

Asbestos Guide

Tunnels

Last updated: 04/12/17

Valid Until: 31/03/20

Document Owner: Professional Head of Mining & Tunnels

Asbestos Exposure

Exposure to asbestos fibres causes mesothelioma, lung cancer and asbestosis, all of which can be fatal. Worst of all, it's not instant and you won't see it coming. These diseases may not develop for ten to fifty years.



- Asbestos still kills around 5000 workers each year; this is more than the number of people killed on the road
- Around 20 tradesmen die each week as a result of past exposure
- Asbestos is not just a problem of the past. It can be present today in any building that was built or refurbished before the year 2000

Purpose of this guide

Who is this for?

This guide has been created to assist anyone who may come into contact or disturb Asbestos Containing Materials (ACMs) when working in or around tunnels. It will also assist responsible managers and those who control site safety and access, by showing where ACMs are likely to be.

Tunnels have been identified as potentially **High** risk

Safety, Technical and Engineering (STE) has completed an assessment of all our assets and identified Tunnels as potentially high or medium risk. The criteria used to complete the assessment included; location, usage, accessibility, maintenance activities, etc.

This guide highlights the most significant risks, but there may be others

This guide provides a list of locations where we believe ACMs might exist, but there may be others. You should always assume that a tunnel will contain asbestos unless it has been inspected/surveyed and recorded on Network Rail's Asbestos Risk Management System (ARMS <https://arms.networkrail.co.uk>).

This guide must not be used in place of an asbestos survey.

Asset Information

Tunnels contain a variety of components, fixing and fittings which may comprise asbestos containing materials (ACMs).

Asbestos may be found in the following forms:

- Joint fillers/mastics
- Caulking to lining
- Lining insulation
- Pads to DC rail pots
- Durasteel doors
- Textiles to cables
- Gaskets to pipework
- Cement sleeves
- Dust/debris to floor, lining & ballast
- Pipe lagging
- Station cladding & station fireproof coatings
- Troughing (body and lids)
- Early water management sheeting
- Stored / stowed rubbish and materials
- Sacrificial smoke plate installations
- Sumps and associated pumping installations
- Internal components to live plant & electrical equipment

Specific areas within tunnels include:

- Ballast: there may be residual traces of asbestos from damage to lineside troughing in ballast. Ballast should therefore be presumed as an ACM. However, due to low levels of asbestos being identified, this will only pose a risk where a work activity in a tunnel involves the handling of used track ballast. Based on ballast alone, examinations and maintenance to tunnel linings is not deemed as working with asbestos. Refer to NR/L3/ENV/044, appendix A for requirements for the handling of ballast
- Soot: samples of soot for asbestos may be required; there may be asbestos present in soot. Initial soot and dust samples will be analysed centrally to determine whether there is the need to amend the guidance
- Sheeting: tunnels have been known to have sheeting material installed prior to year 2000
- Cable/pipe bracket and clips: tunnels have been known to have cable/pipe/pan clips and brackets installed prior to year 2000 that contain asbestos
- Rubbish dumped containing unknown materials

Other assets commonly found in tunnels which potentially could contain asbestos include:

Signalling

- Location case
- Points operating equipment
- AWS & TPWS magnets
- ATP beacons
- Balise
- Disconnection boxes
- Troughing route (signalling & telecoms)
- Tunnel emergency communication (signalling & telecoms)

Electrical Power

- Points heating equipment
- OLE isolator/structure/wire run
- SF6 switchgear
- 25kv switching station
- SCADA electronic equipment
- Functional supply point – 650v
- Section insulator
- Lighting system

Tunnels can be occupied on a daily basis and provide very little ventilation. ACMs in the tunnels may be routinely disturbed. Maintenance activities within the tunnels are expected to cause a high level of disturbance to ACMs present.

If any suspected ACMs could be disturbed or are damaged it should be reported to the dutyholder (NR/TOC/FOC/DFO or other) who will determine what action is required.

Asbestos Guide

Tunnels

Maintenance

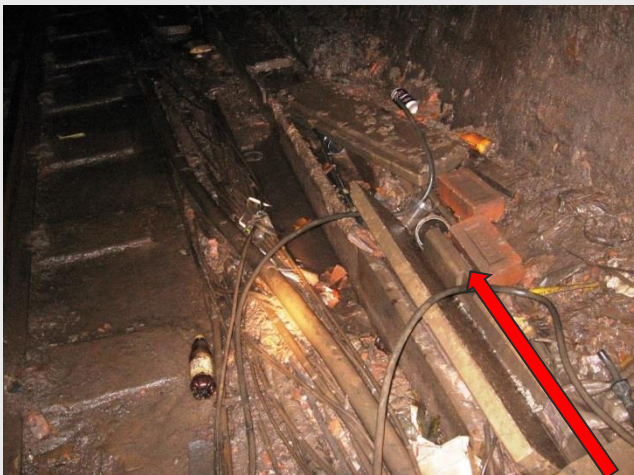
Examples of asbestos containing materials within tunnels include:



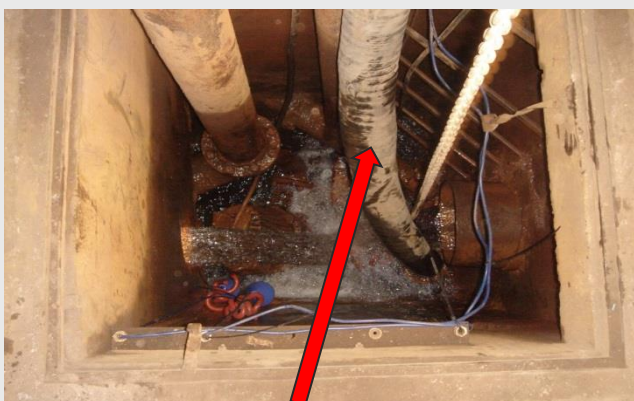
Dust/debris to floor, lining & ballast



Sub-surface station cladding



Rubbish and other materials found in tunnels



Sumps and associated pumping installations



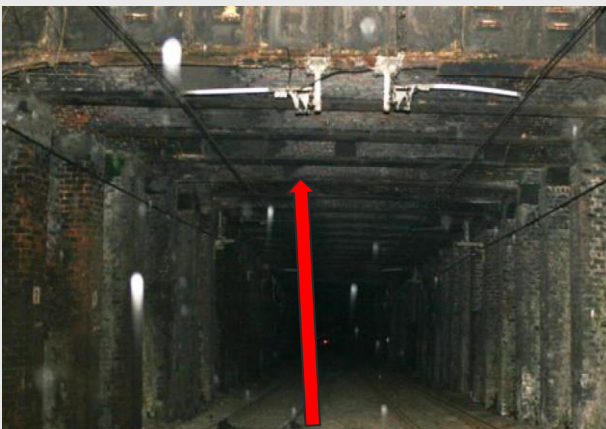
Maintenance continued



Textiles to cables - gaskets to pipework - pipe lagging



Caulking to lining



Sacrificial smoke plate installations



Station fireproof coating

Work with Asbestos

There are three types of work with asbestos:

1. Non-Licensed Works - Work with asbestos that does not require a licence from the HSE. Further information on non-licensed works can be found at <http://www.hse.gov.uk/asbestos/licensing/non-licensed-work.htm>

2. Notifiable Non-Licensed Works (NNLW) - Work with asbestos that does not require a licence from the HSE but is required to be notified to the appropriate enforcing authority (HSE/ORR). Further information on NNLW can be found at <http://www.hse.gov.uk/asbestos/licensing/notifiable-non-licensed-work.htm>

3. Licensed works - Work with asbestos that requires the contractor to hold a license from the HSE and usually requires notification to the appropriate enforcing authority (HSE) 14 days prior to the work starting. Further information on licensed works can be found at <http://www.hse.gov.uk/asbestos/licensing/licensed-contractor.htm>

Work with Asbestos continued

There are some tasks Network Rail Operatives undertake which bring them into contact with asbestos. Most maintenance tasks deemed as work with asbestos will not be licensed works. With the correct level of information, instruction and training, and if the works are deemed as **Non-Licensed Works** or **Notifiable Non-Licensed Works (NNLW)**, Network Rail Operatives can undertake these tasks. Network Rail Operatives must never undertake **Licensed Works** – a Licensed Asbestos Removal Contractor (LARC) must be used.

There is a guide on the HSE website to assist in deciding if the work requires an HSE-Licensed asbestos contractor <http://www.hse.gov.uk/asbestos/managing/flashtools/isitlicensed.htm>. If the work falls under notifiable non-licensed work the notification form can be found at <https://extranet.hse.gov.uk/lfsrserver/external/asbnnlw1>

Some examples of maintenance work which **does not usually require a licence from the HSE** are listed below:

- Maintenance work on asbestos cement products or other materials containing asbestos (such as paints, bitumen, resins, rubber, etc.) where the fibres are bound in a matrix which prevents most of them being released.
- Small, short duration maintenance tasks where the control limits will not be exceeded
- Encapsulation and sealing-in work on ACMs that are in good condition
- Maintenance work involving asbestos gaskets and asbestos rope seals

Some examples of maintenance work which **requires a license from the HSE** are listed below:

- Maintenance works that requires the removal or disturbance of pipe lagging
- Work on asbestos insulating board, where the risk assessment indicates that it will not be of short duration.

If there is asbestos dust/debris present works may need to be completed by a Licensed Asbestos Removal Contractor.

All non-licensed and notifiable non-licensed work with asbestos requires:

- Risk Assessment <http://www.hse.gov.uk/asbestos/risk-assessments.htm>
- Appropriate Controls <http://www.hse.gov.uk/asbestos/essentials/index.htm>
- Information, Instruction & Training <http://www.hse.gov.uk/asbestos/training.htm>
 - Asbestos awareness training (NR training catalogue course code S&SD/OH&S/AM RME)
 - Task-specific information, instruction & training (Cat B Training industry standard, delivered by NR approved framework asbestos contractor)

In summary - for all work with asbestos, staff will require adequate PPE (including a face fit test), training, appropriate equipment and medical surveillance (for NNLW). Records must be kept in relation to works completed including exposure and health records. Arrangements need to be made for the disposal of asbestos waste including storage location, waste carriers license and waste consignment notices. Without all of the above in place, staff must not start work on asbestos. **If in doubt, do not start work.**

Further Information

Document Reference	Document Title
NR/L2/CIV/168	Asbestos Management
NR/L2/OHS/157	Health surveillance for silica and asbestos and the management of diagnosed occupational respiratory conditions.
Number Route Specific	Operational Route Asbestos Management Plan (ORAMP) / Property Asbestos Management Plan (PAMP)
Number Site Specific	Site Specific Asbestos Management Plan (SSAMP)
SI No.632	Control of Asbestos Regulations 2012
L143	Managing and Working with Asbestos. Control of Asbestos Regulations
HSG210	Asbestos Essentials (including task sheets for Equipment and method sheets EM1-EM10 and work with asbestos A1-A37)
HSG 264	Asbestos: The Survey Guide
HSG 248	The Analysts Guide
HSG247	The Licensed Contractors' Guide
RIS-8047-TOM	Reporting of Safety Related Information
INDG453	The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
NR/L2/INV/002	Accident and Incident Reporting and Investigation
NR/L2/OHS/00103	Specialist Risk Assessment - COSHH
NR/L2/OHS/00112	Worksafe Procedure
NR/L2/OHS/00124	Competence specific medical fitness requirements and supplier requirements for medical assessments
NR/L2/OHS/0047	Application of the Common Safety Method for Risk Evaluation and Assessment
NR/L2/RSE/100/02	Application of the Common Safety Method for Risk Evaluation and Assessment
NR/L3/INV/3001	Reporting and Investigation Manual
NR/L3/INV/3001/RIM101	Reporting of accidents, incidents and occupational ill health
NR/L3/INV/3001/RIM113	Statutory reporting of accidents, incidents and occupational ill health
NR/SP/OHS/00102	Work Activity Risk Assessment
NR2072P	Preliminary report investigation form