

## ASBESTOS REMOVAL CONTROL PLAN (ARCP)

**Project Name:** DVA Greenslopes

**Project Location:** 114 Newdegate St, Greenslopes Q 4120

**Project No:** 107143

**Licence Number:** NSW / AD211328

**Licence Class:** Asbestos - Friable Removal Work



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**TEMPLATE REVISION STATUS**

DATE	COMMENTS	PREPARED BY	APPROVED BY
04/11/2014	Full review and update	Sue Solman	Scott Wyatt
04/04/2016	Full review and update in consultation with Matt Goodwin	Sue Solman	Scott Wyatt

**PROJECT REVISION STATUS**

DATE	COMMENTS	PREPARED BY	APPROVED BY
18/02/2022	Project Specific Update, draft for DVA review	Mick Merriman	Jason Cole
22/04/2022	Amended as per client comments	Peri Timo	Jason Cole

**DISTRIBUTION**

ORGANISATION / PERSON	ISSUE DATE
Enviropacific Project Manager	18/02/2022
Client	18/02/2022
Asbestos regulator	On request

## 1 DEFINITIONS

Asbestos Containing Material (ACM)	Any material or thing that, as part of its design, contains asbestos.
Asbestos Contaminated Dust (ACD)	Dust or debris that has settled within a workplace and is (or is assumed to be) contaminated with asbestos.
Asbestos Regulator	The government department responsible for the implementation of asbestos related legislation in the jurisdiction in which the asbestos work will be carried out.
Asbestos removal site	The area comprising the asbestos work area, the buffer zone around the asbestos work area, decontamination facilities, site amenities and storage facilities.
Asbestos Supervisor	A person accredited by the asbestos regulator to supervise the removal of asbestos material who is listed on the asbestos permit and on the EPS asbestos licence and must be always present or readily available during the removal of asbestos material.
Asbestos work area	The delineated area where asbestos removal work will or is being carried out
Class A Licence	Can remove any amount or quantity of asbestos or ACM, including: <ul style="list-style-type: none"> <li>Any amount of friable asbestos or ACM</li> <li>Any amount of ACD</li> <li>Any amount of non-friable asbestos.</li> </ul>
Class B Licence	Can remove: <ul style="list-style-type: none"> <li>Any amount of non-friable asbestos or ACM</li> </ul> <p><b>Note:</b> A Class B licence is required for removal of more than 10 m2 (square metres) of non-friable asbestos or ACM but the licence holder can also remove up to 10 m2 of non-friable asbestos or ACM.</p> <ul style="list-style-type: none"> <li>ACD associated with the removal of non-friable asbestos or ACM.</li> </ul> <p><b>Note:</b> A Class B licence is required for removal of ACD associated with the removal of more than 10 m2 of non-friable asbestos or ACM but the licence holder can also remove ACD associated with removal of up to 10m2 of non-friable asbestos or ACM.</p>
Competent Person	In relation to carrying out clearance inspections under regulation 473 means a person who has acquired through training or experience the knowledge and skills of relevant asbestos removal industry practice and holds a certification in relation to the specified VET course for asbestos assessor work or a tertiary qualification in occupational health and safety, occupational hygiene, science, building, construction, or environmental health. For all other purposes,

	competent person means a person who has acquired through training, qualification or experience, the knowledge, and skills to carry out the task.
Exposure standard	For asbestos is a respirable fibre level of 0.1 fibres/ml of air measured in a person's breathing zone and expressed as a time weighted average fibre concentration calculated over an eight-hour working day and measured over a minimum period of four hours in accordance with the Membrane Filter Method.
Friable Asbestos	Any material containing Asbestos that is in a powder form or that can be crumbled, pulverised, or reduced to a powder by hand pressure when dry.
Health Monitoring	Health monitoring is provided to a worker who is carrying out licensed removal work, other ongoing asbestos removal work or asbestos-related work and there is risk of exposure when carrying out that work. Health monitoring is carried out under the supervision of a registered medical practitioner. The PCBU must pay all expenses for health monitoring, obtain report(s), and keep records for all health monitoring for a minimum of 40 years.
HEPA Filter	High-efficiency particulate air (HEPA) filter utilised in vacuums and negative air units specific to asbestos removal work. Filters should conform to the requirements of AS 4260-1997 <i>High efficiency particulate air (HEPA) filters – Classification, construction, and performance.</i>
Licensed Asbestos Removalist	A person conducting a business or undertaking who is licensed under the WHS regulations to carry out class A or class B asbestos removal work (Enviropacific Services).
Non-Friable Asbestos	Material containing asbestos that is not friable asbestos, including material containing asbestos fibres reinforced with a bonding compound.
Plant	(a) any machinery, equipment, appliance, container, implement and tool, and (b) any component of any of those things, and (c) anything fitted or connected to any of those things
Respiratory Protective Equipment (RPE)	In general, the selection of suitable RPE depends on the nature of the asbestos work, the probable maximum concentrations of asbestos fibres that would be encountered in this work and any personal characteristics of the wearer that may affect the facial fit of the respirator (for example, facial hair or glasses).

## 2 PURPOSE AND SCOPE

### 2.1 PURPOSE

The purpose of this Asbestos Removal Control Plan (ARCP) is to identify the specific control measures required to ensure workers and other persons are not at risk when asbestos removal work is being conducted.

This ARCP will help to ensure the asbestos removal is well planned and carried out in a safe manner and will be prepared before licensed asbestos removal work commences.

Enviropacific as the licensed asbestos removalist will consider any asbestos register relevant to the asbestos to be removed, the area to be worked on and address specific situations and requirements for each project.

A copy of this ARCP will be provided to the client and be readily available during the duration of the asbestos removal work to all workers and if requested, the regulator.

### 2.2 SCOPE OF WORKS

The existing two structures located at 114 Newdegate Street, Greenslopes are in a general state of dis-repair and the Client, Dept. of Veteran Affairs (DVA) has accordingly identified these buildings for demolition and remediation of the surrounding site.

To safely undertake the demolition, the structures must firstly be cleared of all controlled and/or hazardous waste. The Client has engaged Coffey Services Australia Pty Ltd / Tetra Tech Coffey Ltd to carry out a series of site audits to identify and quantify any discovered Hazardous or Controlled Waste streams.

#### Audit Reference Documents

- Asbestos & Hazardous Materials Pre-Demolition Assessment Ref Doc: 754-BNEEN282781 – Coffey - 09/04/2021
- Soils Remediation Planning – Ref Doc: 754-BNEEN282781 - Coffey - 25/01/2022
- Heritage Interpretation Strategy – Catalyst Heritage Architects - 22/01/2022

The following Hazardous and/or Controlled Waste streams have been identified –

#### Non-Friable

- Corrugated roof sheeting to both main structures and annex(s)
- flat wall and ceiling sheeting
- vinyl floor tile coverings
- Various moulding strips, downpipes and drainage surrounds
- Paint texture to external timber coverings
- Electrical Switchboard(s) backing boards.
- Compressed fibre sheeting to wet area(s)

#### Friable

- Residual dust and/or fibre located to all roof level guttering

- Residual dust and/or fibre located to ceiling area of “Main Building” roof cavity
- Residual dust and/or fibre located to ceiling area of “Accommodation Building” roof cavity
- Residual dust and/or fibre located to ceiling area of lower level “TV / Lounge Room”

### **Asbestos with other contaminants**

- Asbestos fines have been identified in the soil samples collected as part of the Remediation Planning. Asbestos is also suspected in the ceiling void to the Main Hall and the Accommodation Block lower level
- Polychlorinated biphenyl (PCBs) located in the Florescent light capacitors to both structures (all levels suspected)
- Lead on external timber wall covering(s) and/or fascia(s) has been reported in lead-based paint of varying consistency
- Organochlorine pesticides (OCPs)
- Heavy Metal (Zinc)

Enviropacific will undertake the removal and remediation of the various listed hazardous or controlled waste as part of the pre-demolition of structure(s) works and post- demolition soils remediation works.

## **2.3 WORKS PROGRAM**

Due to the sensitive nature and complexities of the proposed works, there will be a thorough client-based review of submitted documentation. This process will be staged to include various project stakeholders and a works program will be developed once a firm commencement date for the works is determined. The draft works programme will be finalised following the receipt of relevant approvals. An early estimate of the program timeline for onsite works equates to approximately 3 months from start to completion, depending on the scope for reinstatement of the site and potential maintenance period.



### 3 PROJECT CONTACT DETAILS

#### 3.1 CLIENT DETAILS

Client Name:	Department of Veteran Affairs (DVA)
Address:	Gnabra Building, 21 Genge Street, Canberra ACT 2601
Client Contact:	David Binny
Contact Number:	(02) 6289 6320
Email Address:	<a href="mailto:Dave.binny@dva.gov.au">Dave.binny@dva.gov.au</a>

#### 3.2 SITE DETAILS

Address:	114 Newdegate Street, Greenslopes QLD 4120
Site Contact:	Mick Merriman
Contact Number:	0438 386 774
Email Address:	<a href="mailto:Mick.merriman@enviropacific.com.au">Mick.merriman@enviropacific.com.au</a>

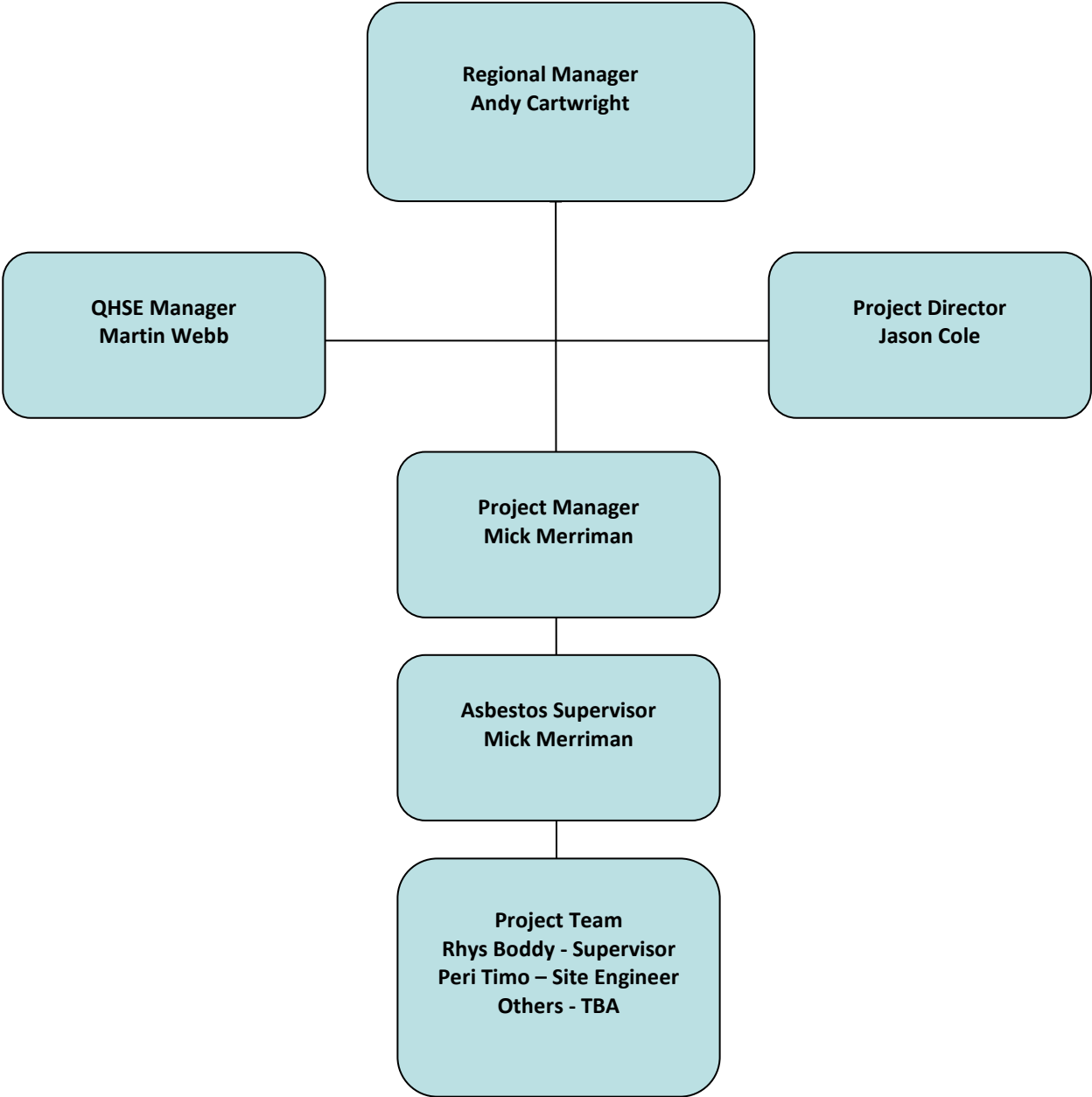
#### 3.3 ENVIROPACIFIC SITE MANAGEMENT

<b>Project Manager:</b>	Mick Merriman
Contact Number:	0438 386 774
Email Address:	<a href="mailto:Mick.merriman@enviropacific.com.au">Mick.merriman@enviropacific.com.au</a>
<b>Asbestos Supervisor:</b>	Mick Merriman
Contact Number:	0438 386 774
Email Address:	<a href="mailto:paul.adams@enviropacific.com.au">paul.adams@enviropacific.com.au</a>

#### 3.4 OCCUPATIONAL HYGIENIST/ASBESTOS ASSESSOR

Company Name:	Envirohealth
Contact Name:	Tony Squire
Contact Number:	0418 879 444
Email Address:	<a href="mailto:tony@envirohealth.com.au">tony@envirohealth.com.au</a>

4 RESPONSIBILITIES



## 4.1. KEY RESPONSIBILITIES OF PERSONNEL

**Company:** Enviropacific Services Limitedd  
**Name:** Andy Cartwright  
**Position:** Regional Manager  
**Contact:** 0438 102 999

Is responsible for:

- Financing of the project.
- Ensuring the risk to persons from operations, plant or substance is at an acceptable level.
- Reviewing safety reports and inspections and initiating any actions to rectify discovered opportunities of improvement.
- Participating in accident/incident investigations; and
- Ensuring adequate equipment and staff are available to carry out the work.

**Company:** Enviropacific Services  
**Name:** Martin Webb  
**Position:** National HSE Manager  
**Contact:** 0408 590 743

Is responsible for:

- Aiding and advise with the development of all management plans and SWMS.
- Appropriate monitoring and assessment of the working environment, work procedures, equipment, and installations at the site.
- Appropriate inspections of each workplace at the site including, where necessary, pre-shift inspections.
- Ensuring the project is in line with the ARCP, legislative requirements and codes of practice.
- Providing advice and assistance on quality, health, safety, and environment to workers.
- Participating in accident/incident investigations.
- Always Stimulating a high level of safety awareness; and
- Ensuring that any persons or sub-contractors who are engaged on the site are aware of their responsibilities under the asbestos and OHS/WHs legislations, regulations, and code of practice (COP) requirements as they relate to removal and management of asbestos materials.

**Company:** Enviropacific Services  
**Name:** Jason Cole  
**Position:** Project Director  
**Contact:** 0438 334 813

Is responsible for:

- Liaising with the client in contractual matters and meeting with public or authorities in matters relating to the project.
- Develop, implement, and maintain a management structure for the site that ensures the safety and health of persons at the site.
- Obtaining a copy of the asbestos register for the workplace prior to asbestos removal work.
- Assisting in the identification and preparation of work procedures.
- Reviewing health and safety reports and inspections and initiating any actions to rectify.
- Participating in accident/incident investigations.
- Compliance with this ARCP and the implementation of the quality programme; and
- Carrying out critical work at the site that requires technical competencies.

**Company:** Enviropacific Services  
**Name:** Mick Merriman  
**Position:** Project Manager  
**Contact:** 0438 386 774

Is responsible for:

- Preparation of a QHSE Work Plan.
- Compliance with asbestos and OHS/WHS legislation, regulations, and project approval conditions.
- Preparation of risk management documents (SWMS etc.).
- Preparation of an Asbestos Removal Control Plan (this document).
- Appointing and managing suitably qualified personnel and sub-contractors.
- Management of the asbestos removal.
- Reporting on the project progress,
- Reporting on all health, safety, and environmental incidents/accidents.
- The everyday running of each area of the site, with direct authority over all labour and plant on site to ensure the efficient and successful completion of work in accordance with the works programme.
- Compliance with this ARCP.
- Develop and implement emergency plans for the project.
- Implementing EPS management systems and observing all WHS requirements and statutory rules and regulations.
- Ensuring that all works are conducted in a manner that is safe and without risk to workers and others health and safety.
- Planning to do all work competently and safely.
- Participating in the planning and design stages of trade activities.
- Communicating and implementing the decontamination processes for all personnel, plant, and equipment to all stakeholders.
- Actioning reports and carrying out workplace inspections.
- Preparing and participating in safety meetings and safety programs.

- Facilitating the preparation of SWMS.
- Participating in accident/incident investigations.
- Always Stimulating a high level of safety awareness; and
- Assisting rehabilitation initiatives for workers.

**Company:** Enviropacific Services  
**Name:** Mick Merriman  
**Position:** Asbestos Supervisor / Demolition Supervisor  
**Contact:** 0438 386 774

Is responsible for:

- Implementation of this ARCP.
- The safe removal of ACM, with authority over all labour and equipment on site, to ensure the efficient successful removal without causing contamination of the environment or a risk to personnel or the public.
- Written notice to the regulator at least 5 days before the start of asbestos removal work in relation to friable and asbestos or non-friable asbestos, if more than 10m<sup>3</sup> is to be removed.
- Assisting in the planning and effective control of all ACM removal.
- Facilitating the preparation of a SWMS as they relate to ACM removal project.
- Management of decontamination of personnel,
- Management of decontamination of plant and equipment.
- The overseeing of all documentation as it relates to asbestos removal and disposal.
- The security and safety of the asbestos removal site and asbestos work area should be specified in this ARCP.
- Maintenance of site security and the prevention of unauthorized access.
- Always Ensuring the security and safety of the asbestos removal site and asbestos work area, particularly if the removal process is to take place over several days or an extended period of time: and
- Decontamination of persons, plant, tools, and equipment including HEPA vacuums in accordance with this ARCP.

**Company:** Enviropacific Services  
**Name/s:** Rhys Boddy / Peri Timo  
**Position:** Project Team level supervision and site engineering  
**Contact:** 0439 030 138 / 0411 802 271

as above

Are responsible for:

- Ensuring all works are conducted in a safe manner and without risk to themselves and other workers health.
- Correctly wearing all asbestos related PPE at all times specified within the SWMS for the project.
- Correctly decontaminating every time when leaving the asbestos work area.
- Not removing plant from the asbestos work area unless it is correctly decontaminated, packed and identified, or correctly contained and identified as asbestos waste.
- Participating in safety meetings and safety programs.
- Preparation of SWMS with team members.
- Participating in accident/incident investigations if required.
- Operating handheld tools when required in a competent and safe manner.
- Operating plant in a competent and safe manner; and
- Ensuring QHSE compliance within the team environment.

## 5 PREPARATION

### 5.1. NOTIFICATION TO REGULATOR

Formal notification of intention to carry out Asbestos removal (**Form-65**) will be lodged with the WHSQ at least 5 days before the start of asbestos removal work in relation to the removal of the non-friable and friable asbestos.

### 5.2. HEALTH MONITORING

Industry standard pre-employment medicals including Spirometry tests are undertaken by each Enviropacific employee. These are conducted by independent third-party medical professionals and are compulsory for Enviropacific workers prior to commencing licensed asbestos removal work. Health monitoring is provided to workers at regular intervals after commencing asbestos-related work but at least once every two years. Asbestos health surveillance reports will be maintained for at least 40 years after the records are made.

### 5.3. CERTIFICATION AND TRAINING

Enviropacific management will not direct or allow a worker to undertake Asbestos removal activities unless they have met the required level of training as per State and Federal Regulations for working in the Asbestos Remediation industry.

Individuals, engaged in Asbestos Removal, must hold a recognised Unit of Competency in line with their proposed level of work – see below:

- CPCCDE3014A – Remove non-Friable Asbestos.
- CPCCDE3015A – Remove Friable Asbestos.
- CPCCBC4051A – Supervise Asbestos removal.

Enviropacific will require Asbestos Awareness training, as a minimum standard, for all sub-contractors engaged in the project works, but not directly involved with the Removal of Asbestos. An example could be the erection of access scaffolding in the vicinity of external ACM wall sheeting.

Enviropacific will provide project site specific inductions and toolbox talks for workers at a level that will address the known risks associated with the proposed works. These will include but not be limited to the following items -

- The nature of the hazards and risks.
- The health risks and health effects associated with exposure to asbestos.
- The need for, and details of health monitoring of a worker carrying out licensed asbestos removal work.
- The risk from exposure to airborne asbestos.
- The control measures in place and maintenance of the ARCP for this project.
- The work methods and plant and equipment that will be used to do the job properly and safely.
- Choosing, using and caring for asbestos work personal protective equipment (PPE) and respiratory protective equipment (RPE).
- Decontamination procedures for workers, plant, equipment, and hand tools.
- Asbestos waste disposal procedure; and
- Emergency procedure and other legal requirements.

Records of all training will be retained for a minimum of 5 years and will be made available to the Regulator on request.

The nominated Asbestos Supervisor will hold the appropriate level of training and will be listed on the Enviropacific Asbestos Removal Licence AD 211 328 (NSW)

The nominated Supervisor will be available and present at site during all Friable Asbestos removal works.

## 5.4. ASBESTOS REGISTER

Enviropacific will maintain a copy of the Client supplied, Asbestos and Hazardous Materials Pre-Demolition Assessment Document Ref: 754-BNEEN282781 by Coffey Services Australia Pty Ltd.

## 5.5. SITE ACCESS, SIGNS AND BARRICADES

### Site Access

Site access is through a dedicated double gate point of entry located to the western boundary line at 114 Newdegate Street. The gates will consist of 1.8m high panels with ground wheels for ease of movement.

These gates will remain locked when unattended and all visitors must be escorted to the site office where a documented Site Visitor Induction will be given to everyone.

Project Specific details will be displayed on a dedicated site board, these will include –

- Project details (Client based) (DVA)
- Project details (Principal Contractor based) – Brisbane office phone number(s)
- Required site entry protocols – minimum PPE
- Site Supervisor / Project Manager contact details – Mobile Phone number(s)
- Enviropacific Emergency / Out of Hours contact Name and Number.

Additional signage will be clearly displayed at the site entry advising of level of Hazards that might be encountered and the control protocols i.e., Level of PPE required / Entry – travel restrictions (if any) -

Example(s) of Site Main Entry signage - **AS 1319 Safety signs for the occupational environment**



## 5.6. CONTROLLED SITE ACCESS

There are two designated but separate delineation barriers for Asbestos Removal Works, these are –

1. The Asbestos Removal Set Up area.
2. The Asbestos Removal Work area.

**The Asbestos Removal Set Up area** is the footprint directly outside of the Asbestos Removal work area. This will be delineated by the installation of either a hard barrier in the form of temporary construction fencing or a soft barrier in the form of hi-vis bollards and tape marked “Danger – Asbestos Removal area”.

Multiple work disciplines can be carried out with-in the Set-Up zone that may include:

- **Placement of waste storage bins / skips**

This area will also be utilised for the placement of controlled waste storage bins and will have separate but controlled point(s) of egress / access for pedestrians’ traffic and for vehicular traffic.

The controlled waste storage area will be further isolated from workers access by placement of additional barricading with advisory signage showing the level of need for both PPE / RPE when entering the immediate area around the waste skips / bins.

All controlled / hazardous waste will be fully encapsulated by double layer 200um plastic sheeting / bags when being stored with-in this sub-zone.

- **Erection / installation of Personal Decontamination facilities**

This may be the placement of a 5-stage decontamination shower unit (trailer mounted) which will double as the single point of egress / access for the removal works area.

This will also act as the “wash-out” facility for the rinsing of the outer layer of the 200um plastic bags / bundles as part of the controlled handling process prior to placement of the waste into the storage bins / skips.

- **General movement in the Set-Up zone**

General task duties can be carried out with-in this controlled zone with workers utilising the task appropriate level of PPE.

If the work does not involve direct contact with Asbestos or Hazardous waste, including the handling / placement of controlled waste, then RPE will not be mandatory.

If the task parameters change to include any inter-action with either Asbestos or Hazardous materials, then the minimum level of RPE will be a P2 Half face mask with a particulate filter (cartridge) respirator.

**The Asbestos Removal Work area** is the footprint where to actual removal / remediation works are being carried out. If the ACM removal works are non-Friable, then the inner border(s) will be delineated by the installation of either a hard barrier in the form of temporary construction fencing or a soft barrier in the form of hi-vis bollards and tape marked “Danger – Asbestos Removal area”.

Plastic sheeting (200um density) may be installed to the inner surface of the fencing panels as a secondary barrier.

These non-friable removal works will involve the removal of ACM(s) in the form of flat wall and ceiling sheeting / corrugated roof sheeting / downpipe surrounds / coving / vinyl floor tiles as are identified in *the Site Asbestos Register Doc Ref: 7540BNEEN282781 (9/04/2021)* by Coffey.

If the ACM removal works are Friable, then the inner border(s) will be delineated by the installation of a Negative Air Working Environment. These Friable removal works will involve the removal of ACM(s) in the form of residual dust(s) located to the upper surface of various ceiling sheeting / tile inserts tiles as are identified in the *Site Asbestos Register Doc Ref: 7540BNEEN282781 (9/04/2021)* by Coffey.

This is designed to control and capture the release of all airborne asbestos fibre(s). The inner surface areas of the Negative Air Working Environment may consist of the following –



- Existing vertical wall surface areas having a layer of 200um plastic sheeting attached for full height
- Doorway / windows are to be closed with a 200um plastic sheet cut to size and applied as an airtight seal.
- Framework may need to be erected to support the plastic sheeting
- The floor area(s) will be subject to a clean by HEPA filtered vacuuming and will have 200um plastic sheet installed with an overlap join to the wall vertical plastic sheeting. These joins will be sealed by adhesive tape(s) being applied the full length of the seam.
- To create a negative air environment, a series of Negative Air Exhaust fan units will be installed to create an air flow into the encapsulated area and then being vented through the HEPA filter system as part of the exhaust unit(s). There is a calculation used to assess the required level of air filtration to enable a minimum level of air filtration, see Airflow Calculations directions, as listed below:

## **AIRFLOW CALCULATIONS**

Calculation of Volume (Cubic Metres):

Length x Width x Height (Example 12 x 14 x 4 = 672 cubic metres).

Calculation of Airflow required (Cubic Metres per Hour):

Take the volume of the area in cubic metres and multiply by the number of air changes required per hour = airflow required in cubic metres per hour.

## **5.7. AIR QUALITY MONITORING**

Air monitoring will be required for all structurally altering works. Air monitoring of the asbestos work area will be carried out by a client appointed independent third-party hygienist firm. It is assumed that the DVA appointed Environmental Consultant, Coffey Services Australia, will be appointed for the ACM removal phase. Monitors will be placed at several locations by the engaged third-party prior to the commencement of asbestos removal work(s)

Surveillance of this procedure shall be carried out with reference to the inspection and test plans (ITPs) by the Project Manager using appropriate inspection checklist reports and/or inspection and test reports (ITRs).

The results of air monitoring for Friable Removal works must be available for review prior to the end of each Daily Shift.

The results of air monitoring for non-Friable Removal works must be available for review prior to the commencement of the next daily shift.

The site supervisor is responsible for displaying the air quality monitoring results in the site amenities to allow viewing by all interested parties.

The asbestos supervisor will be notified immediately if the fibre count exceeds the recommended level, as set out in Table 1 below.

Action level (fibres/mL)	Control/action
<0.01	Continue with control measures

$\geq 0.01$	Review control measures, investigate the cause and implement controls to eliminate or minimise exposure and prevent further release
$\geq 0.02$	Stop removal work, notify the regulator, investigate the cause, implement controls to eliminate or minimise exposure and prevent further release and do not recommence until fibre levels are at or below 0.01 fibres/ml

Table 1 - The exposure standards for asbestos as set out in the national Code of Practice *How to Safely Remove Asbestos*

### Clearance Monitoring / Inspection(s)

At completion of the Asbestos removal works and prior to removing entry barricading and / or encapsulation, a further series of visual inspections and air quality monitoring will be carried by the appointed hygienist and a clearance certificate will only be issued if all resulting criteria falls below the reporting threshold, as shown in the above scale.

## 5.8. PLANT AND EQUIPMENT

Plant, equipment, and tools being used on this project include:

- EWP(s) (Boom Lifts / Scissor Lifts) for safe Work at Heights
- Mobile aluminium scaffolding / platform ladders – various heights
- Trailer mounted 5 stage Decontamination Shower unit
- NSU-4000 Neg air exhaust unit(s)
- HEPA Filtered H-Class vacuum units in compliance with: AS / NZS 60335.2.69
- Various handheld tools
- Battery powered reversable drills (drills to remain in an encapsulated state when the project is completed or if they are removed from the removal works zone.
- Demolition excavator (20t)
- Mini-Excavator (5-8t) for soil remediation works.
- Skid steer loader with an enclosed cabin

## 5.9. PROHIBITIONS

Plant and processes that generate dust should not be used on asbestos. These include:

- The use of high-speed reversable drills, unless they are used with-in a negative air working environment.
- The use of high-speed drills unless they are being used for encapsulation framing construction or preparation works for asbestos removal works and can be operated safely with-out impacting or disturbing any ACM.
- High pressure water sprays delivered directly to the surface of e.g., corrugated “Super Six” roof sheeting.
- Jack hammers that operate with high pressure air hose attachments.

## 5.10. INSPECTION AND MAINTENANCE OF PLANT

The EP-HSE-07-FRM-02 Plant Pre-Commencement Checklist and Inspection form must be completed before plant (e.g an EWP) can be utilized on the project.

All plant and equipment to be utilized for the DVA Greenslopes Demolition involving removal of Asbestos and/or Hazardous waste will undergo a pre-delivery checklist at the depot end). Only plant and equipment in full working order will be permitted on site.

Regular inspection(s) and maintenance checks will be carried out by a person(s) deemed competent to do so e.g Plant operator.

A register will be created to hold a record of inspections and maintenance and any actions resulting from inspection failures and/or maintenance repairs and servicing.

## 6 PPE / RPE REQUIREMENTS

All workers engaged in the handling of ACM, supervision and loading out of materials will be required to wear the following PPE / RPE (this includes persons entering the removal site for the purpose of inspections or testing):

### PPE

- Disposable Coveralls (Type 5/6 Cat3)
- Safety Footwear (T-Boots / gum boots) to be kept with-in the Asbestos Removal work area with additional safety boots made available to the workers following personal decontamination.  
*Compliance: AS 22110.3 2019*
- Safety Gloves – Punctures / tears Cat 3 cut resistant. Compliance: *AS / NZS 2161.3 (1998)*
- Safety Gloves – Chemical resistant. Compliance: *ANS / NZS 2161.10.2005*
- Safety Eye Wear. Compliance: *AS / NZS 1337.1 (2010)*

### RPE

- P2 Disposable – can be used for non-evasive, inspections of non-Friable ACMs. Must be disposed of as controlled waste.
- P2 Half face with Particulate Filter (cartridge type) – can be used for the removal of non-Friable ACMs. Mask must be cleaned as part of the personal decontamination process. Used filters must be disposed of as controlled waste.
- P3 Full Face with Particulate Filter (cartridge type) battery pack air supplied – can be used for the removal of Friable ACMs. Mask must be cleaned as part of the personal decontamination process. Used filters must be disposed of as controlled waste.

### FILTER LIFE

- The operational life of a cartridge type filter will vary due to the level of exposure to respirable airborne fibre(s).
- To increase the effective operational use, the workers will install a pre-filter to the outer surface and held in place by a plastic filter cap. These will be changed out at regular intervals, at least each time that the removalist carries out personal decontamination.

- The operational performance will vary on an individual user's basis; when it is becoming difficult to breathe with the mask fully engaged, then it is time to change out the filters / pre-filters. All replaced filters must be contained and disposed of as a controlled waste.

**FIT TESTING for MASKS**

- Before a worker can lawfully use a chosen model of either a P2 half face or a P3 mask full face, they must have the chosen model of mask "Fit Tested" to ensure that there is an airtight seal when wearing the mask for the purpose of working in area(s) of respiratory hazards.
- The fit test must be compliant with: AS / NZS 1715 Selection, Use and Maintenance of Respiratory Protection Equipment and AS / NZS 1716 Respiratory Protective Devices.
- Fit testing must be carried every 2 years or when the worker selects a different model of mask or has repairs carried out to the model of mask originally tested with.
- All Fit Testing will be recorded against individual training records.

## **7 ASBESTOS REMOVAL PREPARATIONS**

The buildings located at 114 Newdegate Street, Greenslopes are proposed for full structural demolition. To achieve this objective the building spaces must first be cleared of all controlled and/or hazardous materials.

There are 2 main structures described as the Main Hall and the Accommodation Block. An Asbestos and Hazardous Materials Pre-Demolition Assessment has been provided by DVA. The reported Asbestos & Hazardous materials are as follows:

### **7.1 The ACCOMMODATION BLOCK**

Asbestos Containing Materials and other listed Hazards

**Non-Friable**

- External roof sheeting – corrugated "Super Six" – complete footprint listed in report as 2,500m<sup>2</sup>
- Flat sheet to walls and ceilings – both ground and upper level(s).
- Roof area gable ends / barge capping / ridge capping.
- Flat sheeting throughout roof eaves.
- Storm water downpipes and drain surrounds.
- Internal Moulded Fibre cement
- Scattered debris – external ground level
- External surface paint

**Friable**

- Residual dust located in roof guttering - measured in report at 300 lineal metres
- Residual dust to topside of ceiling area (roof void) – measured in report at 750m<sup>2</sup>
- Residual dust located in ceiling void of lower-level Lounge / TV Room area.

**Lead Based Paint and Dust**

- Various levels of lead-based paint have been listed to both internal / external surface areas.
- Residual dust to topside of ceiling area (roof void) – measured in report at 750 m<sup>2</sup>

**Polychlorinated Biphenyls**

- The existing fluorescent lights are suspected to have Capacitors containing PCB.

## 7.2 The MAIN HALL

Asbestos Containing Materials and other listed Hazards

### Non-Friable

- External roof sheeting – corrugated “Super Six” – complete footprint listed in report as 3,000 m<sup>2</sup>
- Flat sheet to walls and ceilings – both ground and upper level(s).
- Roof area gable ends / barge capping / ridge capping.
- Flat sheeting throughout roof eaves.
- Storm water downpipes and drain surrounds.
- Internal Moulded Fibre cement
- Scattered debris – external ground level
- External surface paint

### Friable

- Residual dust located in roof guttering - measured in report at 300 lineal metres
- Residual dust to topside of ceiling area (roof void) – measured in report at 1000m<sup>2</sup>
- Residual dust located in ceiling area(s) of annex rooms to either side running East to West

### Lead Based Paint and Dust

- Various levels of lead-based paint have been listed to both internal / external surface areas.
- Residual dust to topside of ceiling area (roof void) – measured in report at 1000 m<sup>2</sup>

### Polychlorinated Biphenyls

- The existing fluorescent lights are suspected to have Capacitors containing PCB.

## 7.3 WORKING AT HEIGHTS

As the Client has identified the corrugated Asbestos roof sheeting as being in a dilapidated and brittle condition, then all physical access will be prohibited. The following alternative types of height access will be utilized to provide a safe working platform.

### Perimeter Scaffolding

**Accommodation Block** – a full height, 5 board working deck, quick stage scaffold will be erected to the western and northern elevations for the full width and length of the structure. The scaffolding will have external encapsulation by attaching both shade cloth and 200um rated plastic sheeting to the outer elevation. This will effectively provide a separation between the remediation works and any pedestrian traffic for both the neighbouring property(s) and the footpath to Newdegate Street.

**Main Hall** – a full height 5 board working deck, quick stage scaffold will be erected to the western & eastern elevation. The scaffolding will have external encapsulation by attaching both shade cloth and 200um rated plastic sheeting to the outer elevation. This will effectively provide a separation between the remediation works and any pedestrian traffic for both the neighbouring property at 49 Headfort Street and the footpath to Newdegate Street. The Southern elevation along Headfort Street will be erected to approximately 4m in height for the full length of the Main Hall structure.

The scaffolding will have external encapsulation by attaching both shade cloth and 200um rated plastic sheeting to the outer elevation. This will effectively provide a separation between the remediation works and any pedestrian traffic along Headfort Street.

### Elevated Work Platforms (EWPs)

EWPs use will fill the gap for safe working at heights along the elevations that do not have perimeter scaffolding. These area(s) will relate to the following:

**Accommodation Block** – eastern elevation encompassing –

- The single level section of the structure

- The resulting exposed 2 level elevation following the removal of the lower level
- The internal southern elevation parallel to the middle driveway, full length of structure.

## Main Hall

- The internal Northern elevation parallel to the middle driveway, full length of structure.

## Internal Working at Heights

**Accommodation Block** – a combination of mobile aluminium scaffolding and/or platform ladders will be utilized to achieve safe working at heights for the internal strip out works. Step ladders are prohibited from site.

**Main Hall** – a combination of mobile aluminium scaffolding and/or platform ladders will be utilized to achieve safe working at heights for the internal strip out works. The main ceiling access will be provided by the erection of aluminium scaffolding to a working deck height of 6m. This erection of this height of mobile scaffolding will be supervised by a holder of an unrestricted Certificate of Competency and in line with – *AS/NZS 4576:1995 Guidelines for Scaffold / AS/NZS 1664 Aluminium Structures Series*. All adjustments and/or alterations to the Aluminium scaffolding above 4m height will be subject to supervision in line with the above.

## 7.4 PRE-ASBESTOS REMOVAL NON-STRUCTURAL STRIPOUT

### Accommodation Block

Identification of ACM(s) and strip out of non-ACM(s)

- Prior to Asbestos Removal works commencing, workers, using the pre-demolition HazMat Report as a guide, will clearly markup / identify Asbestos Containing Materials (ACMs) with a Hi-Vi's spray paint.
- This will clearly separate the non-asbestos construction materials from the ACMs.
- When the ACMs have been identified and marked up, workers will then commence to carry out a non-structural strip out of the Accommodation bedrooms and social areas taking the utmost care not to disturb or damage any identified ACM(s).
- Included in the strip-out will be the carpet floor covering(s) and associated underlay materials.
- All strip out works will be carried out in the reverse of their original construction and at no time will a mass collapse of walls and / or framework be induced.
- **Hold Point** - Following the removal of the gypsum sheeting attached to both sides of vertical wall framing, the Supervisor / Project Manager will inspect said framing to see if there are any obvious structural elements associated with supporting the roof framing. This inspection will be limited due to the ceiling grid / tiles still being insitu because of their upper surface being listed as cross-contaminated with both Friable dust (suspected) and Lead dust (suspected). There is visible structural evidence of a series of timber beams / columns running the full length, center of structure, East to West.
- **Release of Hold Point** – Only when the Project Manager / Supervisor are satisfied the timber framing, apart from the main center bearers / columns, is non-load bearing then the Hold Point will be released. The framing that forms the external walls to all elevations will be classified as being structural and load bearing and will be left fully insitu until all roof elements have been removed.
- All resulting construction debris will be moved from the levels and placed into waste storage bins located external of the structure.
- Due to the upper-level ceiling consisting of grid and gypsum tiles that are listed as being suspected of being coated in both Friable Asbestos dust and lead based dust, all workers will be issued with and instructed to wear a P2 level mask when doing strip-out works in the area(s). This will provide respiratory protection should a ceiling tile become dislodged during the non-asbestos strip out works.

### Main Hall

- Prior to Asbestos Removal works commencing, workers, using the pre-demolition HazMat Report as a guide, will clearly markup / identify Asbestos Containing Materials (ACMs) with a Hi-Vis's spray paint.
- This will clearly separate the non-asbestos construction materials from the ACMs.
- When the ACMs have been identified and marked up, workers will then commence to carry out a non-structural strip out of the Main Hall and attached annexes taking the utmost care not to disturb or damage any identified ACM(s).

- Included in the strip-out will be the removal of any residual paint flaking, as found across the Main Hall floors. These collections will be deemed “Controlled Works”, this will necessitate the use of task specific PPE / RPE / Personal Decontamination processes and third party clearances.
- **Hold Point** – Clearance Inspection(s) / Report
- **Release Hold Point** – Satisfactory Clearance Inspection(s)
- All strip out works will be carried out in the reverse of their original construction and at no time will a mass collapse of walls and / or framework be induced.
- All resulting construction debris will be moved from the levels and placed into waste storage bins located external of the structure.
- Due to the upper-level ceiling consisting of grid and porous tiles that are listed as being suspected of being coated in both Friable Asbestos dust and lead based dust, all workers will be issued with and instructed to wear a P2 level mask when doing strip-out works in the area(s). This will provide respiratory protection should a ceiling tile become dislodged during the non-asbestos strip out works.
- The strip out to the annex area will consist mostly of cosmetic materials i.e., benches / sinks etc.
- Where these items meet the identified ACM ceiling sheeting, care will be taken to not breakthrough said sheets.

## 7.5 ENCAPSULATION OF THE REMOVAL ZONES

### Accommodation Block / Main Hall

#### Non-Friable Removal - internal

- All openings - e.g doors and windows will be closed (where practicable) and have plastic installed to the inner face area.
- The immediate base of the internal removal work area footprint will have 200um rated plastic sheeting installed. This is designed to catch any residue that results from the removal activities.
- In addition to the ground sheet, workers will apply a liquid sealant to all surface areas. This will be delivered by manual pump pressurized unit - e.g garden spray pack and will consist of a water based PVA glue solution, as a minimum standard.
- This will apply to all visible surfaces, forming both walls, ceilings, vinyl floor tiles and paint containing asbestos materials.

#### Non-Friable Removal – external

- This will relate to the surface paint that has been identified as containing Asbestos.
- The immediate ground level footprint will have 200um plastic sheeting installed, designed to capture residual flaking.
- Upper-level height access will be via EWP(s) with plastic sheeting having been applied to the floor area(s) as well. This is also designed to capture residue and negate cross-contamination of surface areas during Asbestos removal works.
- The condition of the surface paint is deteriorated and flaking and will require the application of a sealant prior to disturbance, otherwise there is a high probability of it becoming airborne.
- Applying the sealant will effectively create a form of encapsulation and allow for safe handling.

#### Friable Removal – internal Accommodation Block

- The areas listed in the pre-demolition HazMat Report show the upper-level complete ceiling cavity (750m<sup>2</sup>) and the lower-level Lounge / TV Room (80 m<sup>2</sup>) as having a residual dust suspected of having Friable asbestos. This will have also been the direct result of the corrugated asbestos roof sheeting deterioration over time.

#### Friable Removal – internal Main Hall

- The areas, listed in the pre-demolition HazMat Report show the Main Hall ceiling cavity (1,000m<sup>2</sup>) and adjoined annex(s) (175m<sup>2</sup>) as having a residual dust suspected of containing dust with a Friable asbestos fibre consistency. This will have been the direct result of the corrugated asbestos roof sheeting deterioration over time.



## **Friable Removal – External Roof - Main Hall and Accommodation Block**

- Safe Working at heights will be provided by using a combination of perimeter quick stage scaffolding and / or EWP (Boom lift / Scissor Lift) to remove ACM dust from guttering sections.
- Prior to disturbance, encapsulation of the residual dust be achieved by applying a liquid-based sealant to the inside of the guttering for the full length of the building.

## **Friable Removal – Internal wall cavities - Main Hall and Accommodation Block**

The internal capture and removal works for cross contaminated residual dust(s) will also need to be carried out with a Negative Air Working Environment.

- Existing vertical wall surface areas having a layer of 200um plastic sheeting attached for full height
- Doorway / windows are to be closed with a 200um plastic sheet cut to size and applied as an airtight seal.
- Framework may need to be erected to support the plastic sheeting
- The floor area(s) will be subject to a clean by HEPA filtered vacuuming and will have 200um plastic sheet installed with an overlap join to the wall vertical plastic sheeting. These joins will be sealed by adhesive tape(s) being applied the full length of the seam.
- To create a negative air environment, a series of Negative Air Exhaust fan units will be installed to create a “Positive” air flow into the encapsulated area and then being vented through the HEPA filter system as part of the exhaust unit(s). The calculation used to assess the required level of air filtration to enable a minimum level of air filtration is included in section 5.6 above.

## **8 ASBESTOS REMOVAL METHODS**

### **8.1 Flat Sheeting Removal – Non-Friable**

- The removal of flat sheeting, both internal and external, will be by the removal of cover strips, retention screws and/or nails. This will allow for the loosened sheeting to remain in as large a section as is practicable.
- A PVA sealant will be applied to all surface areas of the removed flat sheet sections, this time encapsulating the inner surface.
- The remaining timber framework will be checked for residual ACM and will be cleaned with a HEPA vac.
- Removed ACMs will be either placed directly into 200um plastic rated bags or plastic sheet bundles and sealed airtight with adhesive tape.

### **8.2 Flat Sheeting Removal – Friable**

The ceiling areas listed as suspected of supporting residual dust containing Friable asbestos fibre(s) consist of –

- Accommodation Block – Ground Level Lounge Room ceiling 80m<sup>2</sup> of Asbestos Cement Sheeting.
- Main Hall – Annex Rooms upper-level ceiling 175 m<sup>2</sup> of Asbestos Cement Sheeting.
- Due to the location and the suspicion of the upper surface containing Friable dust then all removal of the flat sheeting be carried out with-in a negative air environment.
- The removal of flat sheeting will be by the removal of cover strips, retention screws and/or nails. This will allow for the loosened sheeting to remain in as large a section as is practicable.
- A PVA sealant will be applied to all surface areas of the removed flat sheet sections, this time encapsulating the inner surface.
- The remaining timber framework will be checked for residual ACM and will be cleaned with a HEPA vac.
- Removed ACMs will be either placed directly into 200um plastic rated bags or plastic sheet bundles and sealed airtight with adhesive tape.



### 8.3 Vinyl Floor Tiles – Non-Friable

The area(s) listed as having Asbestos vinyl floor tiles, the following will apply –

- The floor surface will be coated in a PVA sealant and allowed to dry.
- Workers will infill all doorways and windows with plastic sheeting but will not require the workspace to be under negative airflow.
- The vinyl tiles will be lifted by manual scrapping and/or battery powered jack hammers fitted with tile lifting blades.
- As the tiles are released, they will be once more encapsulated with a PVA sealant and placed directly into 200um plastic bags, sealed airtight and placed into safe waste storage pending offsite disposal.
- The Supervisor will inspect the removal footprint for any residual glue and if present this may need to have a floor grind carried out.

### 8.4 Surface Paint – external (non-Friable)

There is an external surface area to the Accommodation Block, measured at 130m<sup>2</sup> and containing asbestos in the form of Chrysotile fibre.

- The removal process will be to firstly apply a PVA sealant and then carry out a scrape of the flaking surface whilst it is in a 'wet' state to negate friable fibre generation and allow for the capture of the removed product and direct placement into 200um plastic bags for encapsulation.
- Once the initial scrape has been carried out, a further application of PVA sealant will be applied. This will leave the remaining weather boards as still being cross-contaminated and they will be prized clear from the timber framing and placed into a storage bin as asbestos waste.

### 8.5 Residual Gutter Dust – Friable

The existing gutter lines to both building have been identified as containing residual asbestos fibre(s).

- The removal process will be to firstly apply a PVA sealant and then carry out a thorough cleaning of the guttering by applying a HEPA filtered vacuum nozzle directly into the gutter and capturing any loose materials.
- It may be necessary to manual loosen the debris where residual build up has occurred. This process must have the HEPA nozzle applied directly to the disturbed materials.
- Items of materials too large for the vacuum nozzle will be collected by hand and placed directly into 200um asbestos waste storage bags.

### 8.6 Internal Ceiling Tiles – Friable

The Main Hall ceiling and the Accommodation Block upper-level ceiling areas are listed as suspected of being cross-contaminated with asbestos containing dust with a Friable consistency.

- Both these areas will be set up as a Negative Air working environment and height access will be via mobile scaffolding.
- The removal of the tiles will be carried out in a stepwise process, with the removed items being individually encapsulated with PVA and placed into a 200um rated plastic bag and sealed airtight with adhesive tape.
- The working environment will be subject to 3<sup>rd</sup> party hygienist clearance procedures prior to having the encapsulation barrier and plastic sheeting removed.

### 8.7 Corrugated Roof Sheeting – Non-Friable

Due to the brittle and dilapidated condition of the corrugated Asbestos roof sheeting, all removal will be carried with access via EWP(s) or alternatively via the individual roof cavities.

It is proposed to apply a layer of aerosol delivered PVA sealant prior to disturbing the sheeting. This will be delivered by utilizing a combination of both scaffolding and EWPs for safe height access.

**Accommodation Block**

- There will be a working deck scaffold to 2 elevations to allow for the removal of some barge capping (west elevation) and the first row of sheeting (northern elevation)
- These removed sheets of ACM will be subject to PVA sealing as they are released by having their retention screws removed from the top side. (This is possible from the scaffolding deck adjacent to the gutter line).
- The southern elevation can be accessed via a Boom Lift (EWP) set up in the center driveway between buildings. The EWP style will be a Knuckle-Boom will allow for access up to the roof peak and ridge capping.
- The sheeting will be released by reversing the retention screws and individually lifting the sheeting clear.
- The direction of removal will be from the roof peak back to the gutter line due to the installation overlap. This will also allow for the removal without unplanned breakage.
- Following the removal, each sheet will have a coating of PVA sealant applied prior to being passed down to ground level for 200um plastic encapsulation and placement in a waste storage bin.
- All roof timber will be visually inspected for residual ACM and will be subject to a HEPA filtered vacuum clean where needed and a PVA sealant, as a minimum.
- All or any sarking and insulation located under the sheeting will be classified as being cross-contaminated and will be removed as a step of this process.
- The remaining roof sheeting will consist of the Northern elevation minus the first row at the gutter line.
- Workers will erect a mobile scaffolding to the inside of the upper level and directly below the roof peak. This will allow for access in-between the roof trusses and may require the removal of the ceiling battens.
- The timber bearers and battens that will be remaining from the southern elevation removal works will be left in situ to provide lateral bracing to the roof trusses and negate the risk of sideways collapse.
- Workers will access the underside of the corrugated sheeting and apply a battery-operated reciprocating saw metal cutting blade into the raised section of the corrugation and adjacent to the metal roof screw. The saw will now be operated sideways and cut through the screw shaft as a "Cold Cut" methodology.
- This process will be repeated until adequate screws have been severed, including those where the sheeting overlaps and the now loose sheeting will be manually hefted free and passed back inside for further PVA encapsulation and passing down to floor level for 200um plastic wrapping / airtight sealing.

**Main Hall**

- There will be a working deck scaffold to 3 elevations will be allow for the removal of some barge capping (west elevation) and the first row of sheeting (southern elevation) and the barge capping to the eastern elevation.
- These removed sheets of ACM will be subject to PVA sealing as they are released by having their retention screws removed from the top side. This will be possible from the scaffolding deck adjacent to the gutter line.
- The northern elevation can be accessed via a Boom-Lift (EWP) set up in the center driveway between buildings. The EWP style will be a Knuckle-Boom of large enough capacity to allow for access up to the roof peak and ridge capping.
- The sheeting will be released by reversing the retention screws and individually lifting the sheeting clear.
- The direction of removal will be from the roof peak back to the gutter line due to the installation overlap. This will also allow for the removal without unplanned breakage.
- Following the removal, each sheet will have a coating of PVA sealant applied prior to being passed down to ground level for 200um plastic encapsulation and placement in a waste storage bin.
- All roof timber will be visually inspected for residual ACM and will be subject to a HEPA filtered vacuum clean where needed and a PVA sealant, as a minimum.
- All or any sarking and insulation located under the sheeting will be classified as being cross-contaminated and will be removed as a step of this process.
- The remaining roof sheeting will consist of the southern elevation minus the first row at the gutter line.
- Workers will erect a mobile scaffolding to the inside of the upper level and directly below the roof peak. This will allow for access in-between the roof trusses and may require the removal of the ceiling battens.

- The timber bearers and battens that will be remaining from the northern elevation removal works will be left insitu to provide lateral bracing to the roof trusses and negate the risk of sideways collapse.
- Workers will access the underside of the corrugated sheeting and apply a battery-operated reciprocating saw metal cutting blade into the raised section of the corrugation and adjacent to the metal roof screw.
- The saw will now be operated sideways and cut through the screw shaft as a “Cold Cut” methodology.
- This process will be repeated until adequate screws have been severed, including those where the sheeting overlaps and the now loose sheeting will be manually hefted free and passed back inside for further PVA encapsulation and passing down to floor level for 200um plastic wrapping for airtight sealing.

## 8.8 Asbestos Removal Clearance

The Clearance for Asbestos Removal works will involve a series of “Hold” & “Release” Points. These will involve inspections and clearances, conducted by a Licensed Asbestos Assessor (LAA) for Friable removal or a Hygienist (Competent Person) for non-Friable works.

### Hold Point(s)

Once a certain stage in the removal works has been reached then an independent third party will be engaged to carry out “Clearance” inspections. These may include –

- Visual inspections for the presence of Asbestos Fibre / debris
- Air Quality Monitoring for the presence of Air Borne Asbestos respirable fibre(s)
- Dust swabbing and testing for the presence of surface Asbestos fibre(s).

### Hold Release

- When the hygienist is satisfied that all ACM has been removed as far as is practicable.
- When all air quality monitoring results return readings < 0.01fibres / mL
- When dust swabs return a negative for the presence of Asbestos fibre(s)

At this point, a Clearance Report will be issued allowing full and uncontrolled access to the ACM removal zones.

## 9 HAZARDOUS MATERIALS REMOVAL

### 9.1 Polychlorinated biphenyls (PCBs) - Removal

The pre-demolition HazMat Report Doc Ref:754-BNEEN282781 list the starting capacitor units in the existing fluorescent lighting to both the Accommodation Block and the Main Hall as being suspected of containing PCBs. It is intended to remove these lights (capacitors) under Hazardous materials handling standards and treat all the capacitors as potentially containing PCB oils, until proven otherwise by reference to the National index of Capacitor serial numbers of the type containing PCBs.

As a minimum, the following level of PPE and RPE will be utilized for the handling of the suspected capacitors.

#### PPE

- Disposable coverall (Type 5/6, Level 3)
- Chemical resistant gloves (non-porous)
- Safety eyewear (clear)
- Safety Helmet with full face screen
- Gum boots with a non-porous surface

#### RPE

- P2 Half face particulate filter (Cartridge)

#### Handling and Storage

- Place the removed capacitor into a 200um rated plastic bag
- If the capacitor has leached, then place the entire fluorescent light into the bag as cross-contaminated waste.

- Place a 220L drum with a resealable lid and line with 200um plastic bin liner.
- Place all bagged PCB waste into the drum and reseal the lid with the added application of adhesive tape applied to the upper horizontal lip for the full circumference.

## 9.2 Lead Based Surface Paint / Residual Dust - Remediation

Reference Doc: AS 4361.2-1998 Guide to Lead Paint Management

The pre-demolition HazMat Report Doc Ref:754-BNEEN282781 lists areas of surface paint with a concentration of lead to various levels greater than > 0.1%.

- Section 392 of the NSW Work Health Safety Regulation, 2017 defines lead paint as a paint containing greater than 1.0% by weight of lead in the context of a lead process.
- Australian Standard (AS) 4361.2 - 2017, Guide to Hazardous Paint Management: Lead paint in residential, public, and commercial buildings, defines lead paint as 'a paint film that contains greater than 0.1% lead by mass in the dry film'.
- As this standard has not yet been adopted in the WHS Act, WHS Regulation or Demolition Code, there is no current requirement to apply 0.1% lead by mass in dry film, as AS/NZS Standards are not legally enforceable.
- Standards are published documents that are designed to provide guidance to help ensure safety, performance, and reliability through the specifications of goods, services, and systems. Standards are not laws, so Section 392 of the Work Health Safety Regulation 2017 NSW defines lead paint as a paint containing greater than 1.0% by weight of lead in the context of a lead process.

Based on the above information derived from the advisory Standards and/or Regulations, the following work methodology(s) will be adopted for the handling and remediation of the timber areas with a surface paint in a dilapidated condition.

### 9.2.1 Lead Based Dust Removal

The HazMat report lists the areas above the ceilings to both buildings as being suspected of containing a lead content. These are the Main Hall and Annexes combined (1175m<sup>2</sup>), the Accommodation Block (750 m<sup>2</sup>).

As both areas are also listed as being suspected of containing a Friable Asbestos content, the remediation methodology will be under negative air working environment(s) which will have the equal if not greater controls and standards that would be reasonably met for such Lead remediation works.

Based on these factors, EnviroPacific deem that the Lead dust hazard will be eradicated in line with the Friable removal process and controls.

### 9.2.2 Lead Based Paint Removal

Where there is visual evidence of surface areas of timber cladding having a dilapidated and flaking condition, the following steps will address the remediation requirements.

As a minimum, the following level of PPE / RPE will be utilized for the handling and removal of the lead-based paint:

#### PPE

- Disposable coverall (Type 5/6, Level 3)
- Chemical resistant gloves (non-porous)
- Safety eyewear (clear)
- Safety Helmet with full face screen
- Gum boots with a non-porous surface

#### RPE

- P2 Half face particulate filter (Cartridge)

#### Handling and Storage

- Placement of 200um plastic ground sheets to capture residual lead-based material loosened during removal processes.
- Only carry out scraping removal methods under dampened wet conditions.
- Only carry out sanding with a unit containing a built-in HEPA vacuum collection capability.
- Place a 220L drum with resealable lid and line with 200um plastic bin liner.
- Place all bagged Lead waste into the drum and reseal the lid with the added application of adhesive tape applied to the upper horizontal lip for the full circumference.

**Disposal**

- Transport and lawful disposal in accordance with QLD DES Regulations 2019.

**10 CONTAMINATED SOILS REMEDIATION**

The Soil Remediation Planning Doc Ref: 754-BNEEN282781 (Coffey) lists the following contaminants of concern identified in soil at the site:

- Organochlorine pesticides (OCPs)
- Asbestos fines and ACM
- Metals (Zinc)

The presence of OCP's is a direct result of previous use of chemicals (pre-1990) in spraying for pest control. Example compounds include:

- Aldrin
- Dieldrin
- Chlordane
- DDT
- Heptachlor

The presence of Asbestos (Fines) means there is respirable fibre mixed in with the soils. These will have the propensity to become easily airborne when soils are disturbed. The presence of OCP's and heavy metals (Zinc) is a secondary concern in regard to potential impact to human health during site remediation works, but is noted as controlled during measures applied for asbestos in soil.

The site will be separated into sections for staged soil remediation works to negate the risk of cross-contamination of clean, completed areas. The zones will likely be listed as Area1, Area 2A, Area 2B, Area 3, Area 4A and Area 4B once the RAP is reviewed and the size of each remediation zone confirmed.

**10.1 Risk to Human Health**

Soil materials on the site containing OCPs which exceed the NEPM HIL-C guidelines are considered to pose a potentially unacceptable risk to human health in the context of the proposed future use of the site for a park or open space land use. Relevant guidance notes have been included below in this ARCP so site workers are informed of other contaminants of concern during ACM removal works and appropriate controls.

- DRAFT 114 Newdegate Street Greenslopes Remediation Planning (Coffey) Report reference number: 754-BNEEN282781 Date: 25 January 2022. Fragments of ACM and asbestos fines which exceed the nominated ILs have been reported in previous investigations of the Site.
- Fragments of ACM were not observed in the 2021 investigation and were not reported in soil samples analysed in 2021.
- As a precautionary measure the upper soil deposits should be considered to contain ACM and there would also be the potential for fragments of ACM to be displaced into the upper soil deposits during demolition of the existing buildings.
- Conceptually this may be to approximately 0.4m depth, based on the assumption that the maximum depth community members would dig to could be 0.3m if undertaking digging for a garden bed or similar.

## 10.2 Proposed Soil Remediation Works

Proposed works for soil remediation will take place following the completion of ACM removal and demolition works to remove the buildings from site.

- As part of the demolition works the concrete hardstand in Area 4A and 4B will be retained.
- The hardstand from these areas is to be removed once excavation has been completed in Area 1, Area 2A/2B and Area 3.

The proposed sequence of remediation works, pending review of the RAP when available, includes:

- Site establishment and set up of environmental controls required during remediation works.
- Clearing of shrubs/trees around the site.
- Excavation of contaminated materials in accordance with the depth described in Table 10-3. Reference Report 754-BNEEN282781 Soil Remediation Planning (Coffey). The proposed sequence of remediation planning areas in order of excavation are Area 1, Area 2A, Area 2B, Area 3, Area 4A and Area 4B.
- Validation sampling including a hold point to determine if further excavation is required to the achieve remediation objective.
- Reinstatement of excavated areas with clean fill sourced from a certified quarry, clean topsoil from a certified source, and establishment of an appropriate ground cover.
- Discussion with the site Auditor on whether the site is to remain on the EMR or can be removed from the EMR.
- Preparation of a Contaminated Land Investigation Document (CLID) including a Site Suitability Statement and Draft SMP (if required) if the Site is to remain on the EMR, or Preparation of a Validation Report including a Site Suitability Statement if the property is to be removed from the EMR.
- Preparation of the Site Auditor Certification and submission of the documentation to the Department of Environmental and Science (DES).

**Note:** validation sampling will be undertaken progressively during site excavation work DRA

## 10.3 PPE / RPE for working with Hazardous Soils

Compulsory, minimum requirements for the Soils Remediation works

### PPE

- Disposable Coveralls (Type 5/6, Cat3)
- Safety Gloves (Nitrile) Chemical resistant / non-porous
- Rubber gum boots (steel capped) (non-porous surface)
- Safety eyeglasses – wrap around style (Solar tinted)
- Safety Helmet with sun protection brim

### RPE

- P2 Half Face with particulate filter (Cartridge)

## 10.4 Airborne Dust Containment methodology

With any breaking and disturbing of soils by mechanical means, there is a risk of dust release becoming airborne. To manage the dispersion and movement of the dust hazard, the following controls will apply:

- Current weather reports will form part of the site Daily Consultation meeting between all interested parties. In the event of high wind days, the Project Manager / Supervisor will decide as to the risk level with continuing soil disturbance work(s).
- Factors such as wind direction and speed will be considered when deciding to either cease work(s) and make safe or continue work(s) with all controls.

### 10.4.1 Dust Suppression

The use of water delivery is the most effective method of suppressing dust from becoming airborne. Enviropacific will maintain a water delivery by either –

- Mains fed down stream of the BCC Water Meter delivered via a temporary polyurethane pipeline, or



- Water tanker fitted with a fuel powered 'Fire Fighters' pump delivery system.

When water is used to provide dust suppression, it is important to control the volume of water delivery to negate the risk of creating site run-off and/or cross-contamination of adjacent zones. An alternative to water spray for dust suppression is the use of tarps or 200um plastic sheeting spread out over the works area and soil stockpiles at end of the shift, or when the site is unattended.

When stockpiles are fully encapsulated with a blanket cover it is critical that the base of the stockpiles are fully bunded. This will prevent unplanned run-off and can be used to weight down the plastic sheet cover. It may be necessary to seal overlap joints with adhesive tape or weights.

#### **10.4.2 Soil Stockpiles**

All stockpiling of excavated soils will require the following minimum control measures:

- 200um plastic sheeting laid at ground level to negate the risk of hazardous soils leeching into areas determined as 'clean'.
- Filled sandbags or socks placed around the full circumference of the stockpile with the ground plastic sheeting raised up and overlapping at the edges.
- Soils will be placed evenly with-in the stockpile edges and the size of the footprint will determine the volume of waste. This is designed to prevent spillage over the bunded sides.
- A water spray will be used to maintain a damp surface thus reducing the risk of airborne dust release.
- 200um plastic sheeting or tarps will be used to cover the stockpiles when unattended.

#### **10.4.3 Site Run-off**

The site has a footprint that falls south to north and northwest. As such, the following run off controls will apply:

- A silt fence will be constructed for the full length of the Northern boundary line.
- A silt fence will be constructed for the northern half of the western boundary joining with the northwest corner.
- The dedicated vehicle entry and exit point located to the Newdegate Street frontage will have a 200mm deep layer of oversize gravel or recycled concrete. This will act as a 'Shaker' and is designed to trap any soils released during wash down of the trucks prior to exiting site.

### **11 GENERAL**

#### **11.1 DECONTAMINATION OF PERSONNEL**

The personal decontamination process is as follows –

##### **Non-Friable Decontamination**

- The worker will retain the full level of the PPE / RPE prior to commencing the 'Dry' decontamination process(s).
- The worker is to engage a 2<sup>nd</sup> party where possible to assist with a HEPA vacuum clean of the outer surface of the protective coveralls.
- The worker will apply the vacuum directly to their safety boots and thoroughly cleanse the surface / soles.
- The outer surface of the coveralls will now be 'washed' down.
- The mask will be wiped down with a damp rag whilst it is still attached and is in operation.
- The worker will now remove PPE items - i.e gloves and coveralls and place them directly into a 200um rated plastic bag for further disposal as controlled waste.
- The P2 Half Face mask will be kept in place and the filter cap removed to allow the pre-filter to be changed out with all used pre-filters being deemed controlled waste.
- Following the removal and replacement of the pre-filter the worker can now safely remove their P2 mask.

- **Note:** It is important to always install the solid filter cover when storing the mask as the main particulate filter may be nearing 'End of Use' and will be full of trapped fibre.

## Friable Decontamination

The wet decontamination shower unit will be trailer mounted and located at the point of dedicated egress or access from the site into the negative air working environment. All workers will undergo a 5-part decontamination process as follows:

- Wet Decontamination – egress from the asbestos removal area and enter the shower unit.
- Dirty Decontamination – wash off dirty coveralls, retain full RPE, strip off dirty overalls and place in receptacle.
- Move through Buffer Zone into clean shower retaining full RPE.
- Enter clean shower and wash down including RPE (keeping filter dry where possible), then remove RPE and install solid filter cover and hang up in clean area.
- Exit clean shower, change into dry clothes and move freely around the non-hazardous area of site.

## 11.2 DECONTAMINATION OF PLANT, EQUIPMENT AND TOOLS

Plant, equipment and tools that are engaged to work within asbestos removal areas must be clearly identified during the procurement stage. This will allow for ease of tracking when the project is complete, as some tools and equipment may have to remain in a sealed environment and only be released to undertake similar works.

Providers of plant and equipment to be used in the asbestos work area are to be advised in writing that the plant is required to work within this area (It is common practice for Hire Companies to have their own Decontamination checklists that must be completed to their required standard).

At the end of the asbestos removal work, all tools should be:

- Decontaminated - i.e fully dismantled and cleaned in a suitable asbestos work area; or
- Placed in sealed containers that are labelled 'For asbestos removal work only' or
- Disposed of as asbestos waste.

## 12 WASTE CONTAINMENT AND DISPOSAL

### 12.1 Storage of Waste at Site

A specialist contractor, licensed to transport and dispose Controlled and/or Hazardous Waste under the QLD Environmental Protection Regulation 2019 will be engaged to supply, deliver and service metal skips for the disposal of Hazardous soils at site not already encapsulated in a covered stockpile.

- All stored soils will be encapsulated with-in 200um plastic sheeting with those soils that may be in bins having open tops covered when not being filled.

### 12.2 TRANSPORT

A specialist contractor, licensed to transport and dispose Controlled and/or Hazardous Waste under the QLD Environmental Protection Regulation 2019 will be engaged to supply, deliver and service skips or supply body trucks for the load-out and transport of the Hazardous soils from site. Site specific truck driver inductions will be given to all workers involved in these areas and all trucks, truck bodies, bins or skips will be subject to a thorough washdown and inspection prior to the transport vehicle exiting the site.

## 13 INTERNAL ENVIROPACIFIC REFERENCES

- Asbestos removal control plan (ARCP) (this plan)
- Daily consultation briefing



- Health surveillance procedure
- Inspection and test plan (ITP)
- Inspection and test report (ITR)
- PPE register
- Plant pre commencement checklist and inspection form
- Project WHS and Environmental Risk Assessment-Register
- QHSE work plan
- Safe work method statement (SWMS)
- Toolbox talks
- Truck driver induction

### 14 EXTERNAL REFERENCES

- *Work Health and Safety Act 2011(QLD)*
- *Work Health and Safety Regulation 2011 (QLD)*
- *EPA Act 1994 (QLD)*
- *Environmental Protection Regulation 2019 (QLD)*
- **AS 1216** *Class labels for dangerous goods*
- **AS 1319** *Safety signs for the occupational environment*
- **AS/NZS 1715** *Selection, use and maintenance of respiratory protective equipment*
- **AS/NZS 1716** *Respiratory protective devices*
- **AS 4260** *High efficiency particulate air (HEPA) filters – Classification, construction, and performance*
- *How to Manage and Control Asbestos in the Workplace Code of Practice*
- *How to Safely Remove Asbestos Code of Practice*