

Asbestos in Soil Management Plan

Tweed Valley Hospital
771 Cudgen Road, Cudgen NSW

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Attachment A – Emergency Response Flow Chart

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Attachment C – Complaint Report Form

1 Introduction

HazSure Consultants (HazSure) was engaged by ADCO Constructions Pty Ltd (the client) to produce an asbestos in soil management plan (ASMP). This ASMP relates to the management of asbestos impacted soil as part of the ongoing works undertaken at the Tweed Valley Hospital, located at 771 Cudgen Road, Cudgen NSW. The area that this ASMP pertains to has been denoted as the ADCO Constructions area, located southwest of the main hospital building.

1.1 Background

This ASMP outlines the general procedures and management strategy to be undertaken during the excavation and construction works with respect to ACM impacted soil as identified at the site. An Asbestos Removal Control Plan (ARCP) must be developed by a suitably competent and licenced asbestos removal company.

1.2 Legislative Requirements

All asbestos removal must comply with the current Codes, Regulations and Acts. The legislative requirements are a minimum requirement and guidance basis for friable asbestos removal.

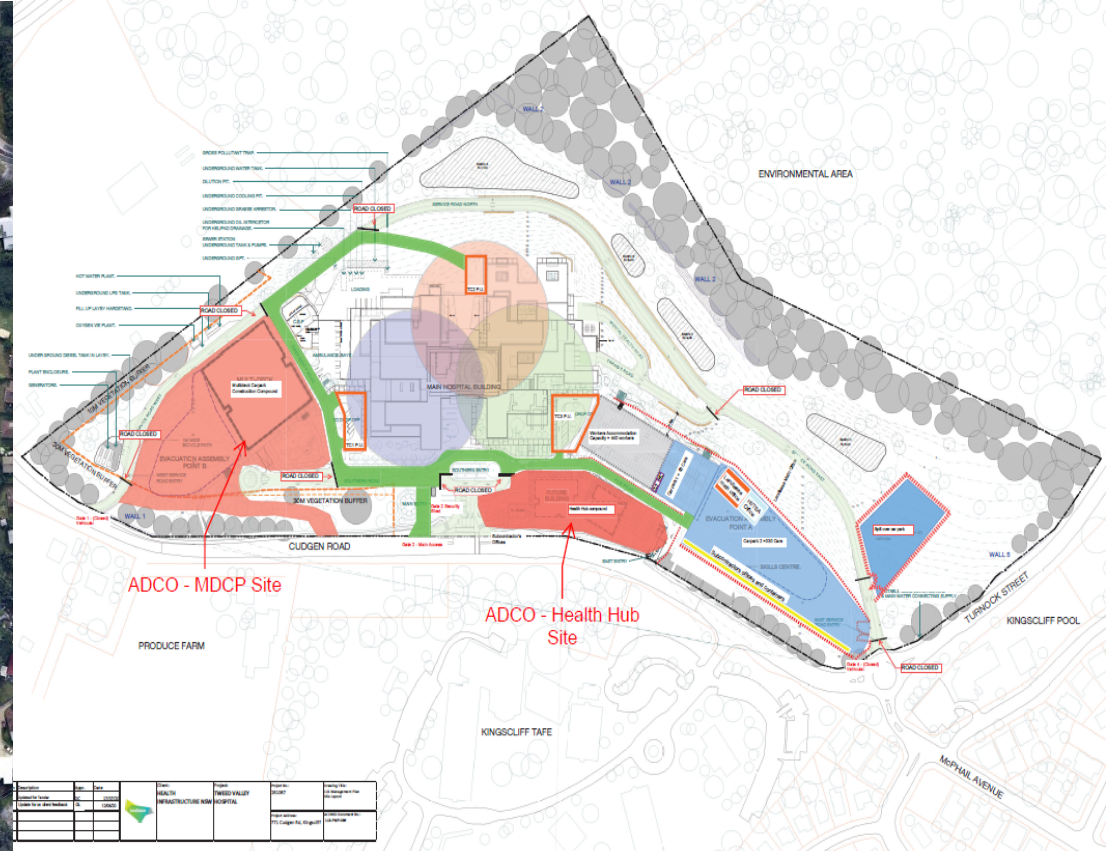
- NSW Government (2019), Code of Practice, *How to Safely Remove Asbestos*
- NSW Government (2019), Code of Practice, *How to Manage and Control Asbestos in the Workplace*
- Work Health and Safety Regulation 2011
- Workplace Health and Safety act 2011
- National Occupational Health and Safety Commission (2005), “*Guidance note on the Membrane Filter Method for Estimation of Airborne Asbestos Fibres*” [NOHSC: 3003 (2005)].
- Government of Western Australia, Department of Health (2021) Guidelines for the Assessment Remediation and Management of Asbestos Contaminated Sites in Western Australia
- NSW Government (1998), State Environmental Planning Policy No-5 – Remediation of the Land (amended version 2020)
- Contaminated Land Management Act 1997
- Protection of the Environment Operations (Waste) Regulation 2014

Figure 1 provides an approximate location for this ASMP area.

Figure 2- Approximate ASMP Controlled Area



Figure 1 - Schematic of ADCO Site Location



2 Objective of Asbestos Impacted Soil Management Plan

This ASMP details the approach to managing the asbestos impacted soil;

- during the excavation of soil
- transport to a licensed landfill; and
- continuation of construction works throughout the site

The documented procedures are designed to minimise the risk of exposure to asbestos for all personnel on the site, in the immediate vicinity of the site, including all project personnel and the general public.

2.1 Objective and Limitations

This ASMP has been developed to manage and minimise asbestos-related health risks associated with the handling, management, removal, and disposal of both friable and non-friable asbestos impacted soil present on the site. This includes during the proposed excavation of soil and subsequent construction works at the site.

This ASMP provides guidance when undertaking the following procedures:

- Visual inspection of the surface soil (EMU Pick).
- Removal of ACM impacted soil.
- Airborne fibre monitoring during potential disturbance of ACM impacted soil.
- Management options for residual ACM impacted soil remaining on site (if required).
- Guidance on managing unexpected unearthing of ACM's.

The identified asbestos impacts are non-friable (i.e. bonded) and as such, it is unlikely to generate elevated levels of airborne fibres which could cause an elevated risk to construction workers, on-site staff, or the general public.

3 Scope of Works

The scope of works outlined below details the steps to be undertaken when managing removal of the asbestos impacted material across the site when required:

- Undertake toolbox talk outlining works to be undertaken, the reason for the removal works, PPE to be worn and location of the landfill to be used for disposal.
- Undertake a visual inspection/EMU pick of the entire site (if required).
- Setup up 10m exclusion zone around in-situ removal areas.
- Place respirable fibre air monitoring pumps around removal area/site, by appropriately competent person.
- Excavate assessed asbestos impacted material to the extent of presumed clean material.
- With the use of an excavator, load all asbestos impacted material into NSW EPA registered vehicles to be disposed of at the nominated disposal facility.
 - Waste tracking is to be through NSW EPA WasteLocate if disposing of more than 100 kilograms of asbestos waste.
- Where material cannot be immediately loaded into the NSW EPA registered vehicle, stockpile material in preparation of off-site disposal.
 - Wet down of maturing during stockpiling
 - Cover with geofabric or plastic and anchor down until appropriate removal can be conducted
- Wet down material being excavated and loaded into NSW EPA registered vehicle.
- Undertake a visual inspection (by Licensed Asbestos Assessor, herein known as a LAA) of the removal area on completion of the excavation and load out works to ensure all ACM impacts have been removed.
- Collect representative validation samples of the remaining in-situ soil.
- Decontamination of the excavator used to excavate and load out the soil.
- Visual inspection of the excavator on completion of the decontamination works by LAA.
- Issue visual inspection certificate of the excavator once LLA is satisfied with decontamination works.
- Submit air monitoring and validation samples to a NATA accredited laboratory for analysis.
- Removal of asbestos exclusion zone on confirmation that air monitoring results are consistent with background (<0.01 Fibres/ml) and validation samples reported no asbestos detected at the reporting limit of 0.1 g/kg.

4 Management Options

Management of the asbestos impacted soil during excavation works as part of the construction process. The management options chosen for the impacted soil present on the site are as follows:

- Off-site landfill disposal
- Residual ACM impacted soil (if required)

Further details with respect to these management options are provided below.

4.1 Off-site Land Fill Disposal

The landfill disposal option involves the excavation of ACM impacted soil and disposal to a licensed landfill with no requirements for future management of the disposed excavated ACM impacted soil. This is discussed further in Section 6.4.2.

4.2 Residual ACM impacted soil*

In the case where sufficient ACM impacted soil has been removed to enable the continuation of works, and where residual ACM impacted soil remains, the following management option is available.

Cover/encapsulate the ACM impacted soil with a suitable barrier (geotextile and/or 200µm virgin plastic) and cover with a minimum of 'clean' soil or a standard thickness concrete slab.

**** It should be noted that if residual ACM impacts are left in-situ, an assessment of these impacts will be required. If this assessment indicates that the impacts are above the appropriate assessment criteria, the site may require continued listing on the environmental management register and a site management plan developed for the life of the property.***

5 Organisational responsibilities

This ASMP has been prepared for ADCO Constructions Pty Ltd (the Principal Contractor) as a part of work involving the disturbance of asbestos impacted soil. The following key personnel are responsible for the implementation of the management control measures discussed in this document.

5.1 Principle Contractor

The Principal Contractor's responsibilities include:

- Ensuring guidelines and recommendations set out in this ASMP are adhered to.
- Ensuring asbestos situations are safely controlled including contractor inductions where appropriate.
- Ensuring appropriate work methods and control measures of any staff member or contractor working within areas of known ACM impacts meet the conditions and standards of this ASMP when required.
- Management of systems to ensure suitable contractors and consultants are engaged to:
 - undertake asbestos-related works, and
 - to ensure the necessary safety standards are being maintained for any such works
- Ensuring site personnel and visitor concerns about asbestos are dealt with in a satisfactory and timely manner.
- Arranging for assessment and removal of suspected ACM if identified.
- Ensuring earth works involving the disturbance of ACM impacted soil is suitably supervised.
- Maintaining a register of all relevant asbestos documentation including updating this ASMP.

5.2 Site Personnel

Site personnel (including sub-contractors) responsibilities include:

- Informing the site/construction manager of the presence of any identified unknown asbestos hazard or a suspected asbestos hazard on site.
- Complying with this ASMP to ensure all personnel on site, including visitors, do not place themselves at risk of exposure to airborne asbestos fibres.

5.3 Nominated Asbestos Removal Contractor

An NSW licenced asbestos removal contractor is to be appointed to undertake/supervise the earthworks associated with the disturbance/removal of ACM impacted soil.

The asbestos removal contractor's responsibilities include:

- Ensuring that work methods and procedures comply with:
 - relevant workplace health and safety legislation
 - codes of practice and industry standards, and

- Undertake work in accordance with their ARCP, HazSure's ASMP and requirements nominated by the Principal Contractor.
- Employing suitably trained, skilled and competent staff during the excavation and removal of ACM impacted soil.
- Reporting to the Principal Contractor before undertaking any works in areas identified as containing asbestos impacted soil.
- Ensuring that their employees are inducted in safe work procedures for asbestos containing materials.
- Providing written notice to the regulator at least five days prior to asbestos removal work commencing, in accordance with Section 466 of the Work Health and Safety Regulation 2011.
- Ensuring that all work is conducted in a safe and competent manner.
- Reporting incidences or potential hazards to the applicable responsible personnel before further works are carried out.

5.4 Supervision of Impacted Soil Disturbance Works

Works involving the disturbance of ACM impacted soil should be supervised by a suitably qualified consultant as defined by the National Environment Protection Council, National Environmental Protection Measure 2013 (NEPM) and asbestos removal company.

The consultant's responsibilities include:

- Supervision of ACM disturbance works and ensuring the work is conducted in accordance with relevant legislation and codes of practice
- Conducting respirable fibre monitoring during asbestos removal works
- Performing visual inspections at the completion of the works for designated areas (if required)
- Ensuring inspections are undertaken by a holder of a Worksafe New South Wales (or similar), Asbestos Assessor License
- Issuing inspection certificates are issued following the satisfactory removal of ACM impacted soil from the designated areas as required.

6 Asbestos related activities

6.1 Selective Removal of ACM Debris – Hand/emu Pick

The management of health risks associated with asbestos impacted soil requires the soil surface to be free of visible ACM (NEPM (2013)). Where surface areas impacted with ACM debris are encountered, they are to be managed by selectively removing the ACM debris by hand pick up or “Emu Pick” the following general procedure will be applied:

- The hand/emu pick is to be undertaken by the asbestos removal contractor.
- A systematic walk over of the ground area should be undertaken using a grid type pattern with 90° directional changes between each grid line.
- A minimum of **two passes of picking and raking** where practical should be carried out across the entire site.
- Suspected ACM fragments should be placed within a double thickness 200 µm thick polythene bags. The bags should be clearly labelled as containing asbestos waste.
- The approximate location and weight of fragments removed should be recorded.
- Materials should not be further damaged or buried during the remediation works.
- A suitably competent consultant or licensed asbestos assessor (LAA) is required to inspect the surfaces (including inside the base and walls of any excavation) to confirm there is no visually identifiable asbestos.
- Respirable fibre monitoring will be carried out by the consultant in accordance with the Code of Practice for the Safe Removal of Asbestos (2019).
- During all hand removal of ACM debris, general health risk mitigation measures as described in Section 7 apply.

In undertaking hand/emu-pick, the Asbestos Removal Contractor’s Safe Work Method Statement (SWMS) for the Removal of asbestos debris is to be followed. The following is provided for general consideration:

- All personnel undertaking the emu-pick within the identified impacted area are to;
 - wear appropriate personal protective equipment (PPE), as required on a construction site, such as hard hats, safety boots, hi-visibility vests, eye protection.
 - wear PPE specifically for asbestos related works includes gloves, disposable type 5/6 coveralls and a minimum P2 respirator.
- All fibre air monitoring will be carried out by the consultant in accordance with the Code of Practice for the Safe Removal of Asbestos (2019)
- A clearance inspection of the work area shall be undertaken at the completion of the works by a LAA in accordance with Worksafe NSW document How to Safely Remove Asbestos: Code of Practice 2019. A more detailed description about measures to minimize human health risks during works with ACM is provided in Section 7.10.

6.2 Removal of Soil Impacted with ACM

The following section describes how soil impacted with ACM will be removed.

6.2.1 General considerations

All works must be undertaken under the supervision of the asbestos removal contractor. The asbestos removal contractor supervising the removal works must hold a friable A Class asbestos removal license issued by the Worksafe NSW (WHSQ). The consultant will be present to verify the complete and safe removal of the ACM impacted soil. The asbestos removal contractor will ensure all works are conducted in accordance with their licensing conditions. The consultant will ensure all current legislative requirements are adhered to and will be on site to perform asbestos air monitoring, inspections and advice as required.

This will include setting the following measures in place to address potential impacts:

- Works on site shall be undertaken in accordance with the WHSQ regulation and the Worksafe NSW Code of Practice: “How to Safely Remove Asbestos” (2019).
- All staff undertaking the ACM impacted soil removal within the asbestos work area(s) are to wear appropriate PPE/RPE.
- The excavation of soil will be defined as containing asbestos and appropriate buffer zones (asbestos work area) will be established in accordance with the on-site recommendations of the consultant.
- The stakeholders in the vicinity of the works area (immediate neighbours, etc.) are to be advised of the proposed asbestos removal works that are to take place.
- All relevant site personnel will undergo a site induction prior to entering the asbestos work area to ensure that staff and contractors are adequately trained to recognize environmental aspects, hygiene and OH&S issues. The induction will incorporate the activities required to manage contamination issues as detailed in this plan.
- A water supply is to be on site for dust suppression during excavation and loading.
- As the works are anticipated to extend past one day, at the end of each day an inspection of the work area will be undertaken to ensure no asbestos impacted material is loose outside of the work area.
- Appropriate PPE will be used within the asbestos work area including the PPE as required for hand/emu-pick should this be required.
- A decontamination area will be set up on site to enable on-site personal decontamination.
- Continuous respirable fibre monitoring will be conducted by the consultant at the perimeter of the work area and within excavator cab. The air fibre monitoring will be checked daily in accordance with Guidance Note on the membrane filter method for estimating airborne asbestos fibres 2nd Edition [NOHSC: 3003(2005)], April 2005.

- LAA shall carry out a visual assessment of the ground surface following the completion of the works.
- If the visual inspection shows the works has been completed to the satisfaction of the LAA, then a clearance certificate will be provided.

6.3 Excavation and Disposal Management

The nominated asbestos removal contractor managing the excavation of ACM impacted soil, will ensure the works are undertaken in accordance with their SWMS for the Excavation and Removal of Asbestos Impacted Soil. In addition, the excavation contractor should adhere to the following provisions:

- Ensure the excavator operator has been inducted onto site and understands the hazards associated with the excavation of ACM impacted soil.
- Ensure that the operator has undertaken asbestos awareness training.
- The excavator being utilized must have an enclosed cabin for the operator.
- The excavator operator is to remain inside the cab of the excavator for the duration of works with the reverse cycle air conditioning running.
- Ensure water is made available on site for dust suppression for the duration of excavation and loading works.
- Ensure erosion and sediment controls are in place prior to works commencing particularly on highly erodible soils.
- Erosion and sediment control will include (where necessary)¹:
 - Diversion banks/drains upslope of the work to divert water around the disturbed area. Drains must discharge onto stable, preferably vegetated surfaces or through sediment controls such as silt fences.
 - Level spreaders or straw bales at the end of diversion banks of any overland flow paths leading from the disturbed area, to dissipate flows and trap sediments.
 - Geotextile filter fabric fences down slope of the work areas (if required)
 - Maintain all sediment controls as necessary until the site is stable. Once the project site has been stabilised, temporary sediment controls will be removed.
 - Any permanent water-retaining structures or other erosion and water management controls will be routinely maintained.

The asbestos removal contractor managing the excavation of ACM impacted soil is to consider the following during the excavation works:

- All ACM impacted soil removal, transport and disposal must be performed in accordance with WHSQ and contaminated land legislation.
- The ACM impacted soil removal work area will be clearly defined and access restricted to prevent unauthorised personnel entering that area. Potential entry points to the asbestos work area will be signposted or labelled in accordance with AS 1319-1994 Safety Signs for the Occupational Environment.

¹ Physical controls used within this ASMP area will require disposal as asbestos impacted waste

- The ACM impacted soil excavated should be loaded into an EPA licensed truck (suitable for the transport of asbestos impacted soil) and transported off-site to a suitably licensed landfill.
- Where the contaminated soil is assessed to contain loose asbestos fibre (i.e. friable), a capping layer of clean material should be layered over to the top for transport.
- Trucks are to be fitted with a retractable tarpaulin that is well maintained and has no holes in it.
- Once the trucks are loaded, the load is to be wetted down and sealed with a retractable tarpaulin:
 - The loading of the trucks should be undertaken in a manner that ensures trucks are not driving on potential ACM impacted soil. If trucks are required to drive onto exposed soil a wash bay will be required or other appropriate method to ensure no tracking of soil off-site.
 - The consultant will inspect the excavated area at the completion of each shift to confirm there is no visually identifiable ACM. A clearance certificate will be issued following a satisfactory result during the LAA's inspection.
- If the material being loaded is deemed to be grossly contaminated with ACM, it may be required to double-line the trucks with 200um black plastic and seal the plastic on completion of loading the trucks.

Transport of the ACM impacted soil to the designated off-site disposal location is anticipated to extend past one day. The exposed impacted soil at these locations is to be temporarily managed until the completion of the permanent management strategy (i.e. placement of the capping layer or other management strategy is to be adopted).

6.4 Off-site Disposal of Impacted Soil

Excavated ACM impacted soil requiring off-site disposal is to be disposed to a licenced landfill as a regulated waste (refer to Environmental Protection Regulation, 2008, section 65) under appropriate waste tracking documentation. ACM impacted soil requiring off-site disposal will be tracked by the nominated asbestos removal contractor from 'cradle to grave', in order to provide detailed and accurate information about the location and quantity of all materials disposed offsite from the time of excavation until the time of disposal.

All ACM impacted soil leaving site will be transported in a leak proof covered truck and disposed of at a licensed facility in accordance with legal requirements.

For any truck leaving the site, the following information would be recorded:

- origin of material
- material type
- approximate volume
- truck registration number.

The consultant should collect these details while onsite and report to the Principal Contractor at the conclusion of each shift.

7 General considerations for the management of health risks

7.1 Introduction

All information and works pertaining to the excavation of soil containing ACM is required to be recorded and reported, refer to Section 9.

All works at the site involving the removal, transport, disposal or otherwise potential disturbance of ACM impacted soils, shall be performed in accordance with all relevant State Acts, Regulations, Codes of Practice, Advisory Standards and industry standards, as listed in Section 1.2 of this ASMP.

7.2 Air Monitoring

Respirable fibre monitoring must be undertaken by an independent LAA and analyzed in a National Association of Testing Authorities (NATA) accredited laboratory during any soil disturbance activities within the ACM impacted area. Airborne fibre monitors shall be placed within the work area in areas representing upwind and downwind locations, as well as on the boundary of adjacent occupied areas.

7.2.1 Occupation Exposure Standards

It is the aim to minimize exposure of site personnel to asbestos as much as is reasonably achievable. Where occupational exposure to ACM impacted soil is likely to occur, exposure is not to exceed the occupational exposure standards for asbestos published by the National Occupational Health and Safety Commission (NOHSC). Occupational exposure is determined using the Membrane Filter Method, by collecting a sample of air from the breathing zone of a person, over an eight-hour duration. The current Australian occupational exposure standards for asbestos are:

- Chrysotile (white asbestos) – 0.1 fibres per millilitre
- Amosite (brown asbestos) – 0.1 fibres per millilitre
- Crocidolite (blue asbestos) – 0.1 fibres per millilitre
- other forms of asbestos or a mixture of asbestos types – 0.1 fibres per millilitre.

7.2.2 Air Monitoring Procedures

The following procedures are to be undertaken by the consultant for clearance purposes:

- The consultant will be required to carry out a visual inspection of the work area prior to the commencement of any ACM impacted soil removal works to ensure mitigation measures are satisfactory.
- During all ACM impacted soil removal works 'work in progress' air monitoring should be undertaken surrounding the work area.
- Following the completion of the ACM impacted soil removal works the consultant will be required to undertake a thorough visual inspection of the work area.
- If removal works are not to the satisfaction of the consultant, removal contractors will be required to re-enter the work area and rectify any issues arising from the inspection.

7.3 Implementation of Control Measures

Prior to the commencement of works involving the disturbance of ACM impacted soil a suitably qualified consultant is to be engaged to:

- Conduct air monitoring and supervision of works involving the disturbance of ACM impacted soil.
- All areas involving the disturbance of ACM impacted soil are to be inspected prior and after the completion of the works.

Prior to the commencement of the excavation and off-site removal of the ACM impacted soil, the following control measures are required to be implemented by the asbestos removal contractor:

- Establish a decontamination zone and work area
- Barricade or rope off the area to be excavated
- Situate appropriate signage warning of asbestos hazard
- Ensure all workers entering the work area are wearing respirators that shall conform to the requirements of Australian Standards AS1715 and AS1716 and must be of a minimum P2 standard. Including being appropriately fitted (i.e. appropriate respirator face fit testing).
- Provide dust suppression in the form of a light water spray. Machine operators are to remain within the cab of the machine which must have air-conditioning fitted with the appropriate filter or operated with air being re-circulated within the cab.

7.4 Decontamination Zone

The Decontamination or Support Zone will be established by the nominated asbestos removal contractor in consultation with the consultant. Based on site conditions and the nature of works, this zone is considered to be the safe area on the site and will contain project administration areas and the like. Site safety briefings will be undertaken in the Decontamination Zone at the commencement of each work shift as appropriate.

7.5 Work Areas

Temporary activity specific work areas will be established by Principal Contractor or the asbestos removal contractor. During excavation works, this work area will be barricaded as required. Where practicable, the work area should extend out to a minimum of a 10 metre radius from the work area. The asbestos risk within the work area is considered to be high and as such any person entering the work area should be wearing the appropriate personal protective equipment (PPE).

7.6 Hand/Emu Pick

Prior to the asbestos removal contractor undertaking works within areas identified as impacted it is suggested that an initial 'emu pick' be undertaken to clear the site of any visible fragments of ACM. Any potential fragments of ACM should be wetted down prior to collection and placed in an appropriately labelled asbestos waste bag and disposed of at a licensed facility.

The emu pick should be undertaken by a person qualified in accordance with the strategies outlined in the Department of Health, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, May 2009 (WA Guidelines).

7.7 Dust Suppression

When any soil disturbance activities are to be undertaken, a water spray shall be used to suppress the dust throughout the entire duration of the works. Where required, water sprays should be used during any soil disturbance within the impacted area. Where possible staff and plant shall be situated upwind from excavation areas during any soil disturbance works.

7.8 Management of Unexpected ACM (Unexpected Finds Protocol)

7.8.1 During the Excavation Process

As a precautionary measure, all persons handling asbestos cement fragments should wash their hands immediately after contact. Sealed asbestos bags containing asbestos fragments may be stored on site in a secured area until such time that the bags can be removed by a licensed contractor. If suspected friable asbestos is detected, the area should be barricaded immediately, and an A class asbestos removal contractor must be engaged to remove the ACM.

During the excavation process, should site personnel observe asbestos debris in an area of the site not previously identified as an area impacted with asbestos, the following steps should be taken:

1. Excavation works are to immediately cease, and the site supervisor should be notified.
2. An exclusion zone should be situated surrounding the affected area with the use caution tape and appropriate signage. The material should be covered with a geo-textile layer and adequately secured.
3. Refer to appendix A for the 'Emergency Response Flow Chart'

7.8.2 Post Excavation

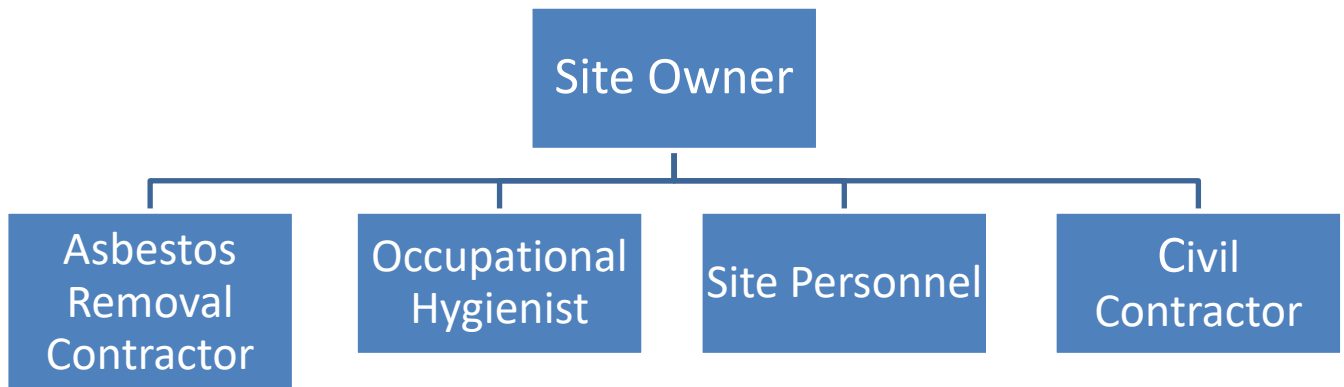
On completion of excavation works, should suspected asbestos debris be observed in an area of the site not previously identified, the site manager should be notified, and the suspected materials covered with geofabric/plastic and cordoned off.

The site manager must inform the asbestos removal contractor and LAA consultant of the findings. The asbestos removal contractor is required to attend to the site and remove suspected materials and dispose of in appropriate manner. The LAA must under a visual inspection of the area and issue a clearance/inspection certificate.

It is recommended that personnel from the asbestos removal contractor are present on site for the duration of the surface soil removal works. During this period, the asbestos removal contractor should act as a spotter during all excavation works to ensure that any areas of ACM impact are identified immediately. Any ACM impacted soil should be isolated, stockpiled in an area delineated with asbestos barrier tape and covered with geofabric or 200µm plastic.

Should additional works be proposed within the area, it is suggested that additional excavation/investigation works are undertaken to assess the presence/absence of ACM materials within the soil.

The organizational chart below identifies who to contact should unexpected finds be encountered at the site:



7.9 Personal Protective Equipment (PPE)

PPE must be used to reduce the potential of exposure to airborne asbestos fibres during all asbestos removal/ impacting works.

7.9.1 Respiratory Protective Equipment (RPE)

The potential to inhale particulate matter can be reduced by the use of P2 respirators for all employees or visitors attending to the site. Respiratory protection shall be worn in accordance with the following:

- Respiratory protection shall be worn by all persons within the work zone.
- Respirators (dust masks) shall be issued on a personal basis. Respirators shall conform to the requirements of Australian/New Zealand Standards AS/NZS 1715 and AS/NZS1716.
- Persons required to wear respiratory protection shall receive training and instruction on the selection of appropriate equipment, its usage and maintenance and have undergone a face fit test.
- Persons required to wear facial-fit respirators must be cleanly shaven.
- Non-disposable respiratory protection shall be cleaned regularly, at least at the end of every shift.
- Cleaning and maintenance of respirators should be carried out in an area free of asbestos contamination.
- Regular cleaning of respirators (non-disposable) is essential because:
 - dirt can interfere with the operation of valves and seals and lead to leaks of contaminated air into the respirator;
 - the outside of the respirator will become contaminated during normal use. If that contamination is not removed it will be transferred to the inside of the respirator from where it can be inhaled; and

- normal good hygiene practice dictates cleaning and disinfecting of respirators on a regular basis.

7.9.2 Gloves

Gloves, where required, shall be worn by all persons coming into direct contact with soils within the work zone.

7.9.3 Coveralls

Disposable coveralls suitable for asbestos related works, shall be worn by persons within the barricaded / roped off excavation removal area during ACM impacted soil removal works

7.9.4 Disposal of PPE

All disposable PPE shall be disposed of as contaminated waste at the end of each shift/ use in labelled asbestos waste bags and securely tied and double bagged. Contaminated waste bags shall be disposed to a licensed facility by an appropriately licensed waste transfer contractor.

7.10 Hygiene Requirements

Persons shall not eat, drink or smoke within the designated ACM impacted soil removal work area. All personnel who have been working within the contamination zone, must wash their hand and exposed skin (face etc.) prior to undertaking other works or eating, drinking etc.

7.11 Decontamination of Personnel, Tools, and Equipment

Decontamination is an essential process in preventing the possible distribution of asbestos fibres to other areas. Disposable P2 respirators are to be removed in the following method:

- Spray a light mist of water onto your face and wet wipe. Then remove the respirator by lifting it up, away from the breathing zone.
- Disposable respirators should be discarded into the waste bag.
- The sealed waste bag must then be placed into a second waste bag and sealed.
- Hands and face are to be washed.

All persons leaving the work area shall thoroughly clean footwear of all adhering materials using water.

All tools and equipment before leaving the work area shall be cleaned and washed with water and wet wiped with a damp cloth. Prior to leaving the work area all vehicles shall be washed down with water. The site manager shall inspect all equipment and vehicles for possible asbestos contaminants before it leaves the work area.

7.12 Decontamination of Plant and Machinery

Provided the plant used to excavate the ACM impacted soil by the asbestos removal contractor is always situated on clean soil/material, decontamination of plant and machinery will not be warranted.

However, if this is not the case the nominated excavation contractor is to decontaminate plant and machinery as follows:

- A designated “wash down” area should be selected and used consistently throughout the works. The plant and machinery “wash down” area must be within the works zone.

- All plant and machinery are to be washed with a water hose at the conclusion of each day's works.
- Plant and machinery are to be washed via a water hose prior to leaving the site.
 - The plant and machinery wash down area is to be lined with 200-micron (200 µm) plastic and contoured to catch and channel all wash water through filter medium with a pore size of less than 5 microns (<5 µm).
 - After washing of the plant and machinery is concluded the filter medium should be disposed of as "asbestos waste". Appropriate disposal of the filter medium will comprise of placing it in a clear polythene bag and tying the bag gooseneck style, then placing into a second polyurethane bag and sealing as before.
 - Appropriate PPE shall be worn by all persons during the wash down of plant and machinery equipment and bagging of the filter medium.

At the conclusion of works provided the integrity of the liner is preserved then the soil directly underlying the liner can remain on site. However, if the integrity of the liner is compromised then the top 0.1m directly below the liner is to be scraped up and disposed of appropriately. At the completion of works the plastic liner is to be disposed of as asbestos waste using the procedures as stated above.

8 Emergency Response Procedures

An emergency situation is most likely to entail a scenario where ACM present on site has been inadvertently disturbed and /or deteriorated to a state which is likely to release respirable fibres through actions of:

- site personnel,
- contractors, or
- damaged by machinery operating in the ACM impacted area which mechanically breaks or grinds fragments of ACM.

Where such damage has occurred, the site manager and/or its nominated asbestos removal contractor shall be notified immediately, and work will stop until the site has been cleared of ACM by the nominated asbestos removal contractor and verified by the consultant as having been cleared.

Emergency Response Procedures shall be initiated and implemented in accordance with the flow chart diagram in Appendix B.

9 Reporting

9.1 Asbestos in Soil Reporting

It is required that detailed records for the site are maintained by the principal such that all activities relating to ACM in soil works, undertaken on the site are recorded. In general, the records kept should include:

- Records of any temporary ACM in soil management comprising onsite containment and stockpiling
- Records of site inspections and LAA clearance certificates
- Asbestos fibre air monitoring results
- Records of any asbestos works performed on site not outlined in this ASMP.

An asbestos in soil report should be compiled at the completion of ACM in soil related works by the consultant (HazSure). The report should include the following (at minimum):

- Background information
- Scope of works
- Site information
- Management methodology
- Records of site works including volumes of ACM impacted soil excavated and on-site/off-site disposal locations
- Results of airborne fibre sampling, soil validation samples undertaken during site works and LAA issued clearance certificates
- Final conclusions
- On-going management requirements (if required)
- Site photographs.

9.2 Emergencies

All employees must report the presences of previous unidentified or suspected asbestos hazards on site to their immediate manager and the Principal Contractor as soon as possible as identified by the Emergency Response Flow Chart (Appendix A). The following forms should be used for reporting exposure to a suspected asbestos hazard on site:

- Incident Report Form (Appendix B).

The OHS Coordinator, in consultation with the employee's immediate manager, will determine other internal or external notification required in accordance with the Emergency Response Flow Chart (Appendix A).

The incident report form is used to report all the presences of previously unidentified or suspected asbestos containing material on site. The incident report form must be completed by either the employee or project manager.

9.3 Complaints

All employees must report all complaints associated with the presence of previously unidentified or suspected ACM to their immediate manager as soon as practical. The following forms should be used for reporting all complaints:

- Complaint Reporting Form (Appendix C).

The project manager will determine other internal or external notification and actions if required in accordance with the Emergency Response Flow Chart (Appendix A).

Attachment A

Emergency response flow chart

Attachment B

Incident report form

| | |
|------------------------|---------------|
| Incident Report | Rev: B |
|------------------------|---------------|

1. What happened? When?

| | |
|---|---|
| Brief description of incident - What happened? - What equipment was involved? - Conditions at the time? - Those involved? (directly or witnesses) | |
| Outcome: | <input type="checkbox"/> Near miss <input type="checkbox"/> Property Damage <input type="checkbox"/> Personal Injury <input type="checkbox"/> Other: |
| Incident Occurred: | Date/Time: |

2. Who was injured or involved (USE BLOCK LETTERS)

| | | |
|---|---|--|
| Cost Centre: | Name: | Phone: |
| | Position: | D.O.B: <input type="checkbox"/> Male <input type="checkbox"/> Female |
| Personnel: | <input type="checkbox"/> Consultant <input type="checkbox"/> Contractor <input type="checkbox"/> Client/Visitor: | |
| Injury description? <i>(if applicable)</i> | | |
| Treatment given? | <input type="checkbox"/> None <input type="checkbox"/> First Aid, by: <input type="checkbox"/> Medical, Dr: <input type="checkbox"/> Hospital: | |
| Nature of treatment? | | |
| Witness? | Name: | Company/Contact: |
| Reported to: | Name: | Company: Date/Time: |
| Reported by: | Name: Company: | |
| | Position: Sign: | Date: |

3. Where did it happen?

| | |
|-----------|-----------------|
| Location: | Client/Company: |
| Address: | |

4. Action take/initiated?

| Brief Description | By who? | When? |
|--|---------|-------|
| Quick fix? <small>(done at time or very soon after)</small> | | |
| Longer term? | | |

5. Investigation?

| | | |
|------------|---|----------|
| Initiated? | <input type="checkbox"/> Yes By who? | Contact: |
|------------|---|----------|

6. Review and recommendation

| | | |
|--------------|-------------------|-------|
| Reviewed by: | ROHSM: Sign: | Date: |
| | Manager: Sign: | Date: |

Attachment C

Complaint report form

| | |
|-------------------------|---------------|
| Complaint Report | Rev: B |
|-------------------------|---------------|

1. What happened? When?

| | |
|---|--|
| Brief description of complaint - What happened? - What equipment was involved? - Conditions at the time? - Those involved? (directly or witnesses) | |
|---|--|

2. Who made the complaint (USE BLOCK LETTERS)

| | | | |
|-------------------------------------|--|----------|---|
| | Name: | Phone: | |
| | Position: | D.O.B: | <input type="checkbox"/> Male <input type="checkbox"/> Female |
| Personnel: | <input type="checkbox"/> Contractor <input type="checkbox"/> Client/Visitor <input type="checkbox"/> Member of the public: | | |
| Injury description? (if applicable) | | | |
| Reported to: | Name: | Company: | Date/Time: |
| Reported by: | Name: Company: | | |
| | Position: | Sign: | Date: |

3. Where did it happen?

| | |
|-----------|-----------------|
| Location: | Client/Company: |
| Address: | |

4. Action take/initiated?

| Brief Description | By who? | When? |
|---|---------|-------|
| Quick fix? (done at time or very soon after) | | |
| Longer term? | | |

5. Investigation?

| | | | |
|------------|------------------------------|---------|----------|
| Initiated? | <input type="checkbox"/> Yes | By who? | Contact: |
|------------|------------------------------|---------|----------|

6. Review and recommendation

| | | | |
|--------------|----------|-------|-------|
| | ROHSM: | Sign: | Date: |
| Reviewed by: | Manager: | Sign: | Date: |