Wickham Wool Store Fire Emergency Asbestos Management Plan

Wickham Wool Store Fire Local Recovery Committee

City of Newcastle
Environment Protection Authority
Fire and Rescue NSW
NSW Health
Public Works Advisory
SafeWork NSW

Date: April 2022

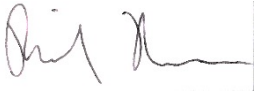
NSW GOVERNMENT

Title:	**Wickham Wool Store Fire Emergency Asbestos Management Plan**
Available to:	
Authorisation:	
Publication date:	April 2022
Current version number:	Version 8
Document number:	Wickham Wool Store EAMP

Version No.	Issue Date	Author	Reason for Change
Draft 1.0	01/04/2022	Wickham Wool Store Fire Local Recovery Committee	
2.0	04/04/2022	Wickham Wool Store Fire Local Recovery Committee	Minor amendments

DOCUMENT APPROVAL

This document has been endorsed and approved for use:

Name	Position	Signature	Date
James Goodwin	Acting Executive Director Regulatory Operations, NSW Environment Protection Authority		05/04/2022
Jeremy Bath	Chief Executive Officer, City of Newcastle		05/04/2022
Tony Williams	Executive Director, Compliance and Dispute Resolution, SafeWork NSW		05/04/22
Martin Dwyer	Director, Engineering Emergency Management, Public Works Advisory		06/04/22
Paul McGuiggan	FRNSW Assistant Commissioner Metropolitan Operations		06/04/2022
Richard Broome	Executive Director, Health Protection NSW		07/04/2022

A signature is required for validation and to effect the approval

Table of Contents

Tables

Figures

Appendices

1. Introduction

1.1. General Overview

The Emergency Asbestos Management Plan (EAMP) is the central control document to manage the Asbestos Containing Debris (ACD) clean-up recovery works after the Wickham Wool Store Fire (Wool Store Fire) which occurred on 1st March 2022. The Wool Store Fire occurred in two large warehouse style timber framed brick veneer buildings with corrugated asbestos cement roofing, located at 33 and 49 Annie Street, Wickham NSW.

In New South Wales under the Protection of the Environment Operations Act 1997 the polluter is responsible for cleaning up following a pollution incident.

The Local Emergency Management Committee was stood up on 3 March 2022 in accordance with the NSW Government's State Emergency Plan to oversee the response to the Wool Store Fire and subsequent ACD clean-up. The Emergency Operations Centre at City of Newcastle's 12 Stewart Avenue was established on 2 March, bringing together representatives from NSW Police, Fire and Rescue NSW (FRNSW), NSW Environmental Protection Authority (EPA), Public Works Advisory (PWA), City of Newcastle (CN) and NSW Health on 7 March 2022.

On 16 March 2022, this transitioned to the Local Recovery Committee comprising relevant NSW Government Agencies including EPA, NSW Health, SafeWork NSW, FRNSW, PWA and CN.

Since the Wool Store Fire event on 1 March 2022, an ACD clean-up of exterior areas of private residential properties and public domain areas commenced, with significant progress made. Public information has been provided via three public meetings, drop-in sessions, and community updates through CN and EPA websites.

ACD from the Wool Store Fire was dispersed on external surfaces. Visible ACD was found in adjacent evacuated apartments, where the density and size of ACD was higher. Moving further from the Wool Store Fire, the ACD reduced in size and commonly washed off hard surfaces into gutters or drainage lines.

Extensive airborne asbestos monitoring has been undertaken relating to the Wool Store Fire. Monitoring results collected in this process to date have shown that all results were below the detection limit. Based on airborne asbestos monitoring and site assessments, there is no evidence to indicate that the community has been exposed to airborne asbestos fibres above background levels from the Wool Store Fire.

Internal cleaning of adjacent buildings was not considered to be required based on the airborne asbestos monitoring results and independent testing of asbestos in dust within some residences, which returned negative results.

Airborne asbestos monitoring locations are shown in Appendix D, and results are available at www.newcastle.nsw.gov.au/council/news/emergencies/wickham-fire-incident/air-monitoring-results.

The EAMP has been developed by the Wickham Wool Store Fire Local Recovery Committee. The EAMP provides a framework for the management and control of asbestos impacts resulting from the dispersion of ACD. ACD has been identified at various locations extending approximately three kilometres in a north-westerly direction from the Wool Store Fire (Impact Area).

The ACD clean-up works have the objective of removing visible ACD fragments from private residential properties and public domain areas. There is the potential for minor ACD fragments to remain or appear following the ACD clean-up works. This is addressed by an unexpected finds protocol.

The EAMP is a living document, with a cycle of continuous review that addresses the decisions made that demonstrate a framework used by the Local Recovery Committee to adhere to environment protection and Work Health and Safety (WHS) legislation, and communication to the affected community.

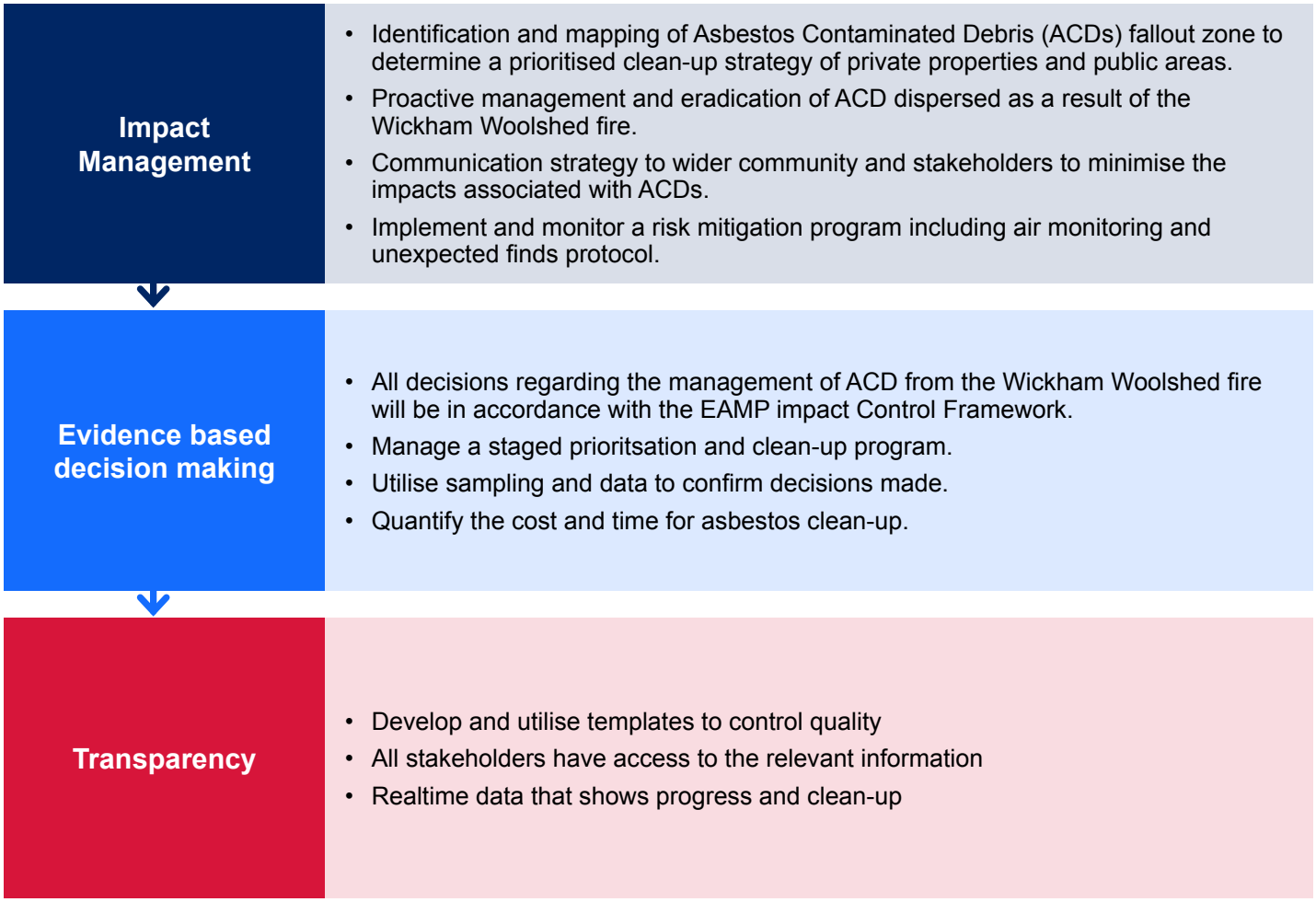
The EAMP will ensure processes and decisions are implemented with clear objectives, targets, performance measures and defined responsibilities. The Key Performance Indicators (KPIs) demonstrate compliance with regulations and continuous improvement.

Implementation of the EAMP will be overseen by the Local Recovery Committee. The Local Recovery Committee will monitor and report on the performance and progress of the EAMP. Regular audits will be undertaken of Class A Contractor and Local Asbestos Assessor (LAA) performance.

1.2. Principles

The principles of the EAMP are summarised in Figure 1.

Figure 1 – Principles of the Emergency Asbestos Management Plan



All stakeholders will be aware of their responsibilities under the EAMP. The EAMP will be communicated widely, including to relevant workers and parties and the affected community.

Nothing contained within the EAMP may be considered to alter or modify requirements and guidelines as set down in the NSW Work Health and Safety Regulation 2017 (WHS Regulation) and relevant Codes of Practice, or the requirements under other relevant legislation.

2. Objectives and Scope

2.1. EAMP Objectives

The objectives of the EAMP includes:

- Document the management processes to be implemented to ensure asbestos hazards are controlled, handled and disposed appropriately to achieve compliance with the WHS Regulation and current Codes of Practice.
- Reduce the impact of exposure to ACD associated with the Wool Store Fire including workers undertaking work within ACD impacted properties and the affected community, and also to comply with the WHS Regulation and associated Codes of Practice.
- Ensure the safe and thorough ACD clean-up of public domain areas and exterior of private residential properties for the long-term health and confidence of impacted communities.

- Provide a consistent and transparent approach to the management of visible ACD on impacted private residential properties and public domain areas.

2.2. EAMP Scope

The scope of the EAMP includes:

- Private residential properties within the Wool Store Fire impact area which have been affected by ACD from the Wool Store Fire.
- Public domain areas, including roads, footpaths, cycleways, parks, playgrounds and other public spaces within the mapped Wool Store Fire impact area which have been affected by visible ACD from the Wool Store Fire.

A number of other areas such as childcare centres were prioritised for ACD clean-up.

The EAMP does not apply to:

- Wickham Wool Store site – the ACD clean-up of the site where the fire occurred is the responsibility of the building owner.
- Non-residential properties – non-residential property owners should seek legal and insurer advice in relation to any ACD clean-up that may be required.
- Waterways – relevant authorities have been notified of the event and have responsibility for managing their assets.
- Department of Education – DoE enacted its own Asbestos Management Plan for the ACD clean-up of schools.

2.3. WHS Objectives

The Local Recovery Committee have the following objectives with respect to Work Health and Safety (WHS):

- Prevent workplace incidents during the Wool Store Fire ACD clean-up.
- Reduce the impact of incidents on workers (injury management).
- Reduce the direct and indirect costs associated with poor WHS management.
- Satisfy the requirements of the WHS, workers compensation and injury management legislation.

These WHS objectives will be achieved through implementation of this EAMP. Each organisation, party and individual is responsible for its own compliance with relevant WHS legislation.

Activities carried out by the Local Recovery Committee, LAAs and Class A Contractors is subject to legislation, including regulations, statutory requirements, impact assessments, licences and approvals. The NSW Work Health and Safety Act 2011 (WHS Act), WHS Regulation and associated SafeWork NSW Codes of Practice detail some of the requirements for the management of ACD.

The WHS Regulation contains requirements for the management of Asbestos Containing Materials (ACMs).

The SafeWork NSW Codes of Practice relevant to the management of ACMs include the following:

- How to Manage and Control Asbestos in the Workplace 2019.
- How to Safely Remove Asbestos 2019.

The requirements of the WHS Regulation and SafeWork NSW Codes of Practice are reflected in this EAMP. The WHS requirements for asbestos licence holders are summarised in Appendix G.

3. About the EAMP

The EAMP provides a framework on how work on visible ACD impacted private residential properties and public domain areas are to be managed, who is responsible, lines of communication and the structured approach to ACD clean-up and validation with data.

The EAMP provides the mechanisms and structure to ensure impacted private residential properties and public domain areas are managed with consistent high standards to reduce the likelihood of unplanned exposure to asbestos fibres.

To achieve this, the EAMP is underpinned by the following:

1. Assessing visible ACD density for the purpose of prioritisation and management of ACD clean-up works.
2. Scoping of ACD clean-up works in the Wool Store Fire impact area.
3. Developing Asbestos Clearance Certificate templates and processes.
4. Developing procedures for ACD clean-up works.

5. Developing a framework for communication of ACD clean-up.
6. Auditing procedures and templates to demonstrate KPI's are met.

The EAMP will be stored in the document storage system for CN and will be accessible by all stakeholders and workers.

SafeWork NSW notification is to be undertaken in accordance with the WHS Regulation; however, the 5 day notification period has been waived until further notice.

3.1. EAMP Structure

The Local Recovery Committee has developed the EAMP to manage the impacts of ACD in accordance with the WHS Regulation and other relevant legislation. The EAMP provides a management approach that communicates impacts and provides a framework for management of visible ACD associated with the Wool Store Fire.

The EAMP contains the following information:

- organisation assessment and validation process.
- management of unexpected finds of visible ACD.
- requirements for ACD clean-up within the Wool Store Fire impact area.
- safe working practices.
- scope and limitations of the EAMP.

4. The Wickham Wool Store Fire Incident

The Wool Store fire commenced on 1 March 2022 and took approximately four days to fully extinguish. During the Wool Store Fire, the entire building structures and contents of two of three Wool Store buildings at the site became fully involved in the fire. The entire contents of both buildings were destroyed leaving just the walls standing which were considered structurally unstable and were subsequently demolished.

The roofs of the buildings were constructed with corrugated asbestos cement sheeting and other Asbestos Contaminated Materials (ACMs) were also present. These ACMs were destroyed by the fire and ACD within the smoke plume was distributed sporadically in fall-out beyond the Wool Store Fire site for approximately 3 kilometres in a north-westerly direction (see Figure 2).

In a fire event, ACMs which were typically utilised for their fire protective and non-combustible properties can suddenly crack and break causing the product to degrade as the result of loss of moisture from the high temperatures. Under these fire conditions, ACMs can 'explode' or spall into smaller pieces such as flakes. These smaller pieces were found in the Wool Store Fire site and were dispersed from the smoke plume.

Studies have shown that during a fire event involving ACMs, a significant volume of air is drawn into the fire and asbestos fibre bundles and free fibres can be present in the smoke plume. The air drawn in along with firefighting techniques decreases the concentration of airborne asbestos fibres at the source and asbestos fibre bundles and free fibres are diluted and dispersed with no effect beyond the Wool Store Fire site. Levels of airborne asbestos fibres are typically below the detection limit.

The concentration and size of deposited ACD decreases with distance from the Wickham Wool Stores. The heaviest concentration of ACD is likely to be on the third adjacent Wool Store building that was not burned down. The building owner is undertaking clean-up work of the remaining Wool Store building roof. Heavy rain during and immediately after the Wool Store Fire resulted in most of the smaller ACD being washed down road drains and pipes. There is a risk that drying out of ACD and windy conditions can continue to blow ACD from building roofs and gutters. An unexpected finds protocol has been developed to address this recontamination of cleaned areas.

Typical larger ACD fragments up to 10cm length are shown in Figure 3 below.

4.1. Clean-Up Responsibility

In New South Wales under the Protection of the Environment Operations Act 1997 the polluter is responsible for cleaning up following a pollution incident. In some emergencies, like this one, clean-up action must start as soon as possible to protect public health and safety and not wait for the responsible entity be identified and to pay. Investigations into the responsible party and cause of the fire are ongoing. The City of Newcastle and Public Works Advisory have engaged specialists who have already started the clean-up (see Figure 4).

Figure 2 – Wind Direction during Wool Store Fire.

Figure 3 – Typical Asbestos Containing Debris (ACD) from the Woodshed fire.

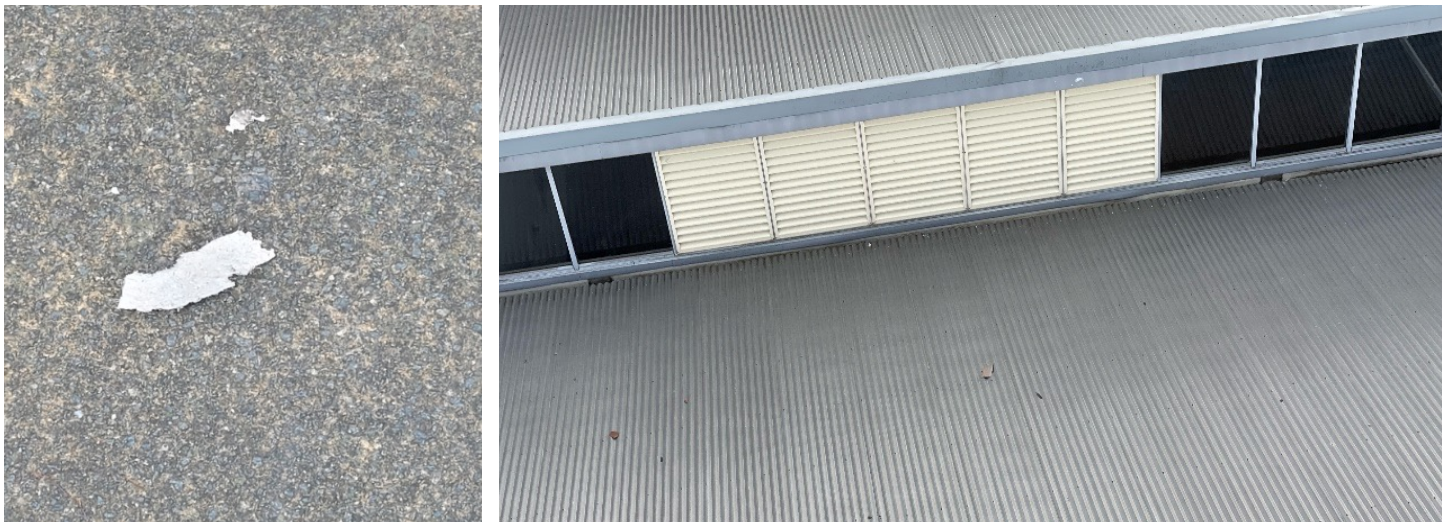


Figure 4 – Photo of Class A Contractor Undertaking ACD Clean-up Work

4.2. Clean-Up Progress as at 31 March 2022

Since the Wool Store Fire event on 1 March 2022, ACD clean-up of external areas of private residential properties and public domain areas has commenced, with significant progress made.

Around 400 residents have reported possible ACD on their properties via the EPA's Environment Line. Residents from 200 households that were evacuated have returned home.

PWA has deployed specialist teams to assess and clean up the external areas of ACD impacted properties. Their focus was first to send teams to homes closest to the Wool Store Fire and most heavily impacted by visible ACD. Once the scope of works has been agreed with the property owner, teams of Class A Contractors undertake an extensive ACD clean-up that is time intensive. In some situations, homes close to the Wool Store Fire took three days to clean. LAAs undertake airborne asbestos monitoring during and after the ACD clean-up and provide Asbestos Clearance Certificates following satisfactory ACD clean-up in accordance with the Scope of Works.

Approximately 200 private residential properties have been cleaned and issued with Asbestos Clearance Certificates.

Demolition of the two fire affected Wool Store buildings is complete with asbestos waste being safely transported to the local waste management facility for disposal as asbestos waste.

Significant ACD clean-up of public streets, parks, playgrounds and footpaths has been undertaken by Class A Contractors with airborne asbestos monitoring and Asbestos Clearance Certificates provided by LAAs.

Public information has been provided via three public meetings, drop-in sessions, community updates and the CN and EPA websites.

5. Public Health and Air Monitoring

5.1. Health Impacts

The risk of adverse health outcomes is dependent on the number of asbestos fibres breathed in and is generally associated with continued exposure to a large number of fibres over long periods of time (usually in occupational settings).

During and since the Wool Store Fire, there has been prolonged rainfall which has helped prevent fibres from becoming airborne.Information from FRNSW rapid assessment reports indicates that ACD from the Wool Store Fire that landed on properties, were fragments of non-friable asbestos cement debris with some loose fibres. The wetting of ACD, either by hoses or by rain, has helped prevent fibres from becoming airborne.

Based on airborne asbestos monitoring and site assessments, there is no evidence to indicate that the community has been exposed to airborne asbestos fibres above background levels from the Wool Store Fire.

5.2. Airborne Asbestos Monitoring

Since the Wool Store Fire, no airborne asbestos has been detected above the detection limit by airborne asbestos monitoring around impacted suburbs.

Airborne asbestos monitoring is undertaken using specialist portable sampling pumps fitted with filters which have been deployed across the Wool Store Fire impact area, with monitoring to continue throughout the ACD clean-up.

A sample is collected by drawing a measured quantity of air through a membrane filter using a sampling pump. Any breathable fibres are then sized and counted in accordance with a technical criterion, using specialist laboratory equipment. The results are calculated as fibres per millilitre of air.

LAAs are responsible for airborne asbestos monitoring. The results are analysed at a laboratory accredited by the Australian National Association of Testing Authorities (NATA).

Airborne asbestos monitoring around the immediate perimeter of the incident site, surrounding streets and suburbs was implemented on the morning of 2 March 2022. This monitoring has occurred daily and to date, with all airborne asbestos monitoring results being less than the detection limit of 0.01 fibres/ml air.

In addition, airborne asbestos monitoring is also undertaken around the perimeter of properties during ACD clean-up by Class A Contractors. These results have also returned results of less than the detection limit of 0.01 fibres/ml of air.

On any one day, there can be in the order of 100 airborne asbestos monitors in operation around the Wool Store Fire site. Thus far, all air results indicate asbestos fibre concentrations of less than the detection limit of 0.01 fibres/ml of air.

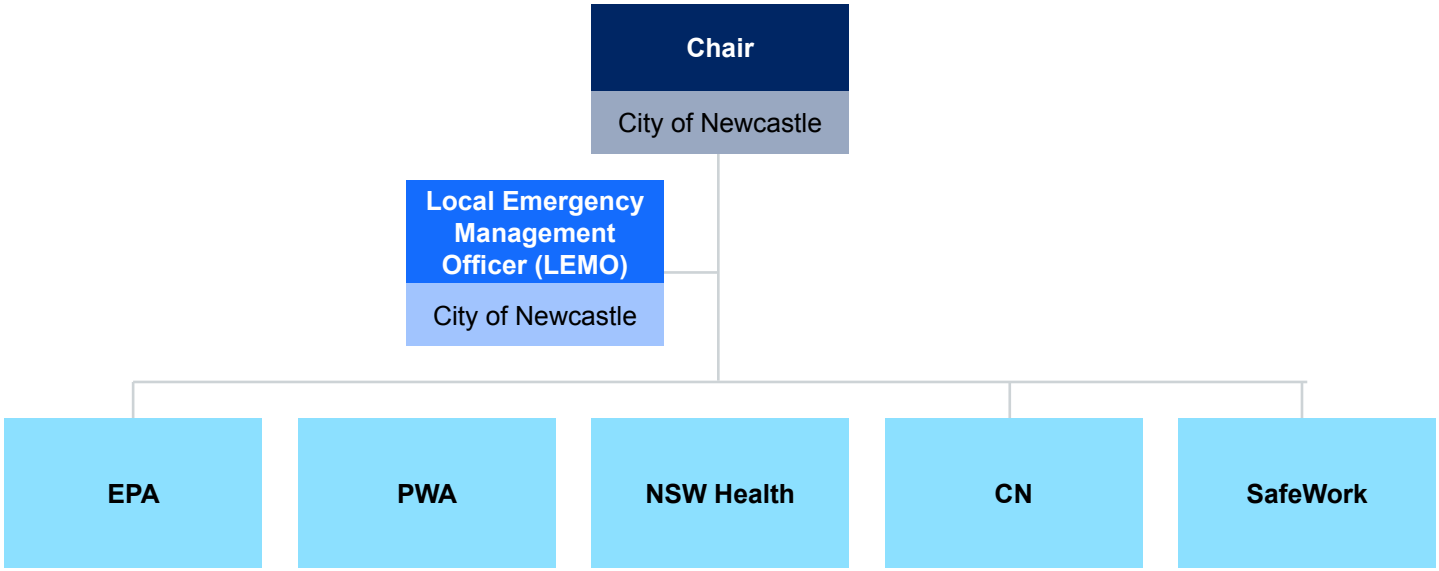
Airborne asbestos monitoring will continue throughout the ACD clean-up.

Airborne asbestos monitoring locations are shown in Appendix D. Results from the air monitoring undertaken is available at www.newcastle.nsw.gov.au/council/news/emergencies/wickham-fire-incident/air-monitoring-results.

6. Local Recovery Committee Overview

The Wickham Wool Store Fire Local Recovery Committee is made up of several stakeholders that includes Government agencies and LAAs, as shown in Figure 5.

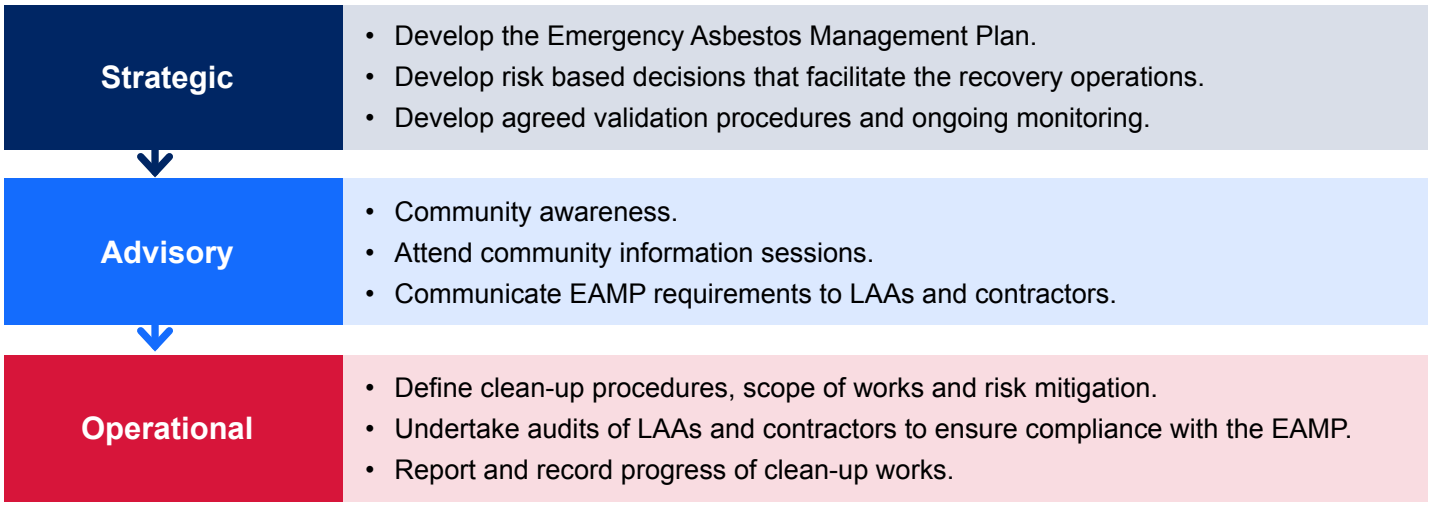
Figure 5 – Wickham Wool Store Fire Local Recovery Committee Structure



The Local Recovery Committee is tasked with directing the Wool Store Fire ACD clean-up and recovery operations as summarised in Figure 6.

CN is the coordinator of the Local Recovery Committee.

Figure 6 – Local Recovery Committee Objectives



7. Approach to Emergency Asbestos Management Plan

The EAMP has been developed to be a living document, clearly defining core objectives that measure the effectiveness of the EAMP, and to ensure best practice procedures are used. A core objective summary table is included in Appendix J. A five-step approach has been used to structure the EAMP and allow clearly defined mechanisms, monitoring effectiveness and continual improvement:

Figure 7 – Five Step Approach to the Emergency Asbestos Management Plan

Commitment & Communication

- The Local Recovery Committee commits to actively assess hazards and reduce impacts.
- Integration of the EAMP into the decision making and impact management for visible ACD resulting from the Wool Store Fire.
- Clearly define the responsibility of all agencies, Person Conducting a Business or Undertaking (PCBU) and workers.
- Define performance targets for the management of ACD clean-up works.
- Report and record the ACD clean-up progress, and validation process.

Manage Asbestos Impact

- Create a systematic and replicable assessment approach for the management of visible ACD.
- Ensure workers undertaking ACD clean-up works meet regulatory requirements by using licensed and qualified contractors and consultants.
- Define objectives and mechanisms for managing visible ACD within the Wool Store Fire impact area.

Resource Efficiency

- Efficiently use financial resources for the identification and management of visible ACD resulting from the Wool Store Fire.
- The ACD clean-up will be subject to the impact assessment process to guide the extent of ACD clean-up activities and help prevent unnecessary ACD clean-up activities.
- Define the scope of works and provide a pretender estimate prior to awarding tendering works.

Stakeholder Engagement

Understand stakeholder expectations, including regulators, unions, workers, residents, and engage with their concerns and demands.

- Ensure all stakeholders and workers are engaged and aware of this EAMP.
- A Joint Agency Communications and Engagement Strategy has been developed separately to follow this EAMP to support its implementation.

Review & Improvement

- Formulate management strategies (i.e. forms and checklists) to ensure delivery of services against the EAMP objectives.
- Develop a system which ensures all elements of the EAMP are regularly reviewed, audited and updated.

8. Step 1 – Commitment & Communication

The implementation of the EAMP requires commitment and communication across all stakeholders in the Local Recovery Committee. The communication is supported by the structure of the organisation and the inherent responsibilities and obligations of each stakeholder. A Joint Agency Communications and Engagement Strategy is being developed separately to follow this EAMP and support its implementation.

8.1. Responsibilities of the Local Recovery Committee

The Local Recovery Committee is responsible for the implementation of the EAMP regarding all residential ACD clean-up works.

The responsibilities include:

1. Development and oversight of the EAMP.
2. Communication of EAMP to all Stakeholders.
3. Identify ACD impacted areas for clean-up.
4. Management of systems to ensure licensed and qualified contractors and consultants are engaged to carry out asbestos-related works, including emergency situations, and to ensure the necessary safety standards are being maintained for any such works.

8.2. Responsibilities of Agencies

The various agencies of the Local Recovery Committee responsibilities include:

1. Review of systems to ensure that safety standards are being implemented by LAAs and Class A Contractors engaged to carry out asbestos-related works.
2. Ensuring that appropriate licences, safe work method statements and control measures of any LAA or Class A Contractor undertaking work meets the conditions and standards required.
3. Ensuring that assessment and sampling by a LAA are undertaken where required.

The Local Recovery Committee is accountable for implementing the EAMP in its areas of control, ensuring impacts are minimised, exposure to visible ACD on impacted properties is reduced and legal responsibilities are met.

8.3. Summary of Responsibilities

A summary of responsibilities is outlined in Table 1. Acronyms in Table 1 are as below:

- LRC – Local Recovery Committee
- EPA – NSW EPA
- CN – City of Newcastle
- PWA – Public Works Advisory
- Health – NSW Health
- SW –SafeWork NSW
- ACON – Class A Contractor (Class A friable asbestos removal licence holder)
- LAA – Licensed Asbestos Assessor

Table 1 – Summary of Responsibilities for the Emergency Asbestos Management Plan (EAMP)

Responsibility	LRC	EPA	CN	PWA	SW	Health	ACON	LAA
Achieve objectives and programs of the EAMP								
Allocate resources (human, technical and financial) to ensure the objectives and requirements of the EAMP are met								
Define policies, objectives, targets, responsibilities and procedures								
Ensure compliance with EAMP								
Ensure compliance with WHS legislation								
Communication								
Co-ordinate EAMP training (including induction and refresher training) and ensure workers have necessary training for their roles								
Continual review of the EAMP								
Assess Class A Contractors' compliance with the EAMP								
Ensure Safety audits are completed and corrective actions are implemented								
Identify, evaluate and prioritise ACD impacts through LAA assessment and sampling								
Develop Unexpected Finds and reporting								

9. Step 2 – Manage Asbestos Impact

The program of works for the Local Recovery Committee involves an impact-based prioritisation approach for the potentially ACD impacted residential properties, community service sites, and public domain areas due to the Wool Store Fire ACD. The CN's public domain portfolio includes public streets, parks, footpaths and other public assets (e.g. playgrounds and community gardens).

9.1. Airborne Asbestos Monitoring

Airborne asbestos monitoring has been undertaken as per the LAA requirements where ACD clean-up work was undertaken, around the demolition zone and at various public locations including parks and roadways. Airborne asbestos monitoring commenced around the Wool Store Fire site and extended through neighbouring streets on the 2nd of March 2022 and has continued daily.

The monitoring assesses levels of airborne asbestos fibres and the results are used to assess any ambient airborne asbestos fibres, the effectiveness of the ACD clean-up controls in place and to compare control limits specified by WHS legislation.

Clearance airborne asbestos monitoring is undertaken at the completion of ACD clean-up works within the ACD clean-up areas to assess levels of any potential airborne asbestos fibres.

As at 30 March 2022, a total of 714 samples have been collected and analysed with all results below the limit of detection. In addition, airborne asbestos monitoring undertaken during ACD clean-up works at external areas of residences, TAFE and schools have reported results below the detection limit of 0.01 fibres/ml.

Airborne asbestos monitoring locations are shown in Appendix D.

All airborne asbestos monitoring is to be conducted by a LAA in accordance with the "Membrane Filter Method for Estimating Airborne Asbestos Fibre" [NOHSC: 3003 (2005)] (Membrane Filter Method) with analysis undertaken by a laboratory accredited by the Australian NATA.

The minimum airborne asbestos monitoring requirements are as follows:

1. Control airborne asbestos monitoring to be undertaken at asbestos work area boundaries to determine whether the asbestos removal controls are effective, and the boundaries are correctly located. Airborne asbestos monitoring will be undertaken at any other areas nominated by the LAA. Control airborne asbestos monitoring is to be undertaken whenever ACD clean-up works are in progress.
2. Clearance airborne asbestos monitoring will be undertaken by the LAA upon completion of the ACD clean-up process and before asbestos work areas are dismantled and barriers are removed, together with a visual inspection, to confirm that final detail cleaning has removed all accessible visible ACD from the areas nominated in the Agreed Scope Register.
3. Reassurance airborne asbestos monitoring is to be undertaken in areas nominated and agreed by the Local Recovery Committee for a period of time to satisfy public concerns. The nominated areas and timeframes will relate to the proximity to Level 1 area and impacts associated with ongoing ACD clean-up works.

9.2. Licensed Asbestos Assessors Site Inspections and Clean-Up Works

Identification of visible ACD is undertaken by a LAA. The LAA conducts a site inspection of the designated property or public domains. The objective of the site inspections is:

- to determine if visible ACD is present, and if so, to assess the level of visible ACD in accordance with the rating system detailed in Section 9.7.
- Provide a scope of works recommendation for any ACD clean-up works required, in accordance with the scope of works detailed in Section 9.7.

The 'Agreed Scope of Work' is an acknowledgment by the owner of the property to PWA, that endorsed items at the property address will be cleaned of ACD or disposed of as asbestos waste. The owner is required to endorse each item within the Agreed Scope Register and ACD clean-up area before the project can proceed. If the LAA recommends ACD clean-up works are required, these are completed by a Class A Contractor with airborne asbestos monitoring to be conducted by a LAA.

At the completion of any ACD clean-up works, the LAA undertakes a visual asbestos clearance inspection with airborne asbestos monitoring to provide an Asbestos Clearance Certificates for the property. Asbestos Clearance Certificates must meet the requirements of the WHS Regulations, and as a minimum, conform to the template Asbestos Clearance Certificate provided in Appendix H.

The external cleaning of cars and roofs was only undertaken in the areas immediately adjacent to the Wickham Wool Stores. In this area the larger fragments of ACD have not been washed away off roofs. Cranes are used to enable workers to remove the larger ACD fragments from roofs and gutter to help prevent ACD falling onto roads or other areas.

9.3. Planning and Assessment of visible Asbestos Containing Debris

Planning and assessment of visible ACD deposition and clean-up works was undertaken based on the FRNSW rapid damage assessment data and calls to the EPA, which was then followed up by visual inspections by LAAs, as viewed from public roads and land.

An independent LAA consultant was engaged to walk around publicly accessible areas, such as roads, foot paths and parks, and quantify the number of visible ACD fragments per square meter and ACD size.

Four levels of impact were identified:

- Level 1 has a significant quantity of visible ACD more than several pieces of ACD fragment size greater than 10 centimetre square (>10 ACD fragments per m2).
- Level 2 has visible ACD between 1 to 10 ACD fragments per m2.
- Level 3 has visible ACD less than 1 fragment per 10m2
- Level 4 has visible ACD less than 1 fragment per 100m2

Private residential properties could not be lawfully accessed for the purpose of this initial assessment.

The definitions of the impact levels and applicable scope of works for each category is provided in Section 9.7.

9.4. Opt in Process for Private Residents

Due to legal property access requirements, an opt in process was necessary for the LAA site inspections, and where recommended, ACD clean-up works.

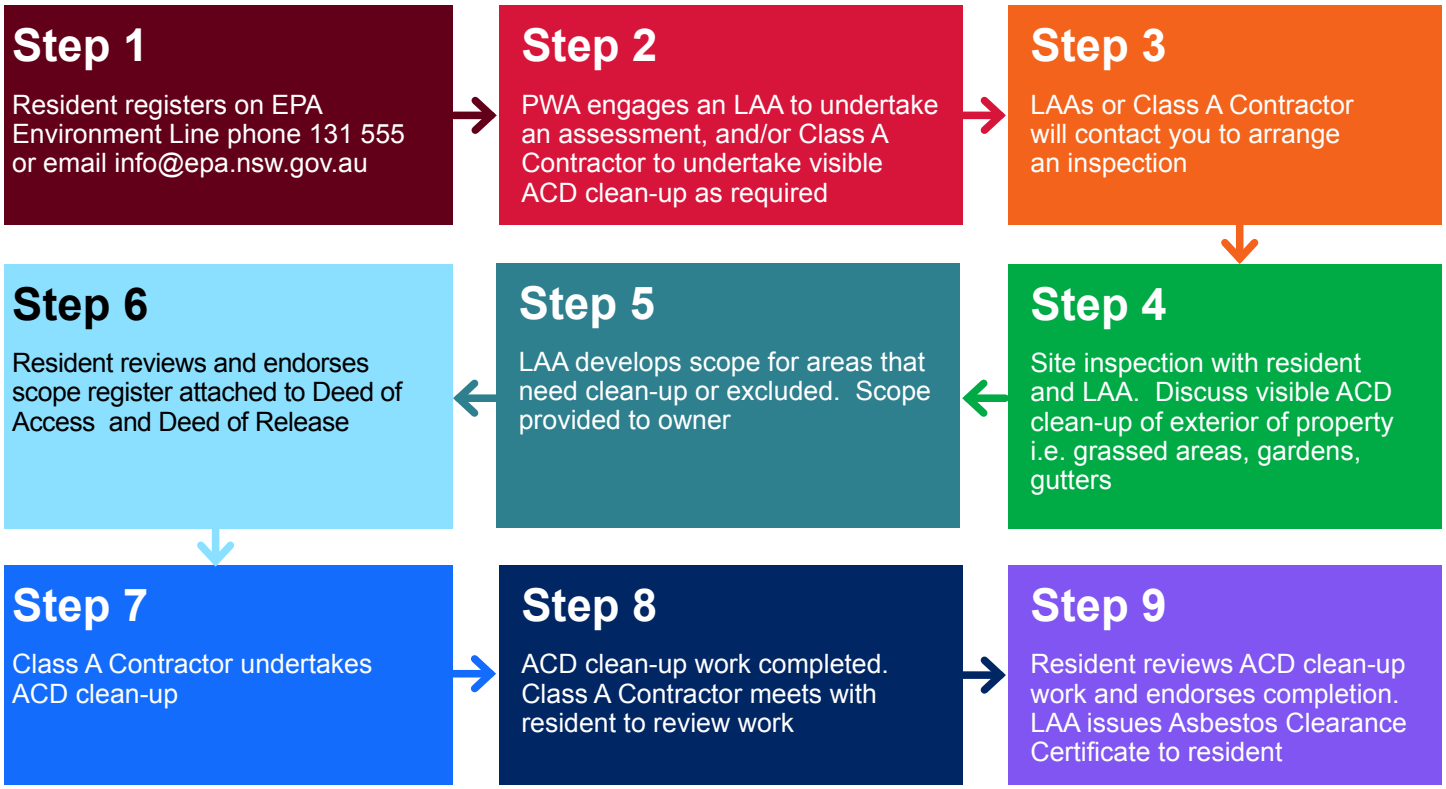
Properties assessed as having a level 1 or 2 impact who have registered, have been contacted to opt in. In addition, properties within these areas that have not registered have been pro-actively contacted in order to opt in. Whilst it is anticipated that the majority of residents within these areas will opt in, it is acknowledged that not all residents may opt in for an ACD assessment and/or potential follow up ACD clean-up.

Properties assessed as having a level 3 impact who have registered are to be offered an assessment by a LAA and appropriate level of clean-up offered.

Properties assess as having a level 4 impact are unlikely to have visible ACD as a result of the Wool Store Fire. If a residential property suspects the visible presence of ACD, the unexpected finds protocol applies.

The Wickham Wool Store Fire ACD Clean-up flowchart for property owners is provided in Figure 8 below.

Figure 8 – Wickham Wool Store Fire ACD Clean-up Flowchart for Properties Assessed as Having Level 1 or 2 Impact



9.5. Residential Properties Outside of Impact Areas

Residential properties located outside of the Wool Store Fire impact area are unlikely to have visible ACD as a result of the Wool Store Fire. An unexpected finds protocol is detailed in Appendix E.

If the resident or landowner is located outside of the Wool Store Fire impact area, and requires an ACD assessment and potential clean-up actions, they are recommended to engage a LAA for an assessment and arrange clean-up (if required). Those works do not come under the scope of this program.

9.6. Asbestos Containing Debris Inside Residential Properties

Visible ACD from the Wool Store Fire was dispersed on external surfaces.

Results of all external airborne asbestos monitoring undertaken throughout the asbestos impacted suburbs to date have also been below the detection limit. This also demonstrates that ACD is unlikely to have entered residential buildings.

The scope of works for the LAA assessment and any associated asbestos clean-up actions does not include the internal areas of properties.

Where residents are concerned that visible ACD has entered their properties, they may contact a LAA at their own expense for further advice.

9.7. Recommended Controls and Actions – Residential Properties

The recommended controls, level of service and response actions are based on the rating of the property or location. These are defined in Appendix F. Separate tables are provided for residential properties and public domain areas.

The scope of works applies for residential properties that potentially contain visible ACD from the Wool Store Fire and:

- are located within the impact areas and assessed as levels 1 to 3;
- were reported to the EPA by Friday 13 May 2022; and
- have completed a deed of agreement by Friday 3 June 2022.

Any residential properties that do not meet these criteria will not be assessed and cleaned.

9.7.1. Limitations to the Scope of Works – Residential Properties

For private residential properties the Agreed Scope of Works requires the input of the LAAs to identify the scope of works with the following limitations:

1. Level 1 – Due to the proximity of the Wool Store Fire location, the density of visible ACD greater than 10cm2 were present on the roof of the remaining Wool Store, the Avenue apartments and Soqué apartments. The risk of recontamination from these ACD fragments onto public spaces has required a clean-up to be undertaken of the roofs.
2. Level 1 – Soft furnishings and soft fabrics to be disposed of. Items disposed will not be replaced.
3. Level 1 – The removal of the top 50-100mm of soil is to be undertaken only in Level 1 areas, with agreement and endorsement by the owner. No soil, landscaping, turf or similar items will be replaced.
4. Level 2 and 3 – Smaller ACD fragments are likely to be present due to the greater distance from the Wool Store Fire site, which are likely to have washed off the roofs during heavy rainfall. As such cleaning has been limited to gutter cleaning, and visible ACD that can be removed from a working platform/ladder. Class A Contractors and LAAs have been advised to not walk on roofs.
5. Level 4 – An LAA with be sent to each registered property to assess the presence and level of visible ACD. If a small amount of visible ACD is present the LAA may contain and remove the visible ACD and provide an Asbestos Clearance Certificate. Clean-up will not be provided if not required.
6. All areas – External railway lines and rail corridors are the responsibility of Australian Rail Track Corporation (ARTC).
7. All areas – Cleaning inside houses is outside of the scope of work (refer to Section 9.6).

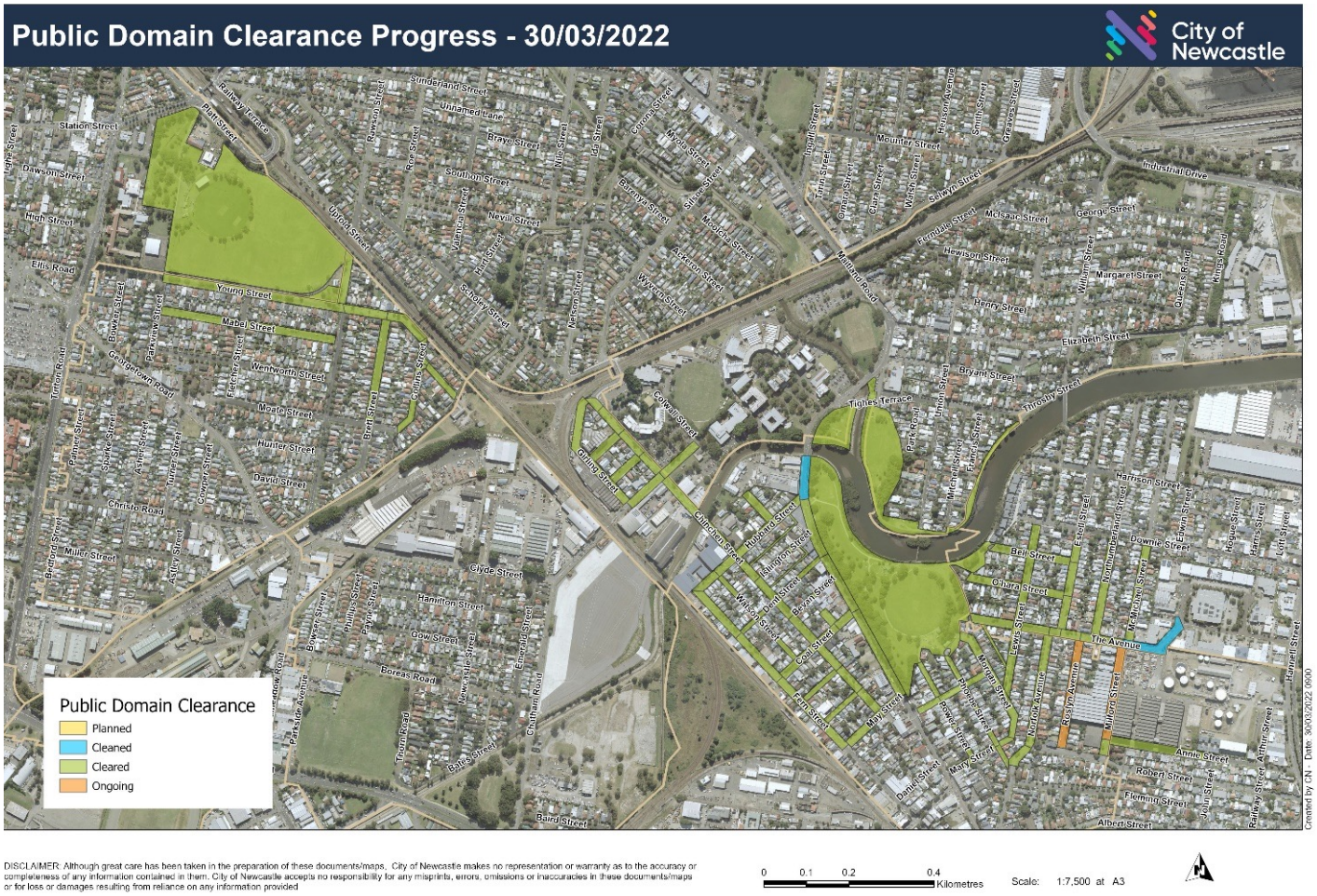
9.8. Recommended Controls and Actions - Public Domain Areas

Extensive public domain areas managed by CN are located within the ACD impacted areas, including public streets, parks, playgrounds and other public assets.

Table 6 in Appendix F outlines the recommended controls and actions in public domain areas.

ACD clean-up and Asbestos Clearance Certificate have been received for all ACD impacted public streets and public domain areas in the ACD impacted areas (see Figure 9).

Figure 9 – Asbestos Clearance of Public Domain Areas as at 30 March 2022



CN staff and CN engaged contractors will receive asbestos awareness training and be advised on ACD risk in public domain areas within the Wool Store Fire impact area.

Green bin collections were suspended in areas assessed as Level 1 and 2 due to the potential presence of visible ACD in the bins. These green bins will be collected by a Class A Contractor for a limited period whilst other public domain and private residential property clean-up activities are undertaken and will then be resumed by CN, subject to appropriate risk assessments.

Mowing of public parks at Islington and Waratah was suspended due to the risk of ACD in the grass. Safe mowing trials were undertaken at both locations, including activity-based airborne asbestos monitoring on the mower operator and testing grass clippings for the presence of asbestos. The air monitoring results showed asbestos fibre concentrations below the limit threshold of 0.01 fibres/ml of air for all samples – that is, no increase above normal background levels. Dust swabs of the mower used for the trial were clear of any traces of asbestos. In addition, dust swabs taken from the children's playground slide, swing set and jungle gym were also all clear of asbestos. After these trials, mowing will resume, subject to appropriate risk assessments. Community sport was also suspended at these public parks, but will resume following clean-up works, subject to appropriate risk assessments.

Various other CN services, operations and activities were suspended in the Wool Store Fire impact area due to risks to staff and community safety, whilst assessments and clean-ups were undertaken. These services will resume, subject to appropriate risk assessments and in accordance with the recommended controls and actions for public domain areas.

The unexpected finds protocol will be implemented where required (refer to Appendix E).

Information about the management of public domain areas is provided and regularly updated on CN's website at https://www.newcastle.nsw.gov.au/council/news/emergencies/wickham-fire-incident.

9.9. Street Closures

CN may close a street until the ACD source has been removed.

9.10. Asbestos Containing Debris on Vehicles

Significant rainfall during and after the Wool Store Fire is likely to have washed away ACD from vehicles. However, there is potential for visible ACD being caught on some external surfaces of vehicles.

A clean-up of the external surface of visibly affected cars has been completed in areas assessed as Level 1 in close proximity to the Wool Store Fire.

Clean-up of internal surfaces of vehicles is not within scope. Any ongoing concerns should be referred to an LAA at the owner's expense.

9.11. Rainwater Tanks

Rainwater tanks within the Wool Store Fire impact area may contain visible ACD, which will settle to the bottom of the tanks. Asbestos is a mineral and will not stay suspended in water for long, however, sludge at the bottom of the tanks could get stirred up after a rain event.

Sludge can be removed and disposed of as asbestos waste. Filtering of the sludge may be required prior to disposal.

Rainwater tank cleaning is included in the recommended scope of works for impact levels 1, 2 and 3 as part of the ACD clean-up work. Replacement of filters or other consumables is not covered under the ACD clean-up program.

9.12. Swimming Pools

Swimming pools within the Wool Store Fire impact area may contain ACD. This may be settled at the bottom of the pool and/or transferred to the pool filter.

Swimming pool cleaning is included in the recommended scope of works for impact levels 1, 2 and 3 as part of the ACD clean-up work. Replacement of pool filters or other consumables is not covered under the ACD clean-up program.

9.13. Unexpected Finds Protocol

An unexpected finds protocol has been developed to provide guidance if an unexpected find within the Wool Store Fire impact area is reported to a local or state authority as it relates to the Wool Store Fire.

An 'unexpected find' can be defined as any unanticipated discovery of visible ACD, that has not been previously assessed or is in an area that has already been cleaned and an Asbestos Clearance Certificate provided.

The unexpected finds protocol is detailed in Appendix E.

10. Step 3 – Resource Efficiency

Resource efficiency is a central element for the identification and clean-up of visible ACD from properties and public domain areas impacted by the Wool Store Fire.

The implementation of the EAMP includes the targeted use of resources to ensure works are programmed in accordance with the risks associated.

The following mitigation measures will be applied to manage resource efficiency:

- Efficiently use financial resources for the targeted management of visible ACD on properties and public domain areas.
- Define the scope of works prior to works being approved by PWA for completion by a Class A Contractor.
- Monitor Class A Contractor performance with audits and reviews.

11. Step 4 – Stakeholder Engagement

The Local Recovery Committee has developed a best practice EAMP that complies with the NSW Work Health and Safety laws and ensures the health and safety of all workers and other people living within or on areas impacted by ACD from the Wool Store Fire.

A Joint Agency Communications and Engagement Strategy is being developed separately to this EAMP.

Table 2 – Core Objectives, External Stakeholder Engagement

Core Objectives	Responsibility	Target	Performance Indicator	Evaluation
Develop a joint agency communication and engagement strategy	Local Recovery Committee	Development and implementation of communication and engagement strategy	Effective management of external communications and engagement	Community feedback from meetings

12. Step 5 – Review and Improvement

The Local Recovery Committee will regularly review progress of the implementation of the EAMP and will undertake an after-action review at the conclusion of the clean-up.

Table 3 – Core Objectives, Review and Improvement

Core Objectives	Responsibility	Target	Performance Indicator	Evaluation
Ensure EAMP progress is regularly reviewed	Local Recovery Committee	EAMP is regularly reviewed	Number of non-conformances with current regulations	Monthly review
After-action review at completion of the project	Local Recovery Committee	After-action review is undertaken	After-action review is undertaken	After-action review is undertaken

13. Limitations

Nothing contained within the EAMP may be considered to alter or modify guidelines as set down in the WHS Regulation and relevant SafeWork NSW Codes of Practice, or the requirements laid down under all relevant New South Wales Legislation.

No one section, or part of a section in the EAMP should be taken as giving an overall idea of this report. Each section must be read in conjunction with the whole of this report, including its appendices and attachments.

Appendix A

Abbreviations

Abbreviations

ACD	Asbestos Containing Debris
ACM	Asbestos Containing Material
CN	City of Newcastle
EAMP	Emergency Asbestos Management Plan
EPA	Environment Protection Authority
FRNSW	Fire & Rescue NSW
LAA	Licensed Asbestos Assessor
NATA	National Association of Testing Authorities
NOHSC	National Occupational Health and Safety Commission
PCBU	Persons Conducting a Business or Undertaking
ACON	Class A Asbestos Removal Contractor
PPE/RPE	Personal / Respiratory Protective Equipment
PWA	Public Works Advisory
QA/QC	Quality Assurance/Quality Control
WHS	Work Health and Safety

Appendix B

Definitions

Definitions

Airborne Asbestos Monitoring	Atmospheric sampling for airborne fibres including asbestos to assist in assessing human exposure and the effectiveness of control measures. This includes exposure monitoring, clearance monitoring (asbestos) and control monitoring.
Asbestos	Fibrous form of those mineral silicates that belong to the serpentine or amphibole groups of rock-forming minerals, including actinolite, amosite (brown asbestos), anthophyllite, chrysotile (white asbestos), crocidolite (blue asbestos) and tremolite.
Asbestos Containing Debris (ACD)	Dust or debris that has settled within a workplace and is, or is assumed to be, contaminated with asbestos.
Asbestos Containing Material (ACM)	Any material, object, product or debris containing asbestos.
Asbestos Removal Contractor	A business or undertaking whose work includes asbestos removal work or a self-employed person whose work includes asbestos removal work.
Asbestos Removal Control Plan	A site specific document to be prepared by the asbestos removal contractor.
Asbestos Removal Licence	A Class A asbestos removal licence or a Class B asbestos licence.
Asbestos Removal Work	Work to remove friable asbestos or bonded ACM.
Asbestos Waste	Asbestos or ACM removed and disposable items used during asbestos removal work including plastic sheeting and disposable tools.
Asbestos Work	Work undertaken in connection with a construction work process in which exposure to asbestos may occur and includes any work process involving the use, application, removal, mixing or other handling of asbestos or ACM.
Asbestos Work Area	The immediate area in which work on ACM is taking place.
Clearance Inspection	An inspection carried out by a competent person, to verify that an asbestos work area is safe to be returned to normal use after work involving the disturbance of ACM has taken place. A clearance inspection must include a visual inspection, and may also include clearance monitoring and/or settled dust sampling.
Clearance Monitoring	Airborne asbestos monitoring using static or positional samples to measure the level of airborne asbestos in an area following work on ACM. An area is cleared when the level of airborne asbestos fibres is measured as being below 0.01 fibres/ml.
Competent Person	A person who has acquired through training, qualification or experience the knowledge and skills to carry out the task.
Control Measure	In relation to a risk to health and safety, means a measure to eliminate or minimise the risk.
Engineering Control	A control measure that is physical in nature, including a mechanical device or process.
Exposure Standard	National Occupational Health and Safety Commission (NOHSC) maximum exposure level by inhalation of airborne concentration of atmospheric lead over an eight-hour day, for a five-day working week, over an entire working life and expressed as 8-hour TWA (Time weighed average). The TWA do not represent 'no-effect' levels which guarantee protection to every worker.
Friable ACM	ACM that, when dry, is or may become crumbled, pulverised or reduced to powder by hand pressure.
Hazard	Any matter, thing, process, or practice that may cause death, injury, illness or disease.

In situ Asbestos	Asbestos or ACM fixed or installed in a structure, equipment or plant, but does not include naturally occurring asbestos.
Licensed Asbestos Assessor	a person who holds an asbestos assessor licence.
Membrane Filter Method	The airborne asbestos monitoring technique outlined in the NOHSC Guidance Note on the Membrane Filter Method for Estimating Method Airborne Asbestos Fibres 2nd Edition
NATA Accredited Laboratory	A testing laboratory accredited by NATA (National Association of Testing Authorities, Australia).
National Association of Testing Authorities, Australia (NATA)	The organisation that approves the method of sampling for airborne asbestos fibres and bulk sample analysis of ACM.
Non-friable ACM	Any ACM other than friable ACM, where the asbestos fibres are reinforced with a bonding compound.
Personal Protective Equipment	Anything used or worn by a person to minimise risk to the person's health and safety, including air supplied respiratory equipment.
Principal Contractor	A PCBU that commissions a construction project is the principal contractor for the project. If another PCBU is engaged or as principal contractor for the construction project and is the authorised person to have management or control of the workplace and to discharge the duties of a principal contractor, the person so engaged is the principal contractor for the project.
Registered Medical Practitioner	A person registered under the Health Practitioner Regulation National Law to practise in the medical profession (other than as a student).
Regulator	The SafeWork Authority constituted under the Workplace Injury Management and Workers Compensation Act 1998.
Respirable Asbestos Fibre	An asbestos fibre that is less than 3 micrometres wide, more than 5 micrometres long, and has a length to width ratio of more than 3:1.
Risk	The likelihood of a hazard causing harm to a person.
Safe Work Australia	Safe Work Australia as established under section 5 of the Safe Work Australia Act 2008 of the Commonwealth.

Appendix C

General Asbestos Information

Asbestos General Information

Asbestos is the generic term for several fibrous silicate minerals. There are two major groups of asbestos:

- the serpentine group contains chrysotile, commonly known as white asbestos.
- the amphibole group contains amosite (brown asbestos) and crocidolite (blue asbestos), as well as some other less common types, such as tremolite, actinolite and anthophyllite.

Since 31 December 2003, using all forms of asbestos was banned.

Sources

Asbestos is ubiquitous in the environment, with fibre release occurring from natural sources and extensive industrial and commercial use of asbestos in the past. Asbestos and ACMs were widely produced in Australia between the 1940s and 1980s.

Chrysotile is the only form of asbestos from the serpentine group that has been used commercially. In the past, chrysotile has been used in the manufacture of:

- asbestos cloth, tapes, ropes and gaskets, and in thermal and chemical insulation.
- asbestos cement sheets and pipes for construction, casing for water and electrical/ telecommunication services.
- rubber, plastics, thermosetting resins, adhesives, paints, coatings, caulking compounds and sealants for thermal, electrical and insulation applications.
- fire-rated doors, equipment and structural beams of buildings.
- fillers and filters.

Until recently, chrysotile was used almost exclusively in the manufacture of packing and friction material, such as gaskets, and brake and clutch linings.

Until the early 1980s, amphibole asbestos such as amosite and crocidolite were used in many products but, in the mid-1980s, the use of all types of asbestos in the amphibole group was banned. The products included:

- asbestos cement sheeting and pipes for construction, casing for water and electrical/ telecommunication services etc.
- thermal, acoustic and chemical insulation e.g. fire-rated doors, limpet spray, lagging and gaskets.

Impacts

Asbestos fibres have the following characteristics:

- Small size
- Ability to split into finer fibres
- Resistance to chemical attack
- Remain airborne for long periods of time

When inhaled they are carried in the air-stream and can deposit within the respiratory system:

- Large fibres (width greater than 3 microns) deposit in major airways of lungs, generally cleared by cilia and mucous.
- Smaller fibres (width less than 3 microns) can reach the alveoli (gas-exchange region) of the lungs.

Asbestos is a known carcinogen and inhalation of these fibres can cause mesothelioma, lung cancer, asbestosis, and pleural plaques after a long latency period:

- Malignant mesothelioma is a cancer of the outer covering of the lung (the pleura) or the abdominal cavity (the peritoneum). It is usually fatal. Mesothelioma is caused by the inhalation of needle-like asbestos fibres deep into the lungs where they can damage mesothelial cells, potentially resulting in cancer. The latency period is generally between 35 and 40 years, but it may be longer, and the disease is very difficult to detect prior to the onset of illness.
- Lung cancer has been shown to be caused by all types of asbestos. The average latency period of the disease, from the first exposure to asbestos, ranges from 20 to 30 years. Lung cancer symptoms are rarely felt until the disease has developed to an advanced stage. People who smoke may have a greater risk of developing lung cancer from inhaling airborne asbestos fibres.
- Asbestosis is a form of lung disease (pneumoconiosis) directly caused by inhaling asbestos fibres, causing a scarring (fibrosis) of the lung tissue which decreases the ability of the lungs to transfer oxygen to the blood. The latency period of asbestosis is generally between 15 and 25 years.
- Pleural plaques are a thickening of the membrane lining the lungs and are detected by chest X-ray. They indicate significant asbestos exposure; however, they are rarely of clinical significance as they are benign.

Asbestos can be bonded or friable, with bonded asbestos posing a minimum risk of human exposure to airborne asbestos, provided it is painted and not mechanically disturbed. Friable asbestos is generally defined as crumbling with hand pressure.

When asbestos is processed and disturbed, the fibre bundles become progressively finer and more hazardous to health as they can become airborne and breathed in. Small fibres, known as respirable fibres, are invisible to the naked eye and when inhaled can penetrate the deepest part of the lungs.

Asbestos can release airborne fibres whenever it is disturbed, particularly during the following:

- direct action on asbestos, such as drilling, boring, cutting especially with power tools, filing, brushing, grinding, sanding, breaking, smashing or blowing with compressed air.
- removing asbestos from workplaces.
- maintaining or servicing ACMs from vehicles, plant, equipment or workplaces.
- renovating or demolishing workplaces (or a part of a workplace) that contains asbestos.
- fire or intense heat can cause asbestos cement to spall and fracture.

Exposure to airborne asbestos fibres for workers and other people must be either eliminated or minimised as far as is reasonably practicable and kept below the relevant exposure standards.

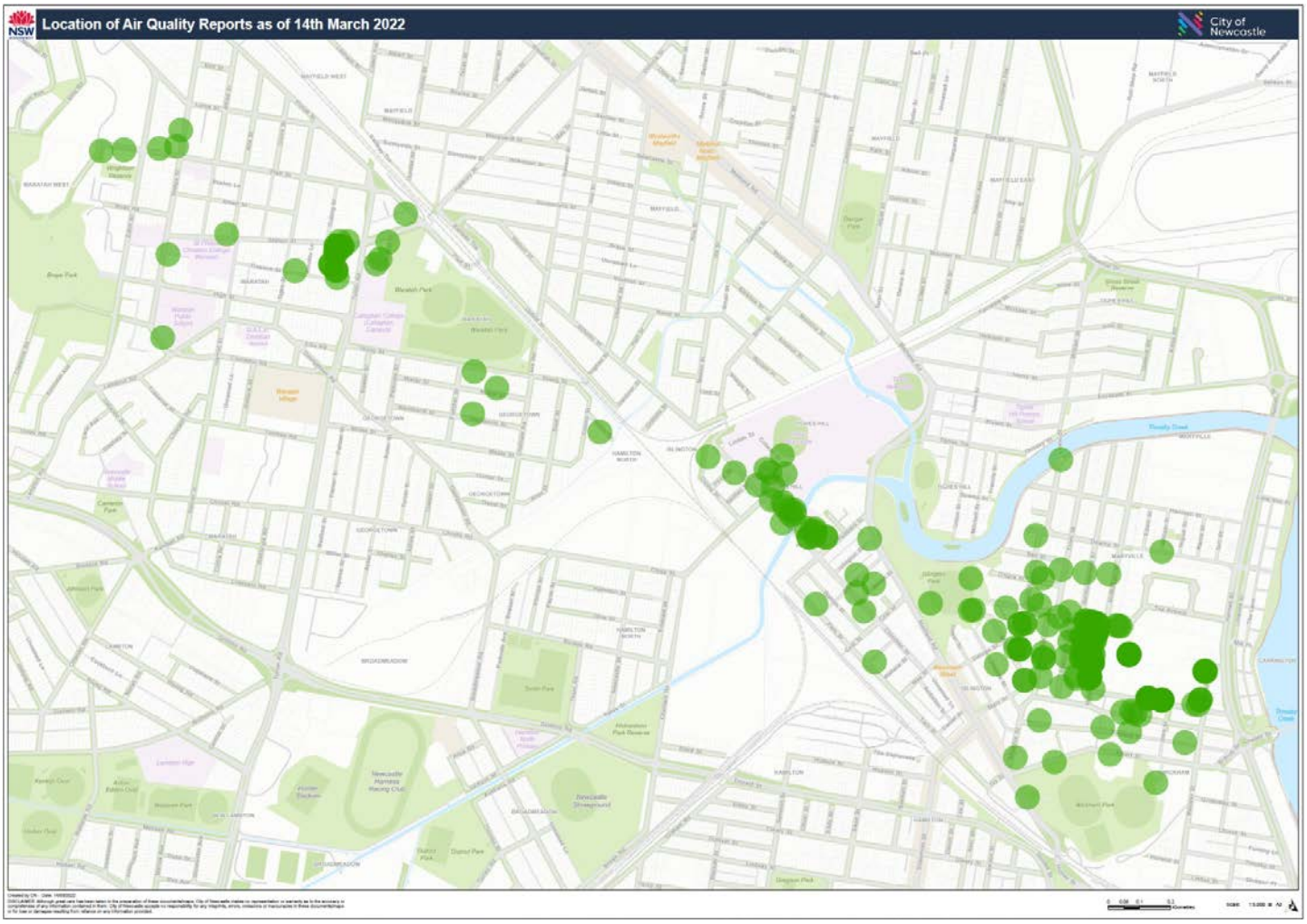
Asbestos Waste

Asbestos waste means any waste that contains asbestos. The disposal of asbestos waste is regulated by the NSW EPA. Under the Waste Classification Guidelines, asbestos waste is considered a Special Waste, and has unique regulatory requirements. All asbestos waste must be disposed of at an appropriately licensed waste disposal facility, and records must be kept of appropriate disposal i.e. waste disposal dockets. Transport of asbestos waste is also regulated by the NSW EPA and requires 'WasteLocate' registration and tracking.

Appendix D

Airborne Asbestos Monitoring Map

Airborne Asbestos Monitoring Map



Appendix E

Unexpected Finds Protocol

Unexpected Finds Protocol

Purpose

The purpose of this protocol is to provide guidance to personnel if an unexpected find within the Wool Store Fire impact area is reported to a local or state authority as it relates to the Wool Store Fire.

An 'unexpected find' can be defined as any unanticipated discovery of visible ACD, that has not been previously assessed or is in an area that has already been cleaned and Asbestos Clearance Certificate provided.

Scope

In some instances, even when appropriate and robust assessments are undertaken during the ACD clean-up process, some ACD may not be identified, or may have been reintroduced to an area due to windblown materials or similar actions. This protocol outlines the procedure that should be followed in those circumstances.

This protocol is not intended to replace any legislated procedures or requirements as set out in relevant Acts or Regulations.

Accountabilities

Responsible authorities are accountable for ensuring the requirements of this document are implemented within their area of responsibility.

Contractors are responsible for following this protocol, where it forms a part of their contract.

Reporting Unexpected Finds

Reports of unexpected finds are made to either the EPA or CN. The location of the found ACD is crucial in triaging the report to the correct appropriate regulatory authority.

Protocols are detailed below.

EPA Protocol – Residential Properties

If the visible ACD is found on private residential or state government owned property:

1. Please report to the EPA Environment Line via 131 555 or info@epa.nsw.gov.au.
2. EPA will triage and assess as required.

CN Protocol – Public Spaces

If the ACD is found on public domain areas:

1. Please report to CN via 4974 2000 or wickhamfire@ncc.nsw.gov.au.
2. CN will triage and assess as required.

How to safely dispose of asbestos

Using a licensed asbestos removalist is the best way to remove unexpected finds following the Wool Store Fire.

A licensed asbestos removalist knows how to safely remove and dispose of asbestos.

If you are not using a licensed removalist, asbestos can be removed safely by doing the following steps:

1. Asbestos should be kept wet or sprayed with PVA, or a similar sealant to suppress the potential release of asbestos fibres.
2. Don't use high pressure water cleaners or water blasters to clean up the visible ACD.
3. Access to the area must be limited to those involved in the ACD clean-up.
4. Obtain 2 thick plastic bags, disposable plastic gloves or washing up gloves
5. Obtain a P2 face mask – from the hardware store. Masks used for COVID-19 safety won't protect you
6. Put on the mask and gloves before starting the ACD clean-up
7. Pick up (don't sweep) the wet ACD and place in plastic bag
8. When finished remove gloves and face mask and place in plastic bag
9. Knot the top of the plastic bag and then place the knotted plastic bag into the second empty plastic bag and then knot the top
10. Clearly label the bag as asbestos
11. Wash and clean hands thoroughly with soap and water
12. Keep asbestos waste separated from all other waste
13. Asbestos waste can only be accepted at some landfill facilities or contact CN.
14. Where visible ACD is found and Class A Contractors are undertaking Wool Store Fire ACD clean-up in the area, they may supply this material to the Class A Contractor for lawful disposal.
15. DO NOT put asbestos waste in red-lid bins or skip bins that aren't meant for asbestos waste.

SafeWork NSW has developed a series of videos on how to manage asbestos safely https://youtube.com/playlist?list=PLbi-niu1pEg1Lypi9V2lsCDXxgDmto5gx.

Appendix F

Recommended Scope of Works and Risk Controls and Actions

Recommended Scope of Works and Risk Controls and Actions

Table 4 – Recommended Controls and Actions – Residential Properties

Assessment Level	Applicable areas	Recommendation
Level 1	Area has a significant quantity of visible ACD more than several pieces of ACD fragment size greater than 10 centimetre square (>10 ACD fragments per m^2). Areas adjacent to where this quantity of visible ACD has been identified.	**Action Summary** Properties that have been reported to the EPA as containing visible ACD are to be offered an assessment by a LAA and appropriate level of clean-up offered. Following inspection by the LAA, neighbouring properties may be determined as needing assessment where higher general levels of ACD impact were identified. **Detail** Access may be restricted on trafficable areas that could present breakage and further contamination, potentially resulting in asbestos fibres becoming airborne. An assessment should be undertaken by a LAA to determine scope of works. Scope of works agreed to between resident, LAA and PWA. ACD clean-up work be undertaken by a Class A Contractor with airborne asbestos monitoring by a LAA. Hard items should be vacuumed and wet wiped. All gutters safely accessible by working platform/ladder and safe reaching equipment are to be cleaned and where able remove visible ACD from roofs. An Asbestos Clearance Certificate issued by a LAA confirming ACD impacted area is free of visible asbestos and cleaning of hard items.
Level 2	Area has visible ACD between 1 to 10 ACD fragments per m^2. Areas adjacent to where visible ACD has been identified.	**Action Summary** Properties that have been reported to the EPA as containing visible ACD are to be offered an assessment by a LAA and appropriate level of clean-up offered. Following inspection by the LAA, neighbouring properties may be determined as needing assessment where higher general levels of ACD impact were identified. **Detail** Access may be restricted on trafficable areas that could present breakage and further contamination, potentially resulting in asbestos fibres becoming airborne. An assessment should be undertaken by a LAA to determine scope of works. Scope of works agreed to between resident, LAA and PWA. ACD clean-up work be undertaken by a Class A Contractor with airborne asbestos monitoring by a LAA. Hard items should be vacuumed and wet wiped. All gutters safely accessible by working platform/ladder and safe reaching equipment are to be cleaned and where able remove visible ACD from roofs. An Asbestos Clearance Certificate issued by a LAA confirming ACD impacted area is free of visible asbestos and cleaning of hard items.
Level 3	Area has visible ACD less than 1 fragment per $10m^2$.	**Action Summary** Properties that have been reported to the EPA as containing ACD are to be offered an assessment by a LAA and appropriate level of clean-up offered. **Detail** If visible ACD is identified the LAA may contain and remove the visible ACD if appropriate and provide an Asbestos Clearance Certificate for the property. If the LAA determines further clean-up is required, the LAA will undertake assessment and provide Agreed Scope of Work. Only readily accessible external areas to be assessed due to WHS risk. ACD clean-up work be undertaken by a Class A Contractor with airborne asbestos monitoring by a LAA. LAA to provide Asbestos Clearance Certificate

Assessment Level	Applicable areas	Recommendation
Level 4	Area has visible ACD less than 1 fragment per 100m^2.	**Action Summary** The unexpected finds protocol applies (Appendix E). If a residential property suspects the visible presence of ACD, they are encouraged to register with the EPA. Properties that have been reported to the EPA as containing visible ACD are to be offered an assessment by a LAA to provide advice as to potential clean-up. If visible ACD is identified the LAA may contain and remove the visible ACD if appropriate and provide an Asbestos Clearance Certificate for the property. **Detail** LAA to be sent to the premises to provide an assessment of visual ACD impact. If visible ACD is identified the LAA may contain and remove the material as appropriate and provide an Asbestos Clearance Certificate for the property.

Table 5 – Recommended Scope of Works at Exterior Areas of Residential Properties

Item Description	Recommended Scope of Works	Impact area Level 1	Level 2	Level 3	Level 4
LAA Assessment	Assessment of presence and level of visible Asbestos Containing Debris (ACD)				
	Agreed Scope of Work				
LAA Asbestos Clearance Certificate	Provision of Interim Asbestos Clearance Certificate.				
	Provision of Final Asbestos Clearance Certificate				
Airborne asbestos monitoring	Airborne asbestos monitoring in community areas for reassurance of acceptable ambient levels				
Soft furnishings /fabrics	Disposal of materials as asbestos waste required				
Soil / grass	Removal of the top 50-100mm of soil, with agreement and endorsement by the owner. Replacement of soil / grass / plants etc is not covered under this asbestos clean-up program.				
Roof	Remove visible ACD that is safely accessible				
Gutters	Remove visible ACD that is safely accessible by the Class A Contractor				
Fences	Hand-pick, vacuum clean and wet wipe to remove visible ACD				

Item Description	Recommended Scope of Works	Impact area Level 1	Level 2	Level 3	Level 4
Rainwater Tanks	Empty and remove sludge from rainwater tanks after roof and gutter cleaning complete. Dispose of filter elements as asbestos waste. Replacement of filters is not covered under this asbestos clean-up program.				
Pools	Vacuum with owner's pool vacuum cleaner and dispose of pool filter as asbestos waste. Replacement of pool filters is not covered under this asbestos clean-up program				
Paths	Hand-pick and vacuum clean to remove visible ACD				
Driveway	Hand-pick and vacuum clean to remove visible ACD Hand-pick or vacuum soils and vegetation to remove visible ACD Hand-pick and vacuum 200mm inside of sub-floor from driveway				
Garden Shed	Hand-pick and vacuum clean and wet-wipe exterior to remove visible ACD				
Patio	Remove visible ACD that is safely accessible Hand-pick, vacuum clean and wet wipe all items and structure				
Lawns and Gardens	Remove all visible ACD from lawns - hand-pick, vacuum Whipper-snip long grass to access visible ACD Hand-pick or vacuum soils and vegetation to remove visible ACD Vacuum clean and wet wipe all yard items				
External House	Vacuum all horizontal surfaces Wet-wipe walls and windows				
Vehicles	Surface cleaning of vehicles to remove visible ACD				
Minimal ACD	LAA to contain and remove as appropriate				

Table 6 – Recommended Risk Controls and Actions - Public Domain Areas

Assessment Level	Applicable areas	Recommendation
Level 1	Public areas had significant quantity of visible ACD more than several pieces of ACD fragment size greater than 10 centimetre square (>10 ACD fragments per m^2). Areas adjacent to where this quantity of visible ACD has been identified.	**Action Summary** All public domain areas to be inspected and cleaned by a Class A Contractor with Asbestos Clearance Certificates to be provided by a LAA. **Detail** Trafficable areas to remain closed, and access to be restricted where appropriate. High visitation public domain areas to be closed until clean-up is undertaken. Implement asbestos controls including air monitoring, exclusion zones, and communication of risks to affected residents. An assessment shall be undertaken by a LAA to determine ACD impacted areas. Make safe ACD clean-up work to be undertaken by a Class A Contractor, including air monitoring by a LAA. LAA to provide Asbestos Clearance Certificates. **CN Services** CN to suspend all impacted services in Level 1 area until Asbestos Clearance Certificates provided for public domain areas, and clean-up works of Wool Stores Site (including roof of remaining building) and majority of impacted areas is complete. Following asbestos clearances and completion of non-public domain works, CN to resume impacted services subject to site specific risk assessment and appropriate controls. Critical works which need to be completed in Level 1 area prior to then be assessed on a case-by-case basis. Class A Contractors to be used where required.
Level 2	Public area has isolated minor visible ACD identified to be between 1 to 10 ACD fragments per m2. Areas adjacent to where minor visible ACD has been identified.	**Action Summary** All public domain areas to be inspected and cleaned by a Class A Contractor with Asbestos Clearance Certificates to be provided by a LAA. **Detail** Implement asbestos controls including air monitoring and communication of risks to the general community. High visitation public domain areas to be closed if required until clean-up is undertaken. Make safe ACD clean-up work to be undertaken by a Class A Contractor, including air monitoring by a LAA. LAA to provide Asbestos Clearance Certificates. **CN Services** CN to suspend services with high risk of potential exposure to ACD in Level 2 area until Asbestos Clearance Certificates provided for public domain areas. Following asbestos clearances, CN to resume impacted services subject to site specific risk assessment and appropriate controls. Class A Contractors to be used where required. Critical works which need to be completed in Level 2 area prior to then to be assessed on a case-by-case basis.

Assessment Level	Applicable areas	Recommendation
Level 3	Visible ACD found less than 1 fragment per 10m².	**Action Summary** Only public domain areas which are reported to EPA and/or CN as containing visible ACD to be inspected and cleaned by a Class A Contractor with Asbestos Clearance Certificates to be provided by a LAA. **Detail** Implement asbestos controls including air monitoring, and communication of risks to the general community. High visitation public domain areas to be closed if required until clean-up is undertaken. Make safe ACD clean-up work to be undertaken by a Class A Contractor, including air monitoring by a LAA. LAA to provide Asbestos Clearance Certificates. **CN Services** CN to implement appropriate safe work procedures and risk assessments. Class A Contractors to be used where required.
Level 4	Less than 1 visible ACD fragment per 100m².	**Action Summary** Unexpected finds protocol to be implemented. **Detail** If necessary, LAA to be sent to the public domain area to provide an assessment of ACD impact. If visible ACD is identified the LAA may contain and remove the material as appropriate and provide an Asbestos Clearance Certificate for the public domain area. **CN Services** CN to implement appropriate safe work procedures and risk assessments.

Appendix G

Work Health and Safety Requirements for Licence Holders

Work Health and Safety Requirements for Licence Holders

Work Health and Safety Requirements

Notification to SafeWork NSW

- Each residential site must be notified by the Class A asbestos licence holder (Class A) via the online notification system before commencing work
- 5-day notification waiting period has been waived, meaning work can commence once notification has been made

SafeWork procedures

- A safe work statement (SWMS) must be prepared by the Class A specific for each site
- The SWMS can be complimented by the Asbestos Removal Control Plan and onsite toolbox talk as long as they are specific to the work controls being implemented
- The safe work procedures must include placement of signage, barricades and asbestos work areas, a decontamination procedure, air monitoring and how the asbestos contaminated areas will be cleaned.

Working at heights

- Roofs must not be accessed
- Working platforms should be considered before using ladders
- A platform ladder is safer than an extension ladder
- All ladders and platforms must be designed for industrial use
- Controls for use of ladders should include minimum;
  - An extension ladder must be secured at the top and bottom
  - Always maintain 3 points of contact on the ladder
  - Maintain a ratio of 1:4 for extension ladders
  - Rotate workers to prevent fatigue

Supervision

- SafeWork NSW approved Class A supervisor to be onsite at all times whilst asbestos clean-up works are being conducted
- Each residential clean-up is considered a site
- Residential sites that area adjacent to each other can be considered as one site

Training

- All workers involved in asbestos clean-up works are required to have completed friable asbestos removal training
- Training records must be available for inspection

Health Monitoring

- All workers involved in asbestos clean-up works and assessment are required to have undertaken asbestos health monitoring
- Records of having undertaken health monitoring must be available for inspection (This is not the workers' health monitoring report but confirmation from the provider that health monitoring is completed)

Respiratory Protective Equipment

- All workers involved in asbestos clean-up works or clearance inspections of clean-up work are required to wearing a minimum half face non-disposable P3 cartridge respirator
- All workers are required to have been fit tested to the respirator type being used
- A copy of the fit testing certificate should be available for inspection
- All workers must be clean shaven before undertaking asbestos clean-up works

Personal Protective Equipment

- All workers involved in asbestos clean-up works are required to wearing the below PPE
  - Type 5 or above asbestos coveralls
  - Gum boots or boot covers
  - Gloves

Decontamination

- A minimum dry decontamination area for workers tools, equipment and asbestos waste
- Decontamination area must be adjacent to the work area
- Decontamination area must be clearly defined
- Decontamination area must have either or both a H Class vacuum cleaner or wet wipes available for use

Asbestos vacuum cleaners

- Must be H Class industrial asbestos vacuum cleaners with red hazard sticker
- Have a current DOP certificate for review
- Must be in good condition ie not having gaffa tape on hoses etc
- Must have a current test and tag certificate

Waste Storage

- Asbestos waste must not be stored on residential sites
- Asbestos waste must be disposed of at the end of each working day at a licensed asbestos waste facility

High Pressure Water Spray

- High pressure water sprayers must not be used for asbestos clean-up works unless for fire fighting purposes

Person Conducting a Business or Undertaking (PCBU) and Workers

PCBUs and workers, including LAAs and Class A Licensed Asbestos Removal Contractors (Class A Contractor), all share responsibility for minimising the exposure to ACD at all clean-up properties without causing risk to themselves, their colleagues, residents or visitors.

All PCBUs and workers will:

1. Comply with the statutory obligations under the WHS Act and the EAMP.
2. Maintaining awareness of and complying with the EAMP to ensure they are not at risk of exposure to airborne asbestos fibres.
3. Inform PWA of the presence of any previously unknown or newly discovered or suspected visible ACD on site.
4. Take reasonable care to ensure the health and safety of themselves and any other person under their control or supervision while at work.
5. Use, in accordance with directions provided, personal protective equipment (PPE) and report when the PPE requires maintenance or replacement.
6. Comply with any reasonable WHS instruction or direction.
7. Report and record all incidents, hazards or near misses that may cause injury or illness and any damage or maintenance requirements affecting the workplace or plant in the PWA project management system.
8. Attend and participate in any training that will support the overall objectives of this EAMP.
9. Co-operate with management in the process of consultation on any WHS issue or information related to health or safety.
10. Class A Contractors need to be aware of the presence of ACD on any properties they are working on.
11. ACD clean-up work should only be undertaken by workers who have completed friable asbestos removal training and have undertaken fit testing of their respirators.

Class A Contractors' responsibilities include:

1. Ensuring that they refer to LAA reports for information.
2. Ensuring that safe work method statements and procedures comply with the EAMP and relevant legislation, codes of practice, advisory standards and industry standards, and undertake work according to the requirements nominated by the PWA.
3. Employing suitably trained, qualified, skilled and competent workers for ACD clean-up work.
4. Ensuring that their workers are inducted in safe work procedures for the ACD clean-up.
5. Obtaining the necessary approvals from regulatory authorities prior to starting any ACD clean-up work (including appropriate asbestos removal licences).
6. Ensuring ACD is disposed of in an appropriate manner at a licensed landfill facility.
7. Retain records of materials disposed to licensed landfill facilities (e.g. tipping dockets).
8. That all suspected/assumed occurrences of ACD are treated as ACD, and that procedures in the EAMP for ACD clean-up are followed.

Training

All Persons Conducting a Business or Undertaking (PCBU) and workers will be made aware of the relevant requirements of the EAMP. LAAs and Class Contractors are considered PCBUs.

PWA will provide the EAMP for all workers including LAAs and Contractors during a toolbox meeting.

The EAMP is designed to increase the awareness of workers of the impacts arising from ACD and how those impacts are to be managed by the Local Recovery Committee.

When required by changes in legislation and policies, affected workers and PCBUs will be educated of the changes.

PCBUs must ensure that the following persons are informed that ACD clean-up work is to be carried out at a residence and when the work is to commence, before the work commences:

- Residents, workers and any other persons at the residence.
- Anyone occupying the adjacent premises in the immediate vicinity of the ACD clean-up work area.

Appendix H

Asbestos Clearance Certificate Template

(Date: ____/ ____/_____)

File: draft interim asbestos clearance inspection ver2.docx

Public Works Advisory
Level 13, McKell Building
2-24 Rawson Place
Sydney NSW 2000

ASBESTOS CLEARANCE CERTIFICATE

(PROPERTY ADDRESS)

1. Background

The Wickham Wool Store Fire on the 1st March 2022, has resulted in a number of nearby residential properties being evacuated due to contamination by Asbestos Containing Debris (ACD) falling out from the smoke and ash plume. Public Works Advisory have engaged a Licensed Asbestos Assessor to undertake visual inspection and airborne asbestos monitoring of the property exterior following ACD clean-up work.

The extent of ACD clean-up work is determined by the priority rating of the property (P1 to P4), as assessed by a Licensed Asbestos Assessor (LAA).

2. Objectives

An asbestos clearance inspection is required to demonstrate that external areas are visually free of ACD and airborne asbestos monitoring is below detection limits following ACD clean-up work.

3. Asbestos Removal Inspection Work Details

(Provide a brief summary of the Scope of Works for the Visual Clearance Inspection)

A visual inspection was undertaken of the asbestos removal areas and transit and waste routes between the asbestos removal work area and the property boundary by a NSW Licensed Asbestos Assessor. No asbestos containing materials were observed during the visual inspection. Photographs taken during the interim asbestos clearance inspection are attached.

Airborne asbestos monitoring was undertaken by the NSW Licensed Asbestos Assessor in at least one location within the asbestos removal area during the interim asbestos clearance inspection. Monitoring locations are marked on the site plan. All airborne asbestos monitoring was undertaken in accordance with the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003 (2005)], with NATA accreditation for both air volume measurement and Asbestos fibre counting. All airborne asbestos monitoring results were below 0.01 fibres/ml. NATA certified airborne asbestos monitoring reports are attached.

Asbestos Removal Work Details	Details
Licensed Asbestos Assessor:	XXXX XXXX
Asbestos Assessor Licence No.:	XXXX
Date of Asbestos Clearance Inspection:	(Date: DD MMMM YYYY)
Class A Licensed Asbestos Removalist:	XXXX
Class A Asbestos Removal Licence No.:	XXXX
Asbestos Removal Start Date:	(Date: DD MMMM YYYY)
Asbestos Removal Finish Date:	(Date: DD MMMM YYYY)
Asbestos Removal Control Plan sighted?	Yes/No
Asbestos Removal Notification given?	Yes/No
Was the Asbestos Removal Work was undertaken in accordance with the Asbestos Removal Control Plan?	Yes/No
Was all visible and reasonably accessible asbestos containing materials removed from the property exterior?	Yes/No
Were all airborne Asbestos Monitoring Results for the Asbestos Clearance Inspection below 0.01 fibres/ml?	Yes/No
Are Waste Disposal Dockets available demonstrating that Asbestos Waste was legally disposed of?	Yes/No

4. Limitations

The asbestos clearance inspection consisted of a visual inspection for any visible asbestos containing debris within the external areas of the property.

The inspection included the expected route for workers, including the removal of asbestos waste and airborne asbestos monitoring within the removal area.

This asbestos clearance inspection does not include interior and inaccessible areas of buildings and property.

5. Asbestos Clearance Declaration

I declare that:

The accessible external areas of the property are free of any visible asbestos.

The transit and waste routes between the asbestos removal work area and the property boundary are free from any visible asbestos resulting from the asbestos removal work.

Airborne Asbestos Monitoring Results were below 0.01 fibres/ml.

Yours faithfully,

_____

Occupational Hygienist

Attachments:

Site Photos

Airborne Asbestos Monitoring Results
(Must include start and stop times, flow rate and location information, as well as fibre counts and results in fibres/ml in accordance with the Safe Work Australia, 2005, 'Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition'. All monitoring reports must be NATA stamped and signed)

Asbestos Waste Disposal Dockets

- Include marked up site plan with legend showing:
- Shaded area showing the asbestos removal area.
- Airborne asbestos monitoring locations within asbestos removal area.
- Scale (where possible) and North arrow.

Site plans may need to be hand drawn during the inspection. Where possible, it is recommended that aerial images of the site be used to draw up the site plan to maintain scale)

Figure 1: Site Plan Showing Asbestos Removal Area and Airborne Asbestos Monitoring Locations.

Figure 2: Site Photos

Photo 1: Front of property	**Photo 2:** Airborne asbestos monitoring location for clearance
Photo 3: Asbestos removal area	**Photo 4:** Asbestos removal area
Photo 5: Asbestos removal area	**Photo 6:** Asbestos waste routes

Appendix I

Audit Checklist

NSW GOVERNMENT | Public Works Advisory

Wickham Wool Store Asbestos Clean-up Inspection Audit Form 2022

Site Inspection Details:

Date of Inspection & Time	
Inspected by	
Batch No.	
LAA Name	
Contractor Name	
Site Works Commenced Date & Time	

Asbestos Environmental Clean:

Asbestos Work Area Barricaded Off	
Agreed Scope of Works Available for Supervisor	
Supervisor confirmed they have a copy of Agreed Scope of Works – Endorsed signed	
Supervisor Contractor aware of Early Morning Toolbox talks	
LAA Cost Estimate on Fulcrum	
Scope of Works is suitable for the Priority rating	
Number of Workers on Site	
Asbestos Air Monitoring operating on Boundaries	
Scope of Works includes front Nature Strip	
Equipment used is suitable and will not result in damage to property exterior or residence	
Visual inspection of roof, does not indicate visible asbestos fragments	

Appendix J

Local Recovery Committee
Core Objectives Summary Table

J

Table 7 – Core Objectives, Summary Table

Core Objectives	Responsibility	Target	Performance Indicator	Evaluation
Develop a joint agency communication and engagement strategy	Local Recovery Committee	Development and implementation of communication and engagement strategy	Effective management of external communications and engagement	Community feedback from meetings
Ensure EAMP progress is regularly reviewed	Local Recovery Committee	EAMP is regularly reviewed	Number of non-conformances with current regulations	Monthly review
After-action review at completion of the project	Local Recovery Committee	After-action review is undertaken	After-action review is undertaken	After-action review is undertaken