the gable roof ends are supported on narrow strips of flat asbestos cement sheet.

SMF

- Located within the roof space there is likely to be SMF insulation batts on top of the ceiling linings.

9.5 Chapel

The Chapel is located in the western part of the proposed demolition area and is a large full masonry building with concrete roof tiles, face brick walls, aluminium and timber framed windows and entry doors, metal gutters and downpipes.

The soffit lining to the main entry porch at the front of the building, the soffit lining over the small rear entry porch (south east area) and the supporting strips below the verge tiles along the ends of the roof gables are flat asbestos cement sheet.

Within the building the main area has a high level timber lining board ceiling whilst in the sacristy rooms and seating areas in the south west part of the building there are fibrous plaster ceiling linings. In the toilet and adjacent entry room to the toilet the ceiling linings are flat asbestos cement sheet. The Airsafe report identified asbestos cement sheet ceiling linings above the plasterboard ceiling linings in the sacristy rooms. The photograph of the upper surface of the ceiling lining in their report only shows the fibrous plaster ceiling with no asbestos present (in the photograph).

The walls in the building are all masonry and the concrete floor is covered with timber boards or ceramic tiles.

No SMF materials were sighted in accessible areas in the building. There is no SMF insulation on top of the set ceilings over the sacristy and adjacent rooms in the south eastern part of the building.

No PCB containing materials were found to be present within accessible areas of the building.

Paint finishes in the building are limited to the set fibrous plaster and asbestos cement sheet ceiling and soffit linings. These paint finishes will not be lead based paints. The painted metal elements on the building exterior may be lead based paints however these paints are in good condition and do not require removal prior to demolition. These metal items may be disposed of as scrap metal.

Airsafe report that cavity dust in the ceiling space over the south east rooms was analysed and found to contain lead at 130mg / kg. This dust is to be removed as part of the asbestos removal work and does not require further specialist removal prior to the demolition of the building.

The following hazardous construction materials were found to be present in accessible areas of the Chapel building at the site:

Asbestos

- The ceiling lining of the main entry porch area is flat asbestos cement sheet.
- The soffit lining over the rear south east entry area is flat asbestos cement sheet.
- The supporting strips below the verge tiles along each of the roof gable ends are flat asbestos cement sheet.
- The ceiling linings in the toilet and adjacent entry room are flat asbestos cement sheet.

9.6 Monastery

The Monastery building is a large two and three storey building that has terracotta roof tiles, face brick external walls, timber framed windows and entry doors, timber fascias and metal eaves gutters and downpipes. The small roof over the front entry area is clad with corrugated asbestos cement sheet. See photograph No. 10.

The eaves linings and the front and rear covered verandah soffits are lined with flat asbestos cement sheet. The infill panels over the entry doors on the rear side of the building are similar flat asbestos cement sheet.

There is a disused telephone cabinet on the front verandah to the west side of the entry door. The bitumen floor covering in this cabinet is an asbestos containing material.

Within the building the framed ceilings are lined with plasterboard and flat asbestos cement sheet, the masonry walls are finished with painted cement render and the floors are either suspended concrete slabs or timber boards. The bitumen insulation paper lining to the underside of the roof tiles does not contain asbestos.

The ceiling linings in the bathrooms and shower rooms located on the ground floor and level 1 are flat asbestos cement sheet.

Samples of the vinyl floor covering in the ground floor kitchen area and of the carpet underlay within the building analysed by Airsafe were found to be free of asbestos. Inspection below the carpet in six randomly selected locations did not find any vinyl floor tiles to be present.

A sample of the fibrous cement sheet cover panel over the corner services duct in the ground level room adjacent to the front entry door was analysed and found to be free of asbestos. See photograph No. 11.

No SMF or PCB containing materials were sighted within accessible areas of the building.

Paint finishes present on the exterior and interior of the building are mostly in good condition with some flaking paint on external timber elements. Airsafe collected eight samples of paint finishes from the building for lead content analysis with six of these samples being confirmed to have a lead content exceeding 0.1% confirming these six sampled paints are lead based paints.

The lead based paints included paint finishes on timber windows, doors, architraves and skirtings. Two samples of the paint on internal walls had a lead content below 0.1%. These paint samples are not lead based paints.

A sample of cavity dust from the roof space of the building was collected by Airsafe and analysis found this dust to contain 410 mg / kg of lead.

The following hazardous construction materials were found to be present in accessible areas of the Monastery building at the site:

Asbestos

- The roof cladding over the front entry area of the building is corrugated asbestos cement sheet. Debris in the box gutter that drains stormwater from this roof contains asbestos fibre contamination.
- The eaves linings and soffit linings over the front and rear verandahs are all flat asbestos cement sheet.
- The infill panels above the entry doors on the rear side of the building are flat asbestos cement sheet.
- The bitumen material on the floor of the disused telephone cabinet on the front verandah is an asbestos containing material.
- The ceiling linings in each of the bathrooms and shower rooms located on the ground floor and level 1 are flat asbestos cement sheet.

Lead Based Paints and Lead Cavity Dust

- There are lead based paint finishes on the timber materials on and in the building. These materials include doors, windows, door jambs, architraves and skirting boards. As the building is a residential structure the paint on these materials may be removed and disposed of as general solid waste or alternately these painted materials may be removed with the paint intact for disposal as general solid waste.
- The cavity dust within the ceiling space contains 410 mg / kg lead. As the building is a residential structure this dust may be removed and disposed of as general solid waste.

9.7 Arts Building (St Augustine's) and Archive Building

9.7.1 Arts Building

The Arts building which was known as St Augustine's, is a large single storey building that has terracotta tile and metal roof cladding, face brick walls, timber framed windows and entry doors, timber fascias and metal eaves guttering and downpipes. The northern side verandah soffit and eaves linings and the infill cladding on the rear side of the building are flat asbestos cement sheet. This building forms the western part of the combined Arts Building / Archive Building.

The fibrous cement sheet over the sub floor access door is asbestos free material.

Within the building there are plasterboard and fibrous cement sheet linings to the ceilings and framed walls, painted cement render finishes to the masonry walls and timber or concrete floors. The fibrous cement sheet wall linings in the north western bathroom in the front residence area and in the bathroom in the rear arts room are free of asbestos.

A sample of the compressed fibrous cement sheet cubicle partitions in the south east bathroom was analysed and found to be free of asbestos.

Floor finishes include carpet, sheet vinyl and ceramic tile. Within the large rear arts room, there is a mottled orange / brown coloured sheet vinyl covering the floor. A sample of this vinyl was found to have chrysotile asbestos in the paper backing layer. The grey coloured sheet vinyl in the rear kitchen area was analysed and found to be free of asbestos. See photograph No. 12.

SMF insulation is presumed to be present within the roof space to the underside of the metal roof cladding.

No PCB containing materials were sighted within accessible areas of the building.

Paint finishes present on the exterior and interior of the building are mostly in good condition with some flaking paint on external timber elements. Airsafe collected two samples of paint finishes from the building for lead content analysis. The sample of exterior paint on a timber element was found to be a lead based paint. The sample of white paint taken from an internal ceiling had a lead content below 0.1%. This paint sample is not a lead based paint.

The following hazardous construction materials were found to be present in accessible areas of the Arts Building at the site:

Asbestos

- The eaves linings and soffit lining over the front verandah are flat asbestos cement sheet.
- The infill panels above the windows and entry doors on the rear and sides of the rear kitchen and arts classroom area are flat asbestos cement sheet.
- The access panels into the ceiling spaces are presumed to be flat asbestos cement sheet.
- The orange / brown coloured sheet vinyl to the floor of the rear arts classroom contains chrysotile asbestos.
- There are a number of fragments of asbestos cement sheet debris on the ground surface at the rear of the building. See photograph No. 13. There are likely to be fragments of asbestos cement sheet debris on the ground surface below the building.

SMF

- There is SMF insulation presumed to be present to the underside of the metal roof cladding.

Lead Based Paints and Lead Cavity Dust

- There are lead based paint finishes on the timber materials on and in the building. These materials include doors, windows, door jambs, architraves and skirting boards. As the building is a residential / educational structure the paint on these materials may be removed and disposed of as general solid waste or alternately these painted materials may be removed with the paint intact for disposal as general solid waste.
- The cavity dust within the ceiling space is presumed to some lead contamination. As the building is a residential / educational structure this dust may be removed and disposed of as general solid waste along with the demolition waste.

9.7.2 Arts Building

The Archives Building forms the eastern part of the combined Arts Building / Archive Building and together they form one building. This eastern portion of the building is a full masonry structure with terracotta tile roof cladding, metal ridge vent, face brick walls and timber and / or metal framed windows and entry doors. There is a large brick chimney in the centre rear area of the building. The fibrous cement sheet infill panels around the double entry doors on the front of the building are free of asbestos.

The eave linings around the perimeter of the building and the front covered area soffit are lined with flat asbestos cement sheet.

The verge tiles along each of the roof gable ends are supported on narrow strips of flat asbestos cement sheet.

Within the upper level area there is a corrugated metal ceiling lining fixed to the underside of the raked roof framing, painted cement rendered masonry walls and concrete floor. The ceiling linings in each of the two store rooms near the double entry doors are flat asbestos cement sheet. The brick chimney within the centre rear area of the building was unable to be accessed during the site inspection. There are no access panels into this chimney.

A sample of the red coloured vinyl floor tiles in the eastern part of the upper level was analysed and found to be free of asbestos.

The lower level area which is located below the south east end of the building has concrete soffit and floor and brick walls. No hazardous materials were sighted in this area.

The sub floor area was locked and unable to be accessed.

No SMF containing materials were sighted in the building. The underside of the foil sisalation paper below the roof tiles is visible through an opening in the corrugated metal ceiling.

Fluorescent light fittings in the building appear to be relatively new and are unlikely to have metal canister capacitors that contain PCB.

The grey coloured paint finish on the walls within the building was collected by Airsafe and analysis of this sample confirmed this paint to contain 0.19% lead. This result confirm this paint to be a lead based paint. Lead based paint finishes are assumed to be present on the timber framed windows and doors.

There is no accessible ceiling space within the building from which to sample cavity dust. With no open ceiling space and foil sisalation paper below the roof tiles, there is unlikely to be any quantity of cavity dust in the building that will require removal prior to demolition.

The following hazardous construction materials are present in accessible areas of the Archives Building:

Asbestos

- The eaves linings and soffit lining over the front covered area are flat asbestos cement sheet.
- The verge tiles along the roof gable ends are supported on narrow strips of flat asbestos cement sheet.
- The ceiling linings in each of the two store rooms near the double entry doors are flat asbestos cement sheet.

Lead Based Paints and Lead Cavity Dust

- The grey coloured paint finish to the walls within the building is a lead based paint. Paint finishes on timber windows and doors, the frames to these items, etc. are also assumed to be lead based paints.

10 RECOMMENDATIONS

The hazardous construction materials found to be present within accessible parts of the buildings that are to be demolished within the St John of God Richmond Hospital at 177 Grose Vale Road, North Richmond NSW were generally in good condition at the time of the site inspection and do not pose a measurable health risk to persons within these areas in the buildings whilst these materials remain in-situ and undisturbed.

Areas that were unable to be accessed during the site inspection such as ceiling spaces, sub floor areas and most wall cavities, etc. should be inspected prior to or in conjunction with demolition work to ascertain the type and extent of any asbestos containing or other hazardous construction materials that may be present.

All hazardous construction materials located within the buildings are to be removed prior to or in conjunction with the proposed demolition work.

All identified asbestos containing construction materials in the buildings at the site (except sheet vinyl floor coverings) are classified as non-friable asbestos containing materials. These non-friable asbestos containing materials may only be removed by a contractor holding a Class A licence for friable asbestos removal or a Class B licence for non-friable asbestos removal.

The asbestos backed sheet vinyl floor coverings in the CTC Building and in the Arts Building are classifiable as friable asbestos containing materials and may only be removed by a contractor holding a Class A licence for friable asbestos removal.

Removal of asbestos containing materials is to be carried out in accordance with the regulations and requirements of the NSW Work Health Safety Regulation 2017 and the How to Safely Remove Asbestos Code of Practice issued by the NSW Government in August 2019.

At the completion of asbestos removal, a visual clearance inspection must be carried out by a licenced asbestos assessor prior to the asbestos removal areas being opened for access without the use of asbestos PPE. Written certification detailing the results of the visual clearance inspection is to be provided.

Airborne asbestos fibre monitoring must be carried out prior to, during and as clearance monitoring following the removal of friable asbestos containing materials. Air monitoring samples are to be forwarded to a NATA accredited laboratory for fibre count analysis.

SMF materials are to be removed in accordance with the National Occupational Health and Safety Commission (NOHSC) National Standard and National Code of Practice for Synthetic Mineral Fibres, 1990 (archived). SMF materials removed from the buildings are to be disposed of at a NSW Environment Protection Authority (NSW EPA) licenced waste disposal facility.

All fluorescent light fittings in each of the buildings are to be internally inspected prior to disposal for the presence of metal canister capacitors. Details of the brand and rating of all metal canister capacitors are to be compared to the ANZECC list of known PCB capacitors. All PCB containing capacitors are to be removed for disposal as PCB waste in accordance with the NSW EPA PCB Chemical Control Order 1997.

Lead based paints and lead contaminated cavity dust in residential, educational and child care buildings are pre-classified as general solid waste (GSW) (NSW EPA Waste Classification Guidelines November 2014). Lead based paints and lead contaminated cavity dust in all other types of buildings are pre-classified as hazardous waste (NSW EPA Waste Classification Guidelines November 2014).

The lead based paints and cavity dust on buildings that were used for residential and educational use must be disposed of as GSW to landfill. These painted items and items on which there is lead dust cannot be sent for recycling (unless the paint and dust is removed prior to be removed from the site) such as second hand building material suppliers or brick and concrete recycling facilities with the exception of steel and other metal items.

The lead based paints and cavity dust on buildings that were used for purposes other than residential and educational use must be disposed of as hazardous waste to landfill. These painted items and items on which there is lead dust cannot be sent for recycling (unless the paint and dust is removed prior to be removed from the site) such as second hand building material suppliers or brick and concrete recycling facilities with the exception of steel and other metal items.

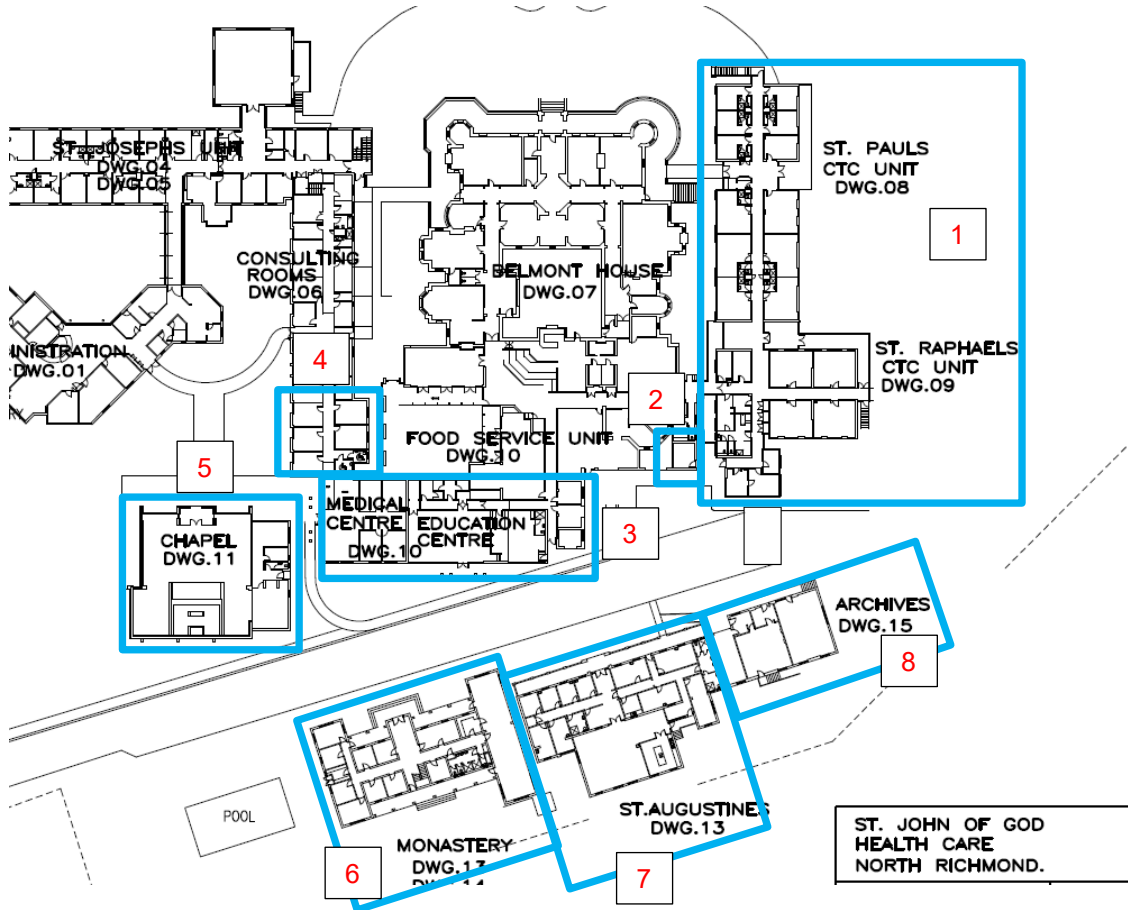
Steel and other metal items on which there is lead based paint can be sent to a metal recycling facility without removing the lead paint.

Fragments of asbestos cement sheet debris may be present within the soil on the site below the buildings and external paved areas. Some random fragments of asbestos cement sheet debris were sighted on the ground surfaces to the rear of the Archives Building and the Arts Building. The identification and extent of any asbestos cement fragments within soil on the site is outside of the scope of this report. Should any asbestos cement fragments within the soil on the site be identified during demolition and/or excavation work, then the soil containing the asbestos cement is to be removed for off-site disposal.

Soil containing fragments of asbestos cement must be assessed prior to removal for classification as either 'non-friable' or 'friable' asbestos containing material. Where it is classified as 'friable' asbestos containing material, the soil must be removed by, or the removal work supervised by, a contractor holding a Class A asbestos removal licence. Asbestos contaminated soil is to be disposed of at a licenced landfill facility as Special Waste (Asbestos Waste).

APPENDIX 1

SITE PLAN SHOWING BUILDING LOCATIONS



Site plan of Building Locations

- 1 – CTC Building
- 2 – Mortuary
- 3 – Medical Centre and Education
- 4 – Consulting Rooms
- 5 – Chapel
- 6 – Monastery
- 7 – Arts Building
- 8 – Archives Building

APPENDIX 2

PHOTOGRAPHS



Photograph No. 1: Flat asbestos cement sheet eave lining in the CTC Building



Photograph No. 2: Flat asbestos cement sheet infill panels and eave lining in the centre roof area of the CTC Building



Photograph No. 3: Flat asbestos cement sheet below floor of the St Raphaels unit on the south east side of the CTC Building



Photograph No. 4: Asbestos cement flue in Duct 6 in CTC Building



Photograph No. 5: Asbestos free fibrous cement sheet infill panel on plumbing duct in typical bathroom in CTC Building



Photograph No. 6: Rear side of typical asbestos free fibrous cement sheet infill panel on plumbing duct in typical bathroom in CTC Building. A sample of this material was analysed and found to be free of asbestos



**Photograph No. 7: Gas room heater in gymnasium in the lower level of the CTC Building.
The flue attached to this heater is moulded asbestos cement**



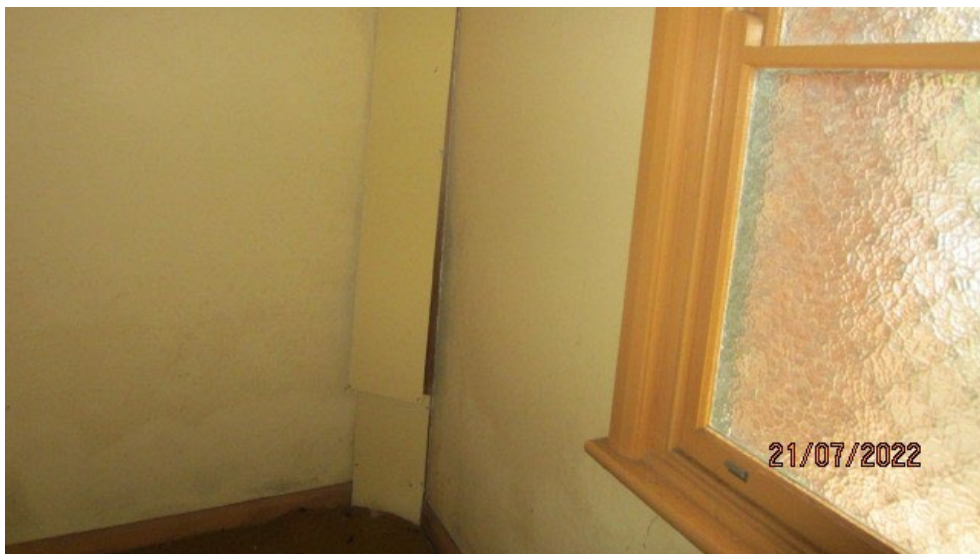
**Photograph No. 8: Asbestos free fibrous cement sheet eave lining and verge tile supporting strip on the north west end of the Medical Services building.
The gable weatherboard cladding is hardboard 'Weathertex'**



Photograph No. 9: Asbestos cement sheet supporting strip below verge tiles and upper eave / anti-ponding board below lowest row of roof tiles on the Consulting Rooms building



Photograph No. 10: Corrugated asbestos cement sheet roof cladding over front entry area to the Monastery building



Photograph No. 11: Fibrous cement cover panels to service duct in front room in the Monastery building. A sample of this material was analysed and found to be free of asbestos



Photograph No. 12: Orange / brown coloured sheet vinyl in rear room of the Arts Building. This vinyl was analysed and found to have asbestos in the fibrous backing layer. This material is classifiable as friable asbestos



Photograph No. 13: Piece of asbestos cement sheet debris on the grassed ground area behind the Arts Building

APPENDIX 3

LABORATORY REPORTS



Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 301233

Client Details

Client	P Clifton & Assoc
Attention	Phil Clifton
Address	PO Box 447, Pymble Business Ctre, NSW, 2073

Sample Details

Your Reference	<u>Nth Richmond</u>
Number of Samples	5 Paint
Date samples received	25/07/2022
Date completed instructions received	25/07/2022

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.

Report Details

Date results requested by	26/07/2022
Date of Issue	26/07/2022
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 *	

Results Approved By

Giovanni Agosti, Group Technical Manager

Authorised By

Nancy Zhang, Laboratory Manager

Client Reference: Nth Richmond

Lead in Paint						
Our Reference		301233-1	301233-2	301233-3	301233-4	301233-5
Your Reference	UNITS	1 Light cream	2 Turquoise	3 Blue door	4 Light yellow	5 Light green
Date Sampled		21/07/2022	21/07/2022	21/07/2022	21/07/2022	21/07/2022
Type of sample		Paint	Paint	Paint	Paint	Paint
Date prepared	-	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022
Date analysed	-	26/07/2022	26/07/2022	26/07/2022	26/07/2022	26/07/2022
Lead in paint	%w/w	<0.005	0.006	<0.005	<0.005	<0.005

Client Reference: Nth Richmond

Method ID	Methodology Summary
Metals-020/021/022	Digestion of Paint chips/scrapings/liquids for Metals determination by ICP-AES/MS and or CV/AAS.

Client Reference: Nth Richmond

QUALITY CONTROL: Lead in Paint				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			26/07/2022	[NT]	[NT]	[NT]	[NT]	26/07/2022	[NT]
Date analysed	-			26/07/2022	[NT]	[NT]	[NT]	[NT]	26/07/2022	[NT]
Lead in paint	%w/w	0.005	Metals-020/021/022	<0.005	[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.



CHAIN OF CUSTODY FORM - Client

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Darwin Office - Envirolab Services
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 ☎ 08 8967 1201 | ✉ darwin@envirolab.com.au

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Company: P Clifton & Assoc		Client Project Name/Number/Site etc. (ie report title): Nth Richmond
Contact Person:		PO No. (if applicable):
Project Mgr:		Envirolab Quote No.:
Sampler:		Date results required: <input type="checkbox"/> Standard <input type="checkbox"/> Same Day <input checked="" type="checkbox"/> 1 day <input type="checkbox"/> 2 day <input type="checkbox"/> 3 day
Address:		Or choose: <input type="checkbox"/> Standard <input type="checkbox"/> Same Day <input checked="" type="checkbox"/> 1 day <input type="checkbox"/> 2 day <input type="checkbox"/> 3 day
Phone:	Mob:	Note: Inform lab in advance if urgent turnaround is required - surcharges apply
Email Results to: phil@clifton.com.au		Additional report format: <input type="checkbox"/> Esdat <input type="checkbox"/> Equis
Email Invoice to:		Lab Comments:

Sample Information					Tests Required												Comments				
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample	Lead																Provide as much information about the sample as you can
1	1 Light cream		21/7	Paint	✓																Envirolab Services 12 Ashley St Chatswood NSW 2067 Ph (02) 9910 6200 Job No: 301233 Date Received: 25/07/22 Time Received: 1245 Received By: CR Temp: Cool/Ambient Cooling: Ice/No pack 18 C Security: Intact/Broken/None
2	2 Turquoise		✓	✓	✓																
3	3 Blue/door		✓	-	✓																
4	4 Light yellow		✓	-	✓																
5	5 Light green		✓	✓	✓																

Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis

Relinquished by (Company): P Clifton & Assoc	Received by (Company): ES Sydney	Lab Use Only	
Print Name: Phil Clifton	Print Name: closemark	Job number: 301233	Cooling: Ice / Ice pack / None
Date & Time: 21-7-22 12:50	Date & Time: 25/7/22 @ 1245	Temperature: 18 C	Security seal: Intact / Broken / None
Signature:	Signature:	TAT Req - SAME day (P1) / 2 / 3 / 4 / STD	

ASBESTOS IDENTIFICATION REPORT

Date: 25 July 2022

ESP Job Number: J46880

Customer: P. Clifton & Associates Pty Ltd

Address: PO Box 457, Turramurra, NSW

Attention: Phil Clifton

Sampled From: As received (Your ref: 7420-2022)

Sampled By: As received

Date Received: 25 July 2022

Date Analysed: 25 July 2022

Test Method: Qualitative identification of asbestos types in bulk samples by polarised light microscopy, including dispersion staining and trace analysis, with a calculated practical detection limit of 0.01 %, using methodology in accordance with AS 4964 and ESP in-house Method No. 2.

ESP Lab No.	Sample location (if provided) and sample description	Result	Notes
E81505	1: CTC - Roof area infill panel – Fibro cement material (20 x 20 x 5 mm)	Chrysotile asbestos detected Amosite asbestos detected	-
E81510	2: CTC - Toilet duct cover panel – Fibro cement material (45 x 25 x 8 mm)	No asbestos detected Organic fibre detected	-
E81511	3: Mortuary - Fibro ceiling lining – Fibro cement material (25 x 10 x 5 mm)	No asbestos detected Organic fibre detected	-
E81512	4: Consulting Rooms - Upper eave and verge tiles – Fibro cement material (90x 50 x 5 mm)	Chrysotile asbestos detected	-
E81513	5: Medical Centre - Fibro below verge tiles – Fibro cement material (70x 45 x 5 mm)	No asbestos detected Organic fibre detected	-
E81514	6: Medical Centre - Fibro eave lining – Fibro cement material (80 x 50 x 5 mm)	No asbestos detected Organic fibre detected	-
E81515	7: Education - Olive green VFT in corridor – Vinyl material (50 x 40 x 3 mm)	No asbestos detected	~

ESP Lab No.	Sample location (if provided) and sample description	Result	Notes
E81516	8: Archives - Red VFT – Vinyl material (60x 50 x 3 mm)	No asbestos detected	~
E81517	9: Arts/St Augustines - Toilet cubicle partition – Fibro cement material (40x 20 x 5 mm)	No asbestos detected Organic fibre detected	-
E81518	10: Arts/St Augustines - Sheet vinyl in rear room - brown – Vinyl material (50x 30 x 3 mm)	Chrysotile asbestos detected	-
E81519	11: Arts/St Augustines - Rear kitchen sheet vinyl - grey – Vinyl material (40x 40 x 3 mm)	No asbestos detected	~
E81520	12: Monastery - Fibro duct cover in front room – Fibro cement material (40x 20 x 5 mm)	No asbestos detected Organic fibre detected	-

The results contained in this report relate only to the sample(s) submitted for testing. ESP Environmental & Safety Professionals accepts no responsibility for the representivity of the sample(s) submitted.

Notes:

~ As noted in AS 4964, asbestos may be difficult to detect in materials of this type. Therefore, confirmation by another analytical technique is advised.

^ Soil samples exceeding 100 g are examined for fibrous material, and sub-sampled to approximately 40 g using an approved sub-sampling technique (ISO 23909). Sub-sampling may limit the likelihood of detection of asbestos in the sample.

Mineral fibres of unknown type were detected using polarized light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities of the fibres, another independent analytical technique is required.

+ Dimensions in the 'Result' column indicate the approximate total dimensions of the asbestos fibres/bundles of the preceding type of asbestos.

Approved Identifier: Ross Cooper

Approved Signatory: Ross Cooper



Hazardous Construction Materials Survey
St John of God Richmond Hospital
177 Grose Vale Road, North Richmond NSW

APPENDIX 4

HAZARDOUS MATERIALS REGISTER TABLES



Register of Hazardous Construction Materials - Asbestos
Buildings to be Demolished at St John of God Richmond Hospital, 177 Grose Vale Road, North Richmond NSW
27 July 2022

CTC Building			
Room or Area	Location	Material	Matrix Type
Building Exterior	Upper and lower level areas, eaves linings and external soffit linings	Flat asbestos cement sheet	Non-friable
	Below verge tiles along roof gable ends	Flat asbestos cement sheet	Non-friable
	Infill panels in high level skylight windows and main level windows	Flat asbestos cement sheet	Non-friable
	Sub floor area near St Raphaels Unit, below concrete floor	Flat asbestos cement sheet	Non-friable
Building Interior	Sheet vinyl below carpet in main corridor areas and in most rooms	Asbestos paper backing layer	Friable
	Doors and ceilings in electrical, data / communications and hot water service cupboards	Asbestos cement sheet	Non-friable
	Ceiling lining in the patient lounge at end of St Raphaels unit	Flat asbestos cement sheet	Non-friable
	Inside Duct 5 and 6	Moulded asbestos cement pipes	Non-friable
	Backing boards in electrical meter cabinets (Live)	Presumed to contain asbestos	Non-friable
	Gymnasium gas heater flue	Moulded asbestos cement pipe	Non-friable
	Sub floor area, hot water heaters, flues	Moulded asbestos cement pipe	Non-friable

Register of Hazardous Construction Materials - Asbestos
Buildings to be Demolished at St John of God Richmond Hospital, 177 Grose Vale Road, North Richmond NSW
27 July 2022

Consulting Rooms			
Room or Area	Location	Material	Matrix Type
Building Exterior	Upper anti-ponding boards below lowest row of roof tiles	Flat asbestos cement sheet	Non-friable
	Lower eaves linings	Flat asbestos cement sheet	Non-friable
	Below verge tiles along roof gable ends	Flat asbestos cement sheet	Non-friable
Chapel			
Building Exterior	Soffit lining at main entry and to rear entry (south east side)	Flat asbestos cement sheet	Non-friable
	Below verge tiles along roof gable ends	Flat asbestos cement sheet	Non-friable
Building Interior	Ceiling linings in toilet and adjacent entry room	Flat asbestos cement sheet	Non-friable
Monastery			
Building Exterior	Roof cladding over front entry area	Corrugated asbestos cement sheet	Non-friable
	Eaves and verandah soffit linings to front and rear of building	Flat asbestos cement sheet	Non-friable
	Infill panels over doors on rear of building	Flat asbestos cement sheet	Non-friable
	Bitumen material on floor of disused phone box	Bitumen covering on floor	Non-friable
Building Interior	Ceiling linings in each bathroom and shower room	Flat asbestos cement sheet	Non-friable
Arts Building			
Building Exterior	Eaves and verandah soffit linings to front of building	Flat asbestos cement sheet	Non-friable
	Infill panels over windows and doors on rear and rear sides of building	Flat asbestos cement sheet	Non-friable
	Ground areas at rear of building and in sub floor	Asbestos cement sheet debris	Non-friable
Building Interior	Access panels to ceiling spaces	Presumed asbestos cement sheet	Non-friable
	Orange / brown coloured sheet vinyl in rear room	Asbestos backing paper	Friable

Register of Hazardous Construction Materials - Asbestos
Buildings to be Demolished at St John of God Richmond Hospital, 177 Grose Vale Road, North Richmond NSW
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Archives Building			
Room or Area	Location	Material	Matrix Type
Building Exterior	Eaves linings and external soffit linings	Flat asbestos cement sheet	Non-friable
	Below verge tiles along roof gable ends	Flat asbestos cement sheet	Non-friable
Building Interior	Ceiling linings in two store rooms near double entry doors	Flat asbestos cement sheet	Non-friable

Register of Hazardous Construction Materials - SMF
Buildings to be Demolished at St John of God Richmond Hospital, 177 Grose Vale Road, North Richmond NSW
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CTC Building			
Room or Area	Location	Material	Matrix Type
Building Interior	Within ceiling spaces to underside of metal roof cladding	Plastic wrapped SMF	N/A
Mortuary			
Building Interior	Within ceiling spaces to underside of metal roof cladding	Plastic wrapped SMF	N/A
Food Services Unit, Medical Centre, Education Room			
Building Interior	Within ceiling spaces to underside of metal roof cladding	Plastic wrapped SMF	N/A
	Air conditioning duct work insulation	SMF	N/A
	Acoustic ceiling tiles	Contain SMF	N/A
Consulting Rooms			
Building Interior	SMF insulation batts on top of ceilings (presumed)	SMF batts	N/A
Arts Building			
Building Interior	SMF insulation to underside of metal roofing (presumed)	Plastic wrapped SMF	N/A

Register of Hazardous Construction Materials – Lead Based Paints and Cavity Dust
Buildings to be Demolished at St John of God Richmond Hospital, 177 Grose Vale Road, North Richmond NSW
27 July 2022

CTC Building			
Room or Area	Location	Material	Comment
Building Exterior / Interior	Nil present	N/A	N/A
Mortuary			
Building Exterior / Interior	Nil present	N/A	N/A
Food Services Unit, Medical Centre, Education Room			
Building Exterior / Interior	Nil present	N/A	N/A
Consulting Rooms			
Building Exterior	Nil present	N/A	N/A
Building Interior	Possible cavity dust in roof space, no access	Lead contaminated dust	Assess when access available
Chapel			
Building Interior	Settled dust on roof space over south east rooms	Lead contaminated dust	Remove with asbestos cement sheet materials
Monastery			
Building Exterior	Paint finishes on various elements	Lead based paints	Residential building, pre-classified as GSW
Building Interior	Paint finishes on various elements	Lead based paints	Residential building, pre-classified as GSW
	Settled dust in ceiling spaces	Lead contaminated dust	Residential building, pre-classified as GSW

Register of Hazardous Construction Materials – Lead Based Paints and Cavity Dust
Buildings to be Demolished at St John of God Richmond Hospital, 177 Grose Vale Road, North Richmond NSW
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Arts and Archives Buildings

Room or Area	Location	Material	Comment
Building Exterior	Paint finishes on various elements	Lead based paints	Residential / educational building, pre-classified as GSW
Building Interior	Paint finishes on various elements	Lead based paints	Residential / educational building, pre-classified as GSW
	Settled dust in ceiling spaces	Lead contaminated dust	Residential / educational building, pre-classified as GSW