

Technical Specification

**Transport and Main Roads Specifications
MRTS96 Management and Removal of Asbestos**

July 2017

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1 Introduction

This Technical Specification applies to the management and safe removal of asbestos from existing transport infrastructure including:

- bridges (for example, rehabilitation works including widening, strengthening and damage due to vehicle impact)
- electrical conduits and pits
- water mains, sewer mains, drainage pipes and pits
- miscellaneous products, packing.

This Technical Specification shall be read in conjunction with the requirements of the *Environmental Protection Act 1994* and *Environmental Protection Regulation 2008*, MRTS01 *Introduction to Technical Specifications*, MRTS50 *Specific Quality System Requirements* and other Technical Specifications as appropriate.

This Technical Specification forms part of the *Transport and Main Roads Specifications Manual*.

2 Definition of terms

The terms used in this Technical Specification shall be as defined in Clause 2 of MRTS01 *Introduction to Technical Specifications*. Further definitions are as defined in Table 2.

The following terms are used in this Technical Specification and their definitions are in accordance with *Work Health and Safety Regulation 2011*, *How to safely remove asbestos – Code of Practice 2011*, *How to manage and control asbestos in the workplace – Code of Practice 2011* and the *Transport and Main Roads Asbestos Management Framework*.

Terms used in this Technical Specification relating to the *Environmental Protection Act 1994* and *Environmental Protection Regulation 2008* are defined in accordance with the regulation.

Table 2 – Definition of terms

Term	Definition
Airborne asbestos	Airborne asbestos means any fibres of asbestos small enough to be made airborne. For the purposes of monitoring airborne asbestos fibres, only respirable fibres are counted.
Asbestos	Asbestos means the asbestos form varieties of mineral silicates belonging to the serpentine or amphibole groups of rock forming minerals, including actinolite asbestos, grunerite (or amosite) asbestos (brown), anthophyllite asbestos, chrysotile asbestos (white), crocidolite asbestos (blue) and tremolite asbestos or a mixture of one or more of these minerals.
Asbestos Coordinator	Transport and Main Roads' nominated persons who undertake the function of entering and extracting data from the Central Asbestos Register, coordinating Asbestos Services as required and any other functions within their allocated area of responsibility as outlined in branch specific Implementation Guides. A full description of the Asbestos Coordinator role and responsibilities is provided in the Framework.

Term	Definition
Central Asbestos Register	Central repository of information relating to the presence, suspected presence or the confirmed absence of asbestos and asbestos containing material in the department owned assets.
Competent person	In relation to identifying asbestos, Asbestos Containing Material (ACM) or Naturally Occurring Asbestos (NOA) at the workplace and/or conducting asbestos risk assessments means a person who: <ul style="list-style-type: none"> • Has acquired through training or experience the knowledge to identify suspected asbestos, ACM or NOA and holds an occupational hygienists license, or • Has a statement of attainment in the unit of competency for the identification of asbestos or ACM.
Competent Person-Clearance inspection	In relation to carrying out clearance inspections under the Work Health and Safety (WHS) Regulation 2011, Section 473 means a person who has acquired through training or experience the knowledge and skills of relevant asbestos removal industry practice and holds a certification in relation to the specified Vocational Education and Training course for asbestos assessor work or a tertiary qualification in occupational health and safety, occupational hygiene, science, building, construction or environmental health.
Friable asbestos	Friable asbestos means material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry, and contains asbestos.
Non-friable asbestos	Non-friable asbestos means material containing asbestos that is not friable asbestos, including material containing asbestos fibres reinforced with a bonding compound. (e.g. Asbestos cement in sheeting or piping).
Respirable asbestos	Respirable asbestos means an asbestos fibre that: <ol style="list-style-type: none"> 1. is less than 3 micrometres (μm) wide 2. more than 5 micrometres (μm) long, and 3. has a length to width ratio of more than 3:1.

3 Referenced documents

Table 3 lists documents referenced in this Technical Specification.

Table 3 – Referenced documents

Reference	Title
Asbestos Removal – COP	<i>How to Safely Remove Asbestos - Code of Practice 2011</i>
Design criteria for Bridges and Other Structures	<i>Bridge Design and Assessment Criteria: Design Criteria for Bridges and Other Structures</i>
Implementation Guideline	Engineering and Technology Implementation Guideline for the Asbestos Management Framework Program Delivery & Operations Implementation Guide RoadTek Implementation Guide
Manage and Control Asbestos COP	<i>How to Manage and Control Asbestos in the Workplace – Code of Practice 2011</i>
MRTS01	<i>Introduction to Technical Specifications</i>
MRTS50	<i>Specific Quality System Requirements</i>
MRTS51	<i>Environmental Management</i>

Reference	Title
TMR Framework	Asbestos Management Framework
WHS Regulation	Work Health and Safety Regulation 2011
-	Asbestos Management Policy for its Assets
-	<i>Environmental Protection Act 1994</i>
-	Environmental Protection Regulation 2008

4 Quality system requirements

4.1 Hold Points, Witness Points and Milestones

General requirements for Hold Points, Witness Points and Milestones are specified in Clause 5.2 of MRTS01 *Introduction to Technical Specifications*.

The Hold Points and Witness Points applicable to this Technical Specification are summarised in Table 4.1. There are no Milestones defined.

Table 4.1 – Hold Points, Witness Points and Milestone

Clause	Hold Point	Witness Point	Milestone
8.2	1. Acceptance of the Asbestos Removal Plan 2. Acceptance of a revised Asbestos Removal Control Plan	1. Submission of Asbestos removal control plan 2. Submission of a revised Asbestos Removal Control Plan	
10	3. Receipt of Clearance certificate		

5 Information about the presence of asbestos

The Central Asbestos Register must be consulted as part of the planning for rehabilitation projects and absolutely prior to the commencement of any works, testing etc., to obtain information about the presence or suspected presence of asbestos, where relevant. The Central Asbestos Register can be accessed in consultation with the nominated departmental Asbestos Coordinator.

The location of known contaminated sites, including those subject to asbestos manufacture or disposal, are identified in Annexure MRTS51.1 *Environmental Management*. Contaminated sites containing asbestos must be managed in accordance with MRTS51 *Environmental Management*, this Technical Specification, and the Environmental Protection Regulation 2008.

Where asbestos is known to be present, the following documentation must be considered as part of any planning for works and incorporated in planning documentation, procurement documentation, and information provided to contractors or subcontractors:

- Site specific information for the Central Asbestos Register, and
- The Asbestos Management Plan.

The documentation can be obtained by the Asbestos Coordinator from the Central Asbestos Register.

If there is uncertainty as to whether asbestos is present in any part of a structure or plant, the person with management or control of the workplace can either assume asbestos is present and treat it with appropriate caution based on the level of risk or have a sample analysed.

6 Investigation and testing for identification of asbestos

The preferred option is for investigation and testing to identify the presence of asbestos in existing structures for rehabilitation projects shall be carried out during the design phase. However, in some circumstances such as damage due to vehicle impact on a bridge, this will not be possible. In this instance work should be carried out according to the relevant Implementation Guideline and the WHS Regulation.

Refer to the department's *Design Criteria for Bridges and Other Structures*, the relevant Implementation Guideline and the relevant WHS Regulation for requirements of identification and testing of asbestos.

Asbestos can occur in the following locations in existing transport infrastructure:

- bridges with permanent formwork for insitu deck slabs with girders including separated deck units
- drainage pipes, water mains, sewer mains, pits
- cast in services (e.g. Conduits and drainage fittings)
- buried services including ducts and pits
- electrical and communication pits
- miscellaneous packing and sealing products.

The department will not allow work involving asbestos to commence unless a competent person has assessed the risks, implemented controls and identified safe work practices. To limit worker exposure to asbestos the department will not perform licensed asbestos removal work but will contract this work to a qualified and licensed specialist. Please refer to the relevant Implementation Guideline.

Before work commences on site, the Contractor shall carry out an investigation to confirm the information on the asbestos register and the Central Asbestos Register. The Contractor shall be aware that ACM may exist at locations in addition to those included on the asbestos register and take all necessary precautions.

Where a new incidence of ACM is discovered, or suspected, the Contractor shall immediately stop work and notify the Administrator. The Administrator will promptly arrange for the site to be inspected and assessed by a competent person. The Administrator may declare an exclusion zone for a period of time. The Contractor shall erect exclusion zones as directed by the Administrator and preclude access to those areas.

If asbestos is identified, a written asbestos management plan shall be developed by a qualified person in accordance with the WHS Regulation.

The Asbestos Coordinator should be advised and record all details, photos etc., of any newly identified ACM in the Central Asbestos Register. Where ACM is not disturbed as a result of design details, it shall remain insitu to the extent permitted and be identified and protected appropriately as per guideline provided in the Manage and Control Asbestos Code of practice (COP).

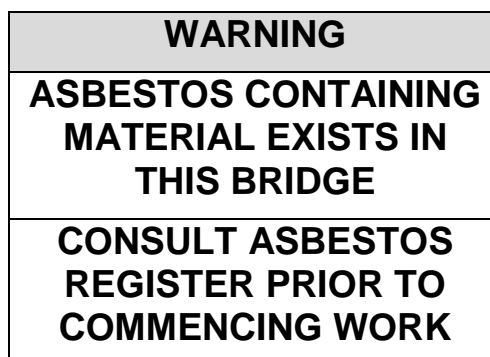
7 Management of asbestos

Management of asbestos should align to the procedures within the relevant Implementation Guideline. This includes managing asbestos risk in transport infrastructure. In addition to the Implementation Guideline, management of asbestos as a regulated and trackable waste should occur in accordance with MRTS51 *Environmental Management*, this Technical Specification, and the Environmental Protection Regulation 2008.

Where the Contract includes requirements for managing ACM on the site, the Contractor shall strictly comply with requirements outlined in the relevant Implementation Guideline and the WHS Regulation.

The department shall erect signs in prominent locations warning of the presence of ACM and shall display a copy of the Asbestos Register. An example of a typical warning sign is shown in Figure 7. All required information shall be included in all safety inductions and meetings.

Figure 7 - Example of a typical warning sign



Where the site has ACM that is not to be disturbed, the department shall ensure that the ACM is adequately signed and delineated to ensure that it is not disturbed.

The Contractor shall ensure all asbestos-related work activities are carried out in accordance with the WHS Regulation.

8 Asbestos removal

8.1 General

Where removal of ACM is included in the Contract, removal shall be undertaken as specified in the contract and paid in accordance with MRS96. When removal of ACM is outside the Contract, the Administrator shall undertake the work in accordance with this Technical Specification, Manage and Control Asbestos – COP and the relevant Implementation Guide.

Where ACM requires removal, the appointed Licensed Asbestos Removal Contractor must notify the Regulator, using the approved form, at least five days prior to starting work, unless there is a sudden unexpected event or breakdown of essential services requiring work to be done immediately. In the latter case the Regulator must be notified immediately or within 24 hours after notice is provided. Asbestos removal must only be done with specific care to minimise asbestos fibres becoming airborne. The following WHSQ legislation shall be followed:

- Work Health and Safety Regulation 2011
- *How to Safely Remove Asbestos – Code of Practice 2011*
- *How to Manage and Control Asbestos in the Workplace – Code of Practice 2011.*

8.2 Licensed asbestos removal contractor

Asbestos removal shall be carried out by an appropriately licensed asbestos removal contractor unless exempted by the WHS Regulation for the size and class of the proposed asbestos removal work. The type of license required shall be in accordance with WHS Regulation 2011 and Asbestos Removal Control Plan.

The licensed asbestos removal contractor shall prepare an Asbestos Removal Control Plan (ARCP) and submit it to the Administrator at least 21 days prior to the start of asbestos removal works. Refer to the *Asbestos Removal Code of Practice* 2011 and the Implementation Guide for guidance.

Witness Point 1 The proposed asbestos waste disposal site shall be shown in the ARCP. Asbestos removal shall not be commenced until the Administrator has issued written confirmation of the acceptance of the ARCP. **Hold Point 1**

The ARCP shall outline the specific control measures to control airborne asbestos. An assessment of air monitoring requirements shall be carried out by the Asbestos removalist in accordance with the Asbestos Removal – COP to ensure the effectiveness of control measures.

If requirements for additional measures are identified during the ACM removal work, the ACM removal shall stop immediately and the Administrator notified. The Administrator will promptly arrange for the site to be inspected and assessed. The Administrator may declare an exclusion zone for a period of time. The Contractor shall erect exclusion zone as directed by the Administrator and preclude access to those areas. The contractor shall revise the ARCP and submit it to the Administrator at least 14 days before the commencement of the Asbestos removal. **Witness Point 2** Asbestos removal shall not be commenced until the Administrator has issued written confirmation of the acceptance of the revised plan **Hold Point 2**

8.3 Asbestos removal work

Asbestos removal may require the asbestos removal area to be enclosed. Large scale asbestos removal (friable or non-friable) is of longer duration and there is higher risk of generating a significant amount of airborne asbestos.

The licensed asbestos removalist shall carry out a risk assessment to determine the requirements for the asbestos removal area to be enclosed to eliminate or minimise the release of airborne asbestos. If it is not reasonably practicable to enclose the area, adequate alternative control measures shall be included in the ARCP. The ARCP shall be submitted to the Administrator for approval in accordance with Clause 8.23

Design, assessment and testing of the enclosure shall be carried out in accordance with the Asbestos Removal – Code of Practice.

8.4 Tools and equipment prohibited on asbestos

In accordance with the Asbestos Removal – COP, tools and equipment that generate dust must not be used on ACM. Prohibited tools and equipment's include:

- high-speed abrasive power and pneumatic tools, for example angle grinders, sanders, saws and high-speed drills
- brooms and brushes (unless brushes are used for sealing)

- high-pressure water spray, jets, power or similar tools and instruments on asbestos in the workplace, and
- compressed air.

The use of tools and equipment that cause the release of asbestos, including power tools and brooms shall not be used on asbestos unless they are enclosed and/or designed to capture or suppress asbestos fibres and/or the equipment is used in such a way that is designed to capture or suppress asbestos fibres safely.

The wet spray method shall be used for asbestos removal and any dry method is not permitted because of greater potential for airborne asbestos fibres to be generated.

The level of airborne asbestos shall be monitored during asbestos removal. If the level of airborne asbestos is higher than the fibre levels specified in the Asbestos Removal – COP, asbestos removal works shall stop and the Administrator notified for action as stated in Clause 7.3 and the WHS Regulation. The ARCP shall be revised with additional control measures as stated in Clause 7.3.

8.5 Decontamination

Contaminated items, tools, equipment and clothing including PPE and RPE must not be removed from the asbestos removal work area unless they have been decontaminated or contained. Personal decontamination shall also be undertaken each time an asbestos removal worker leaves the ACM removal work area. Decontamination should be undertaken as per the guidelines provided in Asbestos Removal – COP.

9 Transport and disposal of asbestos waste

Asbestos waste must be contained and labelled before the asbestos waste is removed from the asbestos removal area. The transport and disposal of asbestos shall be in accordance with the requirements of the Environmental Protection Regulation 2008. The Contractor shall manage as a regulated waste including waste tracking obligations.

Transport and disposal of asbestos waste shall be in accordance with the guidelines provided in the Asbestos Removal COP.

10 Clearance inspection, clearance certificate and site validation report

On completion of the asbestos removal works, a clearance inspection of the area shall be carried out and a clearance certificate shall be issued by an independent licensed asbestos assessor for friable licensed asbestos removal work or an independent competent person for non-friable licensed asbestos removal work to verify that it is safe for normal use in accordance with WHSQ Regulations 2011 and the Asbestos Removal – COP.

The requirements of the independent asbestos assessor and independent competent person for clearance inspection to issue clearance certificate shall be in accordance with the Asbestos Removal – COP. If required within MRTS51, a site validation report shall be completed in accordance with sections 389 and 390 of the *Environmental Protection Act 1994*.

The Contractor shall submit this clearance certificate to the Administrator and shall not allow unauthorised persons to access the asbestos effected area until the Administrator has acknowledged receipt of the clearance certificate. **Hold Point 3** The asbestos hazard signs shall be maintained until the **Hold Point 3** has been released.

Within 10 days of completion of the clearance inspection for all work associated with the removal of ACM or any audit/inspection program, the Contractor shall forward to the Administrator all related asbestos documentation, including clearance certificate, photographs, waste disposal certificate, sample results etc., to show the extent of ACM that was removed or identified. The department shall update the Central Asbestos Register and update the Hazard Field in the Bridge Information System if applicable.

