

HAZARDOUS MATERIALS REMOVAL SCOPE OF
WORKS
RYDE HOSPITAL, DENISTONE RD
EASTWOOD NSW 2122



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EXECUTIVE SUMMARY

Note: This Executive Summary must not be read in isolation, but should be read in conjunction with all sections of this report. This report has been produced after reviewing the sites Remediation Action Plan, Demolition Plan and Asbestos Management Plan and provides additional specific advice as requested.

Hazardous Materials Removal Scope of Works:

All work is to be undertaken in accordance with the:

- Safe Work Australia (2020) "Code of Practice How to Safely Remove Asbestos".
- AS 4361.2—2017 'Australian Standard™ Guide to lead paint management, Part 2: Residential and commercial buildings';
- EPA 'Polychlorinated Biphenyl (PCB) Chemical Control Order 1997'. [Published in Government Gazette No. 66 of 20.6.1997 p. 4686];
- SafeWork Australia's "guide to handling refractory ceramic fibres 2013".
- National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)]

Further information on legislative requirements and guidance information is provided at the end of this document.

Building 11: An investigation has been undertaken within the building for possible Hazardous materials by JBS&G in Report 56558/122796. SMF was the only identified hazardous material within the building.

Building 17: An investigation has been undertaken within the wall cavities for possible Asbestos and lead following the presumed positive by JBS&G in Report 56558/122796. All results have returned No Asbestos Detected and lead levels below the adopted criteria however synthetic mineral fibre was identified.

Building 18: An investigation has been undertaken within the wall cavities for possible Asbestos and lead following the presumed positive by JBS&G in Report 56558/122796. All results have returned No Asbestos Detected. 6 samples for lead were taken, all results from within the wall cavity returned below the adopted criteria with one sample from the air duct into the cavity returning high results. More Lead sampling should be undertaken to determine any possible contamination within vents within the rooms.

Scope Of Works:

Building 18 - Chattery Building:

- Begin by encapsulating the hot water system within the ceiling void.
- Following the encapsulation of the hot water system, the entire ceiling space should be emu-picked and HEPA vacuumed to removal all Lead dust and AC fragments.
- The removal of all flaking lead paint and SMF not located within the ceiling space may be conducted at the same time as Asbestos work in the ceiling space provided Air monitoring is conducted and there is no air flow between the asbestos works and Lead / SMF removal works.
- Lead Air monitoring should be conducted during all lead removal the timing of which should be determined within the sites demolition plan. Please refer to the previously provided Air Monitoring Plan for intended monitoring locations. Lead Air Monitoring to be conducted in accordance with Australia's Lead Management Code of Practice (NOHSC:2015(1994)).
- Once the ceiling void has been sufficiently cleaned and all Lead removal has been conducted within the first floor of the building, the removal of all AC ceilings and electrical backing boards may be undertaken.
- Eave sheets may also be removed following the decontamination of the ceiling void.
- Once access is available, the removal of the hot water heater by crane may be undertaken. No un-protected workers should be on site during the craning of the hot water heater into the truck.
 - Encapsulate the subfloor soil profile followed by mechanical removal following demolition of the existing building.

Refer to the sites Remediation Action Plan for validation sampling requirements to obtain a Clearance Certificate.

Building 11 - Cleaners Building

- Removal of Eave sheeting as Asbestos Waste.
- Remove all Internal ceilings as Asbestos Waste.



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- Remove the Garage/Store room, Eastern Wall Electrical Backing Board as Asbestos Waste.

Building 17:

- Removal of SMF

Removal of Asbestos Materials:

The asbestos removal scope of work described within this document is considered Friable asbestos removal work requiring a Class A Licence.

Due to the friable nature of some asbestos components within the building, NATA accredited air monitoring is to be undertaken for the entire duration all asbestos related removal works.

Refer to the sites Demolition Plan for details on Exclusion Zones / Safety parameters.

Hot Water System:

- Begin applying a PVA emulsion to the whole of the hot water system and then encapsulating the top of the hot water system by wrapping around the sides with 0.2mm virgin plastic sheeting and sealing to the walls. Then cover the top hot water system and secure with plastic sheeting ensuring that the entire top of the system is encapsulated.
- Following the encapsulation of the top of the hot water system, as a precaution undertake a cleanup of all surfaces up to 2m surrounding the hot water system, by HEPA vacuumed and / or wet-wiping.
- When access is available, the hot water system should be taken from the ceiling space by way of a crane or other large plant equipment. Crane study required by builder to ensure safe lifting practice for removal.

Gaskets:

Removal locations (Refer to JBS&G Report 56558/122796):

- Roof void, pipework

All gaskets should be removed by the "glovebag" method as described within the NSW Code of Practice "How to safely remove asbestos." or by the following method:

- Ensure no services are within the pipe and that no liquids or (hazardous / flammable) gasses are present within the pipe.
- Wrap up the gasket and pipe with 0.2mm virgin plastic sheeting 30cm either side of the gasket, and seal shut with tape.
- Cut the pipe (using hand tools, such as a hacksaw or oxy torch) at either end of the encapsulation, making sure that the encapsulation is not compromised by the cutting method used.
- If possible, place the pipe into heavy duty polyethylene bags (minimum 200 µm thickness) and gooseneck the top to avoid any release of fibers should the encapsulation fail.
- Remove as asbestos waste.

Removal of Asbestos Cement (AC):

Removal locations Building 18 (Refer to JBS&G Report 56558/122796):

- Roof void, fragments
- First floor, toilets and shower ceilings
- First floor, west fire stair entry, ceiling
- First floor, Room 42, ceiling
- First floor, Room 43, ceiling
- First floor, sub-board No4H1, ceiling
- First floor, small cupboard adjacent to Room 30, ceiling
- Ground floor, Sub-board No4H - north wall, electrical backing board
- External, eaves to all sides

Removal locations Building 11 (Refer to JBS&G Report 56558/122796):

- External, eaves to all sides
- Internal, ceilings to all rooms
- Garage/Store room, Eastern Wall Electrical Backing Board



Clearsafe recommends reinspection of areas determined to be inaccessible as soon as safe access can be provided. The removal of asbestos containing materials (ACM) from all structures is to be conducted using the following methods:

- NATA accredited air monitoring is to be undertaken during all asbestos removal work. (Refer to Air Monitoring Plan for Monitoring Locations)
- Place plastic sheeting or other suitable cover on all horizontal surfaces below and directly adjoining the removal area.
- Ensure water is available for misting / dust suppression and power is available for lighting and HEPA vacuuming prior to commencing. Temp services to be noted in DWP by HPAC.
- All fixings (nails, bolts and the like) are to be removed manually prior to attempting to remove the sheet.
- Remove any impacted insulation and dispose of as contaminated waste.
- All sheets are to be removed whole without damaging or breaking.
- All visible and accessible dust is to be removed from all surfaces associated with the asbestos removal.
- All building framework associated with the removal is to be totally de-nailed.
- All materials are to be lowered to ground level and not dropped.
- All surfaces associated with the asbestos removal works are to be HEPA vacuumed and / or wet-wiped.
- At the completion of the works, subsequent to the Clearance Inspection, all areas of asbestos removal are to be subjected to a dilute PVA emulsion.
- Any remaining occurrences of ACM not within the current scope of asbestos removal are to be left in a safe state, this will normally involve painting / coating with mastic.

Removal of Lead Paint:

Removal locations (Refer to JBS&G Report 56558/122796):

- Roof void, dust
- Western wall cavity, dust
- Internal, ground floor, windows, architraves and skirting boards (white paint)
- Internal, ground floor, walls (off-white paint)
- Internal, ground floor, ceilings (white paint)
- Internal, first floor, windows, architraves and skirting boards (white paint)
- Internal, first floor, walls (off-white paint)
- Internal, first floor, ceilings (white paint)
- External, timber fascia (cream paint)
- External, windows (white paint)

The removal of lead paint systems is to be conducted using the following methods:

- It is recommended that background soil samples are collected from exposed adjoining ground surfaces, and analysed for lead content. All results are to be recorded for future comparison with clearance samples to be collected from the same location at the completion of the works. soil sampling completed 30.8.23.
- The Principal Contractor shall ensure that blood lead levels of employees involved in lead works are assessed prior to, during and following the remedial works (refer to Section 6.7 of AS 4361.2-1998 Guide to Lead Paint Management Part 2 – Residential and Commercial Buildings). Investigation is scheduled for week starting 4/9/2023.
- All workers are to follow adequate personal decontamination / hygiene practices throughout the project. This is to include not eating or smoking within the work area, and thoroughly washing hands / face prior to leaving the work area. Clean fresh PPE is to be used at all times when entering the work area. All employees should minimise both their personal exposure to potential lead impacted materials as well as the potential for cross contamination of surrounding surfaces.
- Surfaces adjacent/below the removal area, including ground surfaces and equipment unable to be easily decontaminated in the event of 'dust fall' must be covered with plastic sheeting prior to works. This sheeting is to be removed at the completion of the work.



- Lead in air monitoring shall be undertaken by an accredited independent company such as Clearsafe, engaged by and reporting directly to the Principal Contractor.
- All work is to be undertaken dust-free with the implementation of measures to minimise the potential for contamination of adjoining surfaces. As a contamination minimisation measure, the Principal Contractor shall spray all flaking paint to be removed from the removal area with a low pressure water mist prior to, and during the removal. The sprays are not to generate free water/water runoff. A dilute PVA emulsion may be sprayed periodically to stabilise flaking paint.
- The Principal Contractor shall ensure that all drains etc are fitted with an appropriate filter medium in order to remove contaminants from any water leaving the site. The condition of the filters shall be checked regularly and filters replaced when necessary.
- Hand scraping should be used to remove flaking paint carefully and prevent contamination to adjacent surfaces.
- After removal of flaking paint a dilute PVA emulsion is to be sprayed to stabilise remaining painted surfaces.
- After removal works, the Principal Contractor shall remove non-essential containment and associated equipment. Any contaminated/potentially contaminated containment materials (eg plastic sheeting) are to be disposed of as contaminated waste.
- All waste (including PPE used in removal activities) shall be disposed of appropriately to a licensed landfill in plastic lined bins. Tipping documentation is to be retained.
- All workers that may have come into contact with lead impacted rubble are to have their blood lead levels post-checked by an authorised medical practitioner. Adequate counselling to be arranged as required.
- A visual clearance inspection and clearance wipe sampling in accordance with this document is to be conducted throughout the Site by Clearsafe to ascertain the remediation process was sufficient for the removal of contamination.

Removal of PCB Light Capacitors:

The removal of internal light fittings presumed to contain PCB light capacitors is to be conducted using the following methods:

- Removal and disposal of suspected PCB light capacitors is to be conducted in accordance with the EPA "Polychlorinated Biphenyl (PCB) Chemical Control Order 1997". [Published in Government Gazette No. 66 of 20.6.1997 p. 4686].
- Prior to removal light fittings containing PCB light capacitors are to be wrapped in a polyethylene bag.
- The matrix of the light capacitor is not to be compromised to prevent a hazardous spill.
- All materials are to be lowered to ground level and not dropped.
- The following PPE is to be worn at all times when handling suspected PCB containing components:
 - Disposable chemical resistant gloves, mid-arm length if necessary (NOTE: DO NOT use PVC or Latex gloves);
 - Disposable chemical resistant overalls with hood;
 - Full face shield;
 - Twin cartridge type respirator suitable for chlorinated vapours.
- Wash any non-disposable contaminated equipment with kerosene and collect the kerosene for disposal as a PCB contaminated solvent.
- After handling PCBs, even if gloves were worn, wash hands well in warm, soapy water before eating, drinking, smoking, handling food or drink, or using toilet facilities.
- Ensure there are no open flames in areas where PCB containing components are being removed or stored.
- Place wrapped components in a sealable metal container. This container must be clearly marked with the details of the contents and must be maintained in good order (that is, no visible signs of damage or corrosion).
- If some of these materials are leaking, the container should be partially filled with an absorbent material prior to storing wrapped components, such as a commercial absorbent, kitty litter or a diatomaceous earth. The plastic wrapped leaking components can then be placed in the container.

Removal of SMF Insulation:

Removal locations (Refer to JBS&G Report 56558/122796):

- Roof void - pipework (lagging)



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- Internal, large staff dining room - hot water system
- External, hot water system (x2)

The removal of synthetic mineral fibre insulation is to be conducted using the following methods:

- Place plastic sheeting or other suitable cover on all horizontal surfaces below and directly adjoining the removal area.
- Ensure water is available for misting / dust suppression and power is available for lighting and HEPA vacuuming prior to commencing.
- All visible and accessible dust is to be removed from all surfaces associated with the removal.
- All materials are to be lowered to ground level and not dropped.
- All surfaces associated with the removal works are to be HEPA vacuumed and / or wet-wiped.

Encapsulation of Subfloor to Building 18 Followed by Soil Scrape:

The soil profile may be encapsulated until it can be removed using mechanical means.

- Begin by applying a PVA emulsion to all ground and structural surfaces within the subfloor.
- Place a geofabric membrane across the entire subfloor starting from the furthest point from the access and working back towards the entrance.
- Following the instillation of a geofabric membrane layer, place and anchor an additional layer of black 200um plastic across the entire subfloor.
- During the demolition of the building, inspections should be undertaken to ensure no debris / rubble penetrate the plastic layer. If the layer becomes compromised an investigation into the extent of any possible contamination should be undertaken.
- Following the demolition of the building and access is available a soil scrape of the ground surfaces must be undertaken.
- Using an excavator with mud bucket, conduct a shallow scrape of the entire impacted area to a depth of approximately 150mm or until a clean natural soil profile is observed.
- Proceed in a methodical fashion from one end of the area to the other.
- Once an area has been scraped do not allow plant or machinery to traverse back over the scraped area.
- Subsequent to achieving a satisfactory soil profile, request for the Licensed Asbestos Assessor to conduct validation sampling of the work area. In the event that further contamination is identified, undertake a further detailed scrape until a satisfactory soil profile is achieved.
- Consideration should be given to waste classification of any impacted soil associated with the removal works. Waste classification is normally required prior to disposal of waste soil. Allow up to 10 working days for the waste classification laboratory analysis to be undertaken.

Decontaminating the asbestos-related activity equipment:

- Use damp rags to clean all equipment.
- If required, use damp rags or an asbestos vacuum cleaner to collect any loose debris on any plastic sheeting used to cover any surface within the asbestos work area.
- Carefully roll or fold any plastic sheeting used to cover any surface within the asbestos work area so as not to spill any dust or debris that has been collected.
- Use damp rags and/or an asbestos vacuum cleaner to clean any remaining visibly contaminated sections of the asbestos work area.
- Place debris, used rags, plastic sheeting and other waste in the labelled asbestos waste bags/container.
- Wet-wipe the external surfaces of the asbestos waste bags/container to remove any dust before they are removed from the asbestos work area.
- Disposal of equipment, such as drills and drill bits, as asbestos-contaminated waste is always an alternative to decontamination or bagging it.

Personal decontamination:

Carry out the following personal decontamination procedure in a designated area:

- If disposable coveralls are worn for the activity, clean the coveralls and respirator while still wearing them. Coveralls can be cleaned using a HEPA vacuum, damp rag or fine-water spray and the respirator can be cleaned with a wet rag or cloth.



- While still wearing the respirator remove coveralls, turning them inside-out to entrap any remaining contamination and then place them into a labelled asbestos waste bag.
- Remove the respirator. If a non-disposable respirator was used, inspect it to ensure it is free from contamination, clean it with a wet rag and store in a clean container. Disposable respirators do not require cleaning. They need to be placed into a labelled asbestos waste bag or waste container dedicated for asbestos waste.
- A decontamination unit should be used for all removal work deemed friable.

Considerations for Use of Machinery Within an Asbestos Work Area:

- All machinery / vehicles and equipment is to be washed free of visible dirt / mud prior to being permitted onto the site. This is to aid in the post-works decontamination process.
- Establish a designated 'decontamination and inspection area' at the edge of the 'removal area', but still allowing for a 10m exclusion zone where practicable for the decontamination of equipment and machinery.
- No equipment is to leave the site unless it has been decontaminated and inspected and is deemed free of all visible contamination.
- At no time shall powered vehicles / machinery be operated within any confined or poorly ventilated space.

Requirements for Decontamination of Vehicles and Machinery Prior to Demobilisation:

- Where practicable, conduct all decontamination on a geofabric membrane or other surface that can be decontaminated or disposed. This permits the removal of potentially impacted soils but limits contamination of the underlying surfaces.
- Use low pressure water and / or a HEPA rated industrial vacuum cleaner to remove all visible soil and contamination from the machinery / equipment.
- All decontamination works are to be conducted inside the site boundary and not within 10m of the exclusion zone where practicable.
- Conduct a detailed inspection of the plant / machinery prior to removing off site.

Considerations for Loading and Carting of Asbestos Impacted Waste:

- Establish a 'loading area' where trucks may pull up alongside the work area and be loaded. The load-out of the contaminated material is to be carefully supervised by the site's competent person such that no spillage or cross contamination is permitted.
- It is recommended that the loading of trucks is conducted on top of or next to a geofabric membrane so that any spillage may be cleaned without leaving residues on ground surfaces.
- The loading of waste is to be conducted within the site boundary and while maintaining a 10m exclusion zone from unprotected workers.
- All trucks entering the work area are to have remote controlled load covers such that the driver may cover the load without leaving the cab.
- All trucks entering the work area are to have the windows closed and the air circulation system off and on recirculate at all times whilst within the site area.
- All drivers and operators are to undergo asbestos awareness training prior to the conduct of any work.
- At no time shall trucks be loaded on a public road or any other place accessible to unprotected persons.
- Any environmental incidents are to be recorded and cleaned up immediately, using appropriate controlled techniques, as required by the circumstance.
- All carting of asbestos waste is to be undertaken by a contractor authorised to do so. Trucks / bins must be leak-proof by design, and unless measures are implemented to prevent leakage, all trucks / bins are to be lined and sealed with 0.2mm plastic sheeting.
- After tipping, adequate provision needs to be allowed for the inspection / decontamination of the truck tray and body by an appropriately competent person. Any residual contamination will need to be cleaned using controlled asbestos removal techniques.



1 INTRODUCTION

Assessment:

The asbestos removal scope of work described within this document involves work that is considered Friable asbestos removal work requiring a Class A Licence.

Site Description:

- The site consists of a three story, bricked, building, labeled 'building 18', a single demountable labeled "building 17" and a single story bricked building labeled 'building 11' located within Ryde Hospital, Denistone Rd, Eastwood NSW 2122.

Removal Area:

- Internal and external areas to building 18 located at Ryde Hospital, Denistone Rd, Eastwood NSW 2122, refer to JBS&G Report 56558/122796.



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2 NOTES AND LIMITATIONS

This Hazardous Materials Removal Plan is prepared based on the information available on the scope of hazardous material removal work at the time of writing. If additional hazardous materials are identified at a later date or during the removal program, all work should cease and advice be sought from a suitably licensed consultancy such as Clearsafe.

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All work is conducted in a conscientious and professional manner, with due diligence and appropriate care. However due to the disproportionate cost of potential damages or liability relative to the cost of our services, Clearsafe cannot offer any guarantee that all hazards have been identified. Subsequently, Clearsafe's liability to the client or any other party resulting from the performance or non-performance of the service, whether under contract law, tort law or otherwise, is limited to a maximum of up to five (5) times the total fee excluding expenses.

Any Party that uses or relies on this document, in doing so acknowledges, on behalf of themselves and all other legal entities that they represent, the unequivocal approval, acceptance and endorsement of the limitations and exclusions stated within this document, else this document should not be used or relied upon for any purpose.



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3 ABBREVIATIONS

- AIB - Asbestos Insulating Board (also referred to as LDB)
- ACM - Asbestos Containing Material
- ACD - Asbestos Contaminated Dust
- AC - Asbestos Cement (commonly known as fibro)
- EDB - Electrical Distribution Board
- FCS - Fibrous Cement Sheeting
- LDB - Low Density Board (a Friable ACM that appears similar to Asbestos Cement)
- NATA - National Association of Testing Authorities
- NES - National Exposure Standard
- NOHSC - National Occupational Health and Safety Commission
- Pb - Lead
- PCB - Polychlorinated Biphenyls
- PPE - Personal Protective Equipment
- QA/QC - Quality Assurance / Quality Control
- SMF - Synthetic Mineral Fibre
- SWA - Safe Work Australia
- TWA - Time Weighted Average
- VFT - Vinyl Floor Tile
- WHS - Work Health and Safety



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4 HAZARDOUS MATERIALS REMOVAL PLAN

4.1 General

- NATA Accredited Airborne Asbestos fibre monitoring is to be undertaken during all Asbestos removal work. (Refer to provided Air Monitoring Plan for Monitoring Locations)
- The Principal shall engage a suitably licensed Asbestos removal contractor;
- The Removal Contractor shall provide to the Principal copies of their Asbestos Removal Licence and relevant insurances;
- The Removal Contractor is to ensure that all work is undertaken in accordance with the Safe Work Australia Code of Practice How to Safely Remove Asbestos (April 2016), and the Work Health and Safety Act 2011 (WHS 2011);
- The Removal Contractor is required at all times to strictly adhere to all relevant Acts, Regulations and Codes of Practice;
- The Removal Contractor shall obtain all necessary permits and approvals and give required notices (eg. SafeWork Authority permit to undertake removal works and any site specific approvals from the Local Council Authority);
- The Removal Contractor shall ensure that site access is restricted and unauthorised access into the site is prevented. Install barricades and/or hoardings, and appropriate signs, including asbestos removal signs, before beginning any work;
- All non-essential persons are to be separated from the removal area by at least 10 metres as a general guide. If a shorter boundary is required then a Licensed Asbestos Assessor (friable) or Competent Person (non-friable) should determine the new boundary based on a risk assessment;
- Access for other persons to within any asbestos removal control boundary is not permissible without the supervision of the licensed asbestos removal contractor and whilst wearing the correct PPE;
- The Removal Contractor shall ensure that the site is secure and safe;
- The Removal Contractor shall establish procedures for dealing with emergencies. Fully inform all site personnel of work plan and safety procedures. Emergency muster points in coordination with HPAC;
- Where an asbestos removal exclusion zone is established in the vicinity of a fire exit or emergency egress route, procedures should be implemented such that emergency evacuation may occur unhindered;
- No asbestos removal work is to be undertaken during any period of high wind or within the period of effect of any high wind warning, gale warning or other storm warning;
- Where removal works extend beyond 1 day, the Removal Contractor shall ensure that the removal site and any associated asbestos removal equipment is made weather / storm proof prior to leaving site each day;
- The Removal Contractor shall seal all penetrations, holes, vents, air plenums, HVAC ducting and the like prior to the commencement of work;
- The Removal Contractor shall cover all vegetation, shrubs, grassed surfaces, gardens and the like with 0.2mm plastic sheeting with taped joints prior to the commencement of work;
- The Removal Contractor shall remove or seal all soft furnishings, floor coverings, window coverings, fly screens, and other porous or perforated materials prior to the commencement of work;
- The Removal Contractor shall ensure that all drains etc. are fitted with an appropriate filter medium in order to remove contaminants from any water leaving the site. The condition of the filters shall be checked regularly and filters replaced when necessary;
- The Removal Contractor will decide if electrical services etc. are to remain in operation during remedial works and ensure all other services are assessed prior to commencement. Arrange service alternatives as required;
- The Removal Contractor shall ensure that fire extinguisher(s) suitable for the area of work are present and accessible at all times during the removal program.
- To ensure that dust generation is minimised, the Removal Contractor shall ensure that all sources of dust are suppressed with low-pressure water sprays. The sprays will apply minimal amounts of water to the work areas in a fine mist to minimise or eliminate water run-off and free water;
- The Removal Contractor shall ensure that all confined spaces are adequately designated, and that all works within any identified confined spaces are conducted in accordance with the relevant legislative requirements;



- The Removal Contractor is responsible for the proper disposal of all wastes in accordance with all statutory requirements. Waste disposal receipts and/or tipping documentation is to be supplied to the Principal. Refuse arising from the execution of work (including food scraps and the like) shall be removed from the site;
- Any ancillary workers (tradesman / machinery operators / specialist technicians and the like) required to be present during the asbestos removal must undergo Asbestos awareness training prior to the commencement of work;
- The Removal Contractor shall ensure that all workers have received appropriate instruction in the health hazards associated with asbestos the use of PPE and that all workers wear their PPE in accordance with the manufacturers specifications;
- The Removal Contractor shall ensure that all workers required to wear respiratory protective equipment have undergone a qualitative fit testing assessment to ascertain that they are able to maintain an adequate facial seal while wearing the chosen RPE.
- The Removal Contractor shall establish an area for decontamination of equipment/plant/vehicles and wetting down and disposal of PPE. Decontamination facilities must be appropriate for the nature of the planned removal;
- No disposable coveralls or PPE is to be worn outside of the removal area;
- No vehicle or container shall leave the site unless it is loaded appropriately, within the safe working limit of the vehicle/container and is adequately covered;
- All material which may contain asbestos should be assumed to contain asbestos unless NATA accredited analysis indicates otherwise;
- Asbestos containing materials should not be broken in any way and are to be disposed of as whole components;
- All tools and equipment that has entered the contaminated areas is to undergo decontamination in the decontamination area prior to leaving the contaminated area;
- The Removal Contractor is advised that the SafeWork Authority may be called upon by the Consultant to give advice on current work procedures and practices at any stage throughout the Project without prior notice to the Principal Contractor.

4.2 Conduct of Work

- Undertake a detailed and site specific risk assessment in consultation with all workers involved;
- Hold a 'toolbox' meeting to ensure that all workers are fully informed of works involved;
- Demarcate an Asbestos removal exclusion zone at greater than 10m from the worksite, or where practical;
- Install barricades and signage on all potential points of entry to the exclusion zone;
- Designate a decontamination area for the removal and disposal of all used PPE;
- Designate an Asbestos waste storage area for the temporary storage of waste;
- As a dust minimisation measure, spray all asbestos contaminated/potentially contaminated material with a low pressure water mist or PVA emulsion prior to, and during the removal. The sprays are not to generate free water/water runoff;
- Undertake ALL asbestos removal works detailed in the Executive Summary of this report in accordance with the SafeWork Australia Code of Practice How to Safely Remove Asbestos (April 2016);
- At the completion of the scheduled asbestos removal work, undertake a walk-over inspection to ascertain the complete removal of all ACM within the current scope of work;
- Undertake a general site clean-up and restore the worksite condition in a tradesman-like manner;
- Request for the Licensed Asbestos Assessor (friable) or Competent Person (non-friable) to conduct a final visual clearance inspection and issue a clearance certificate upon satisfactory clearance results;
- Subsequent to satisfactory inspection by the Hygienist, all surfaces within the work area are to be sprayed with a dilute PVA emulsion;
- Subsequent to a satisfactory Clearance Inspection, remove non-essential containment and associated equipment. Any contaminated/potentially contaminated containment materials (eg. plastic sheeting) are to be disposed of as asbestos contaminated waste;
- Conduct a final walk-over inspection to ascertain the complete make-good of the worksite.



4.3 Personal Protective Equipment and Work Practices

During all removal work, the Removal Contractor is to ensure that the following precautions and safety measures are implemented:

- The exclusion of non-workers;
- Use of appropriate respiratory protection;
- The correct and proper wearing of disposable suits with hood;
- The wearing of non-porous gloves;
- The wearing of non-lace-up boots;
- Eye protection (eg. goggles), steel capped boots, and hard hat as per general requirements for site work;
- Use of decontamination units/facilities to include washing of face, hands, and all skin thoroughly before leaving the removal area, eating, drinking or smoking;
- No food consumption or smoking inside the treatment area;
- Showering and changing before leaving the site each day (friable work);
- Cleaning of boots before leaving the treatment area;
- New disposable suits and face masks to be used for each entry to the exclusion zone;
- No disposable coveralls or PPE is to be worn outside of the removal area.

4.4 NATA Accredited Air Monitoring

Air monitoring is the established method to confirm that the controls have been effective during asbestos removal work. Air monitoring should be undertaken during all asbestos removal work. The air monitoring must be undertaken by a NATA accredited company, such as Clearsafe.

4.5 Contaminated Waste

The Removal Contractor is to ensure that the transportation and disposal of contaminated waste meets the requirements of the NSW Office of Environment and Heritage (OEH, formerly DECCW, EPA, DECC and DEC) as outlined in Waste Disposal Guidelines.

The Removal Contractor is responsible for controlling all waste generated. This may include determining that all testing, handling, storage, transport and disposal requirement have been met.

Copies of the waste disposal receipts are to be supplied by the Removal Contractor to the Principal. A log detailing the dates and quantities of waste removed and the disposal site is to be kept. Contractor to nominate facilities used.

4.6 Site Supervision and Inspection

Site Supervision shall be undertaken by a qualified employee of the Removal Contractor (the Site Supervisor). The Supervisor's duties include all those set out in the relevant rules and regulations as well as any other duties required by this document.

The Site Supervisor shall be fully trained, have at least 2 years' experience, and a thorough knowledge of the work procedures and safety standards.

No Asbestos removal work is to be undertaken without the presence in the Asbestos Work Area of a Site Supervisor of the Removal Contractor.

4.7 Waste Removal



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It is the responsibility of the Removal Contractor to ensure that all waste is managed in accordance with the relevant legislation and in the following manner:

- All Asbestos waste is to be placed immediately into approved polyethylene bags or lined bins and sealed in an appropriate manner to render it safe for handling and disposal;
- Bags shall be filled to no more than 20 kg and should be no more than half full. Bins should not be overfilled;
- Bags shall be tied with wire rod ties fixed in position with a rod-tying tool and/or sealed by tape. When tying the bag, surplus air should be excluded from the bag without discharging contaminated dust;
- Loaded bags shall be carried carefully and not thrown, dropped, or roughly handled;
- Any damaged or punctured bag shall be placed into a second bag, which is then re-sealed;
- The bagged waste shall not be allowed to accumulate. It shall be removed from the site at regular intervals at the completion of decontamination in each Asbestos Work Area;
- All waste must be available for inspection;
- The external surface of the bag is to be wet wiped in the decontamination area to remove any dust adhering to the surface immediately before being shifted from the Asbestos Work Area;
- The bags shall be placed into approved storage containers/bins. The containers shall be lined with 0.2mm plastic. When the bins/containers are full they shall be sealed and removed from site;
- Any contamination of the work area shall be cleaned up immediately.

4.8 Clean-Up and Area Restoration

On completion of the asbestos remediation the Removal Contractor shall ensure the clean-up of the removal area. All surfaces shall be thoroughly cleaned and prepared for final inspection by the Hygienist. If the remediation area is not cleaned satisfactorily, the Removal Contractor shall repeat the clean up as directed by the Hygienist. Clearance air monitoring may be conducted following a satisfactory visual inspection by the Hygienist.

4.9 Clearance Certification

At the completion of the Asbestos removal works, and following satisfactory clean-up and area restoration by the Removal Contractor, the Hygienist will attend the site to undertake a visual clearance inspection. Clearance sampling of settled dust may be considered necessary by the Hygienist in order to identify any residual micro-fibre Asbestos – particularly if the removal area is not able to be sprayed with a dilute PVA emulsion subsequent to the removal works. Additional sample testing within the contractors wider site area to be conducted.

If during the Clearance Inspection:

- No further evidence of asbestos contamination is visually identified;
- Any encapsulation work is found to be complete and adequate;
- All asbestos air monitoring results are <0.01 fibres/mL;
- All sample analysis results report 'No Asbestos Detected';

Then the consultant will issue a clearance certificate with words to the effect:

'The Consultant considers that as far as reasonably practicable all visible and accessible Asbestos containing materials within the current scope of work have been removed to a satisfactory industry standard. It is the opinion of the Consultant, that with regard to Asbestos, the above-mentioned areas inspected are considered safe for normal activities to proceed.'

Included will be a limitation clause(s) to cover any possible or actual remaining contamination/issues of concern.

LEGISLATIVE REQUIREMENTS

The NSW Work Health and Safety Act 2011 (WHS Act 2011) and WHS Regulation 2011 and associated Safe Work Australia Codes of Practice detail some of the requirements for the management of some hazardous building materials. The following sections summarise relevant standards and guidance for the relevant hazardous materials.

ASBESTOS

The WHS Regulation contains a number of requirements for the management of ACM. Chapter 8 of the WHS Regulation deals specifically with asbestos and covers the following:



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- Prohibitions and exceptions relating to work involving ACM;
- General duties with respect to exposure to airborne asbestos at workplaces;
- Management of asbestos and associated risks, including the requirements for an Asbestos Register (Hazardous Building Materials Register) and AMP;
- Requirements for health monitoring;
- Duty to train workers about asbestos;
- Duty to limit use of certain equipment on ACM;
- Demolition and refurbishment with respect to ACM;
- Asbestos removal work and other asbestos-related work;
- Licensing of asbestos removalists and asbestos assessors.

There are two (2) Safe Work Australia Codes of Practice relevant to the management of ACM are provide guidance on the best practice approach to the removal and management of ACM. The codes of Practice include the following:

- How to Manage and Control Asbestos in the Workplace 2022;
- How to Safely Remove Asbestos 2020.

LEAD PAINT

Guidance material prepared by the Regulator, Australian Standards and other documents relevant to the management of lead include the following:

- AS 4361.1—2017 'Australian Standard™ Guide to lead paint management, Part 1: Industrial applications';
- AS 4361.2—2017 'Australian Standard™ Guide to lead paint management, Part 2: Residential and commercial buildings';
- AS 3640—2009 'Workplace Atmospheres Method for Sampling and Gravimetric Determination of Inhalable Dust';
- NSW EPA (2014) 'Waste Classification Guidelines, Part 1: Classifying Waste';

POLYCHLORINATED BIPHENYLS (PCBS)

The WHS Regulation contains only general requirements for the management of PCBs, which are classified as hazardous chemicals.

Guidance material prepared by the Regulator, Australian Standards and other documents relevant to the management of PCBs include the following:

- EPA "Polychlorinated Biphenyl (PCB) Chemical Control Order 1997". [Published in Government Gazette No. 66 of 20.6.1997 p. 4686].
- ANZECC (1997) 'Identification of PCB-Containing Capacitors, An Information Booklet for Electricians and Electrical Contractors';
- ANZECC (2003) 'Polychlorinated Biphenyls Management Plan' Revised Edition;
- NSW EPA (2014) 'Waste Classification Guidelines, Part 1: Classifying Waste'.

SYNTHETIC MINERAL FIBRES (SMFS)

Guidance material prepared by the Regulator, Australian Standards and other documents relevant to the management of SMF include the following:

- SafeWork Australia's "guide to handling refractory ceramic fibres 2013".
- NOHSC:1004 (1990) 'National Standard for Synthetic Mineral Fibres';
- NOHSC:2006 (1990) 'National Code of Practice for the Safe Use of Synthetic Mineral Fibres';
- WorkCover (1993) 'Code of Practice for the Safe Use of Synthetic Mineral Fibres'.



APPENDIX A - PLATES



Photograph 1:

Representative photo of the hot water heater in the ceiling void that is to be encapsulated followed by removal via crane.



Photograph 2:

Representative photo of the SMF lagging in the ceiling void.



Photograph 3:

Representative photo of the gaskets in the ceiling void.



Photograph 4:

Representative photo of the internal flaking lead paint.



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