NSW GOVERNMENT

MANAGEMENT OF ASBESTOS IN RECYCLED CONSTRUCTION AND DEMOLITION WASTE – GUIDE

SAFEWORK NSW

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1. INTRODUCTION

Products containing asbestos containing materials (ACM) are prohibited from being sold or used as recycling materials.

This guide provides practical assistance to the construction and demolition waste recycling industry to minimise the potential risk of contamination in recycled construction and demolition (C&D) materials – eg concrete and brick. It outlines the procedures to verify that asbestos-containing material (ACM) does not contaminate material intended for resource recovery.

An evaluation of the guide will be conducted in 12 months, to determine the effectiveness and practicality of the solutions.

The regulatory obligations for the management, control and removal of asbestos are defined in the *Occupational Health and Safety Act 2000, Occupational Health and Safety Regulation 2001,* the *Code of practice for the management and control of asbestos in the workplace* [NOHSC: 2018 (2005)] and the *Code of practice for the safe removal of asbestos* [NOHSC: 2002 (2005)].

This guide is a useful tool to help you achieve compliance.

Contributors to this guide include:

- Building Trades Group
- CFMEU
- Civil Contractors Federation (NSW)
- Demolition Contractors Association
- Council Safe NSW
- Department of Environment, Climate Change and Water
- Hunter Regional Councils
- Master Builders Association
- Southern Councils Group
- Unions NSW
- Waste Management Association of Australia – NSW C&D Working Group
- Waste Contractors Recycling Association (NSW)

2. SCOPE

This guide covers the receipt, processing and management of construction and demolition (C&D) materials at construction and demolition (C&D) facilities. These facilities process and/or recover construction and demolition waste (but not kerb side recyclables from residents).

The guide assists employers and controllers of construction and demolition (C&D) facilities to meet their work health and safety (WHS) obligations by:

- checking and inspecting incoming materials before stockpiling or processing, to minimise the risk of asbestos contamination in recovered materials
- rejecting loads, to avoid accepting and recycling ACM
- recording non-complying waste generators that illegally dispose of asbestos or ACM
- investigating non-compliant incidents
- independent reviews of the systems, so that customers and regulatory authorities have confidence in the quality of the product and the operations of those businesses that adopt these guidelines
- increasing the level of construction and demolition (C&D) recycling material in a safe, sustainable, environmentally sound manner.

These guidelines allow construction and demolition (C&D) facilities flexibility in assessing their own supply chain and developing strategies to deal with levels of risk that apply to their customers.

3. DEFINITIONS

ACM asbestos-containing materials.

Asbestos the fibrous form of mineral silicates belonging to the serpentine and amphibole groups of rock-forming minerals, including actinolite, amosite (brown asbestos), anthophyllite, chrysotile (white asbestos), crocidolite (blue asbestos), tremolite, or any mixture containing one or more of the mineral silicates belonging to these groups.

Bonded asbestos contains a bonding compound reinforced with asbestos fibres.

C&D facility recycling facilities that process and/or recover construction and demolition waste (but not kerbside recyclables from residents).

C&D materials waste materials from construction and demolition activities.

Competent person a person who has acquired through training, qualification or experience (or a combination of these), the knowledge and skills to carry out a particular task.

Contamination any unwanted substance found in waste materials.

DECCW NSW Department of Environment, Climate Change and Water.

EPA Environment Protection Authority (NSW), part of the DECCW but holding certain statutory functions and powers exercised in the name of the EPA.

Friable asbestos ACM that, when dry, is (or may become) crumbled, pulverised or reduced to powder by hand pressure.

Inspector of loads the person responsible for the inspection of the loads.

Licensed demolisher any person who is licensed by the WHS regulator to demolish a building or structure where all ACM is removed before or during demolition.

Occupational hygienist a person who specialises in the assessment and control of chemical, physical and biological hazards.

Personal protective equipment (PPE) the equipment worn by workers to reduce their exposure to hazards. PPE includes respirators, hard hats, safety shoes, glasses, ear plugs, overalls and the like.

Processing the complete recycling process, including the inspection of incoming loads, the removal of ACM and other unwanted material from the feedstock, and the crushing and blending of different materials to create recycled product.

Regulator the WHS authority and environmental authority in each State.

Rejected load register an onsite document that records details of a rejected load.

Skip bins bins left on a site for loading; the contents may or may not be source separated.

Supplier see ‘waste generator’.

Trained personnel those who have the knowledge and skills expected of someone who has successfully completed the bonded asbestos removal course.

Transporter the employer or self-employed person who is engaged to demolish and/or remove material from a construction or demolition site.

Waste generator a person who generates recyclable waste via demolition and/or construction.

Waste materials waste that a C&D facility receives and processes, usually from construction and demolition sites.

4. RECYCLING PROCESS

4.1 SITE SET-UP

A key to the successful elimination of ACM from the waste stream is to have a site that:

- advises suppliers that asbestos and ACM will not be accepted
- incorporates a 'no asbestos clause' in contracts
- installs highly visible signs indicating that NO ASBESTOS in C&D waste will be accepted
- ensures that workers who receive and inspect C&D materials are trained and provided with suitable equipment to complete their tasks
- has a site safety plan that documents a safe system of work – see appendix.

4.2 RECEIVING CONSTRUCTION AND DEMOLITION WASTE

The procedures for receiving waste will play an important part in minimising the risk of ACM entering the recycling process.

4.2.1 Classification of materials

The primary control point for the removal of asbestos is prior to demolition. The responsibility lies with the waste generator and the owner of the building or structure that is being demolished.

The probability that waste contains ACM depends on the type and source of the material.

Buildings and structures normally undergo regulated and comprehensive asbestos removal programs and stringent clearance inspections before they are demolished. If licensed demolishers conduct the demolition, and the waste has ACM removed and separated at the source, the probability of ACM being present should be low.

However, it is not unusual for mixed waste from unknown sources, or from small-scale demolition or refurbishment activities that place their waste into skip bins, to contain amounts of ACM waste. These sources should be considered high risk.

All waste materials from skip bins should undergo a rigorous inspection – ie the material should be spread out and inspected.

Nowadays, the probability that waste materials contain ACM is minimal, due to:

- the requirement by the State regulatory authority for asbestos registers
- the removal of ACM before the demolition of buildings and structures
- licensed demolishers.

4.2.2 Inspection process

An inspection process should be implemented when waste materials are received at the C&D facility. It should be a two-stage process undertaken by trained personnel.

The first stage takes place on receipt of the load, the second when the load is tipped out (and before it is included in a mass stockpile).

- Upon receipt of the load:
- ascertain its source
- inspect the top surface

record details – ie date, name and address of supplier, vehicle registration, estimated weight of the load, and classification of material.

First inspection

If friable asbestos is detected, the load should be immediately rejected. If ACM is not sighted, or bonded ACM needs to be removed from the load, direct the driver to the second inspection area and advise the inspector of loads. The material is then tipped out and inspected more thoroughly by trained people wearing appropriate PPE.

Second inspection – No asbestos sighted

Second inspection – Asbestos sighted and wearing appropriate personal protective equipment

Recommended PPE for the removal of ACM includes:

- half-face P1 or P2 respirator – disposable or cartridge respirator (see AS 1715, AS 1716)
- gloves
- disposable overalls with hood
- boot covers
- wet wipes.

If bonded ACM is detected, it should be removed in accordance with the *Code of practice for the safe removal of asbestos* and stored appropriately for later disposal. If friable ACM is detected, the load must be isolated and kept wet during the course of further inspection.

If ACM is detected, the load should be either:

- assessed by an occupational hygienist
- rejected and reloaded onto the delivery truck
- isolated until removal is arranged.

4.2.3 Rejected load register

Details of the waste generator and transporter should be recorded in a rejected load register. The waste generator should be notified and, if necessary, issued with a rejected load certificate.

Maintaining a register of rejected loads will ensure a more stringent inspection regime on those waste generators and transporters who repeatedly deliver waste that is rejected.

The register must be kept on site for the regulator to review at any time.

4.2.4 Processing waste materials

Only process waste material that has been inspected and cleared.

An environmental protection licence prohibits most C&D facilities from receiving or storing asbestos waste. However, if waste materials are received that appear asbestos-free and subsequently found to contain ACM, it must be managed in accordance with regulatory requirements and removed from the site for lawful disposal.

REJECTED LOAD REGISTER

Company name

ABN

A Asbestos (suspected)
B Batteries
H Hazardous (fumes, petrol, chemicals, etc)
L Light fittings (PCBs)
R Rubbish (timber, plasterboard, etc)
S Soil

Date	Company	Registration	Comment			Reason	Certificate issued (Yes/No)
			Reload	Turned away	Company contacted		

REJECTED LOAD CERTIFICATE

Company name

Certificate number

Date

Time

Source of waste

Vehicle registration details

Driver's name

Driver's licence number

Driver's signature

Company's signature

This certificate is to advise that your load has been found to contain suspected asbestos containing material and therefore is rejected from entry to this site.

Details of your vehicle, company and the reason for rejection will be entered in the rejected load register, which is audited by the regulator.

This load should be conveyed to a facility that is licensed to accept asbestos for disposal.

5. TESTING AND SYSTEM REVIEW

If waste-derived products are found to contain asbestos, the C&D facility should undertake an internal review of its receival processes.

Random testing for ACM should be undertaken when other quality control tests are conducted, and the recycling process should be reviewed internally every six months. A suitably qualified, competent and independant person should review the entire C&D facility every two years.

The written review should include:

- the date of the review
- who carried out the review
- remedial action
- non-compliant issues
- date of next review.

The six-monthly review should involve:

- checking signage
- inspecting PPE
- training for those involved with ACM
- inspecting the rejected loads register
- observing the inspection process.

The two-yearly review should involve:

- analysing the six-monthly reviews
- reviewing the safety guidelines
- reviewing the site safety management plan
- observing and reviewing the process for receiving waste
- reviewing testing results
- reviewing non-compliant incident reports
- reviewing training.

6. TRAINING AND COMPETENCY

The minimum training for those at a C&D recycling workplace where ACM may be present is the asbestos awareness course, which runs for about two hours. The content of the course includes:

- Introduction to asbestos
  - what is asbestos?
  - the three types of asbestos found in ACM
  - the properties of asbestos
- Asbestos products
  - when asbestos was used in Australia
  - the types of material that can contain asbestos
  - bonded and friable ACM
  - samples of ACM
- Health effects
  - the adverse health effects
  - the routes of exposure
  - the effect of fibre size
  - hazards and risks
- Legislation
  - *Occupational Health and Safety Regulation 2001*
  - *Code of practice for the safe removal of asbestos*
  - *Code of practice for the management and control of asbestos in workplaces*
- Safe handling techniques and PPE
  - how to handle ACM
  - techniques to reduce asbestos exposure
  - the use of PPE
  - how to store ACM.

The minimum training for those involved in the inspection and removal of bonded ACM is the **bonded asbestos removal course,** which runs for about four hours.

The minimum training for those involved in the inspection and removal of friable ACM is the **friable asbestos removal course which runs for a minimum of two days.**

TAFE offers the following courses:

- Asbestos removal (friable asbestos)
- Asbestos training for supervisors (friable)
- Bonded asbestos removal course
- Asbestos training for supervisors (bonded).

The Master Builders Association (MBA) and the Asbestos Removal Contractors Association of NSW (ARCA) offer:

- the friable asbestos removal workers course
- the friable asbestos removal supervisors course
- the bonded asbestos removal workers course
- the bonded asbestos removal supervisors course.

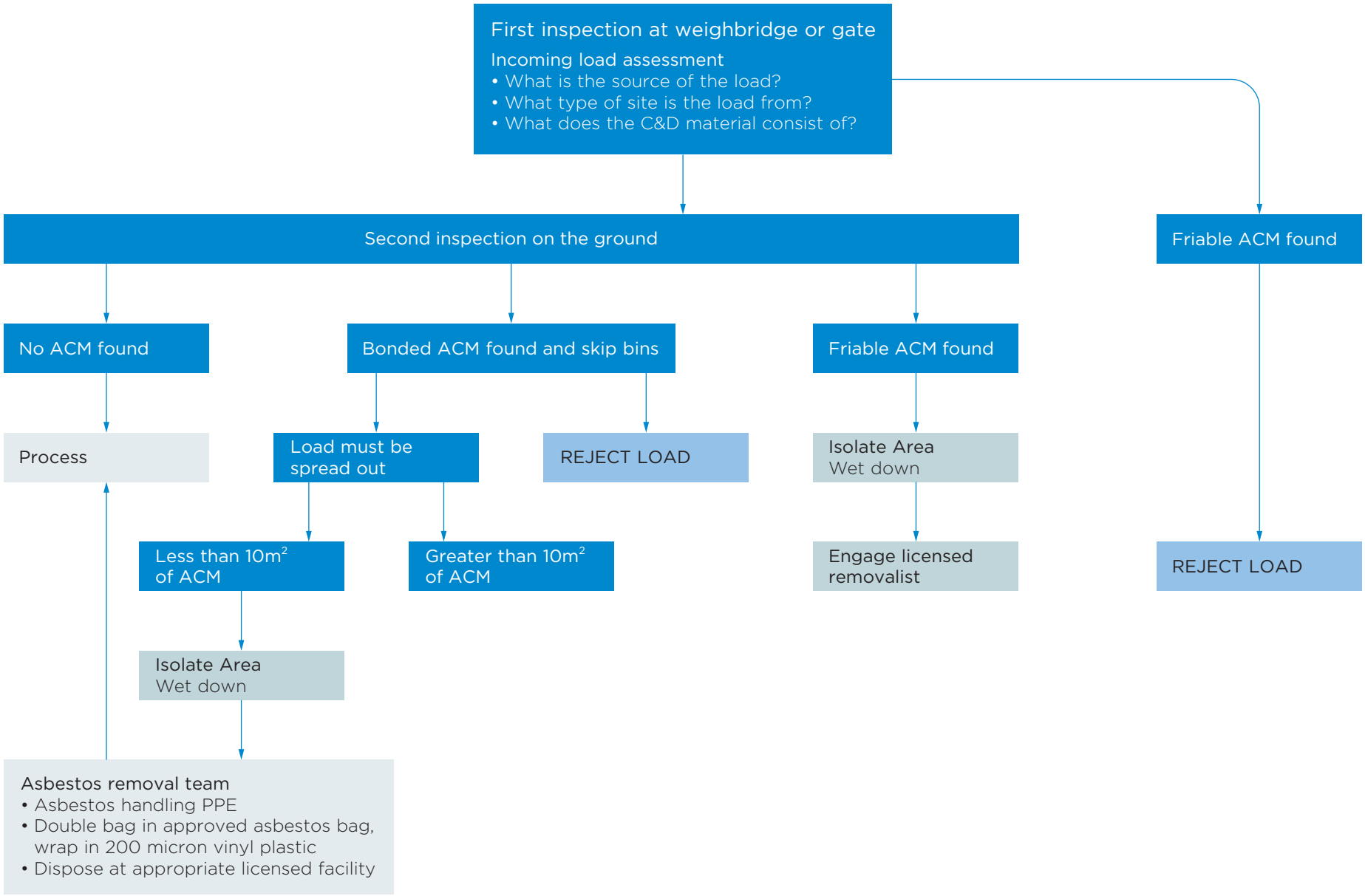
The Housing Industry Association (HIA) offers:

- the bonded asbestos removal course
- the bonded asbestos supervisors course.

The Local Government Training Institute offers:

- the bonded asbestos removal course
- the bonded asbestos supervisors course.

7. FLOW CHART: ACM INSPECTION PROCESS



APPENDIX

The site safety plan should address the health and safety hazards associated with the recycling process, such as:

- the inspection process
- the work environment, including site layout, traffic management, weather and noise
- equipment and materials, including trucks, potential contaminants in loads, mobile plant, crushers and conveyors.

The plan should take into account all those involved in the recycling process, including subcontractors, visitors and truck drivers. Any ACM removed during this process must be disposed of at a facility that is licensed to accept asbestos.

The site safety plan should include:

- Occupational health and safety policy
  - Demonstrates the organisation's commitment to the health, safety and welfare of its workers and anyone else that may be affected through its activities, and to controlling the hazards and risks that have the potential to harm the environment.
- Roles and responsibilities
  - Ensures that the appropriate time and resources are provided to effectively implement and maintain the plan.
- Consultation
  - An agreed and documented mechanism where workers consult on a regular basis to express their views on OHS matters.
- Risk management
  - Identifies hazards, assesses the risks, and implements control measures
  - Allocates responsibilities and resources to implement control measures and assesses the effectiveness of the risk management process
  - Develops procedures, including safe work method statements, which demonstrate how hazards are identified and risks are assessed – eg safe removal of asbestos, manual handling, traffic management.
- Training and competency
  - Everyone is trained to fulfill their roles and responsibilities, and are competent to perform tasks safely, so as not to adversely impact upon themselves, others or the environment.
- Document control
  - All records of OHS matters – ie documents, forms and procedures – are maintained, relevant and up-to-date.
- Evaluation and review
  - Regular inspections of the workplace are understood to monitor control measures and reduce the likelihood of an incident.

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