Asbestos Management on Highways

White Paper

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Introduction

The purpose of this paper is to give an unambiguous understanding of the requirements of the duty holder with regards to managing asbestos on UK Highways.

Executive Summary

With much of the UK highways infrastructure over 20 years old, one of the biggest risks associated with renewal schemes, repair and maintenance is the hidden dangers of Asbestos Containing Materials (ACMs).

Regulations to asbestos on highways are the same as any structure, however many assets have not been surveyed for asbestos. It is the duty holder’s responsibility to make sure that assets are well managed and maintained. The duty holder must have knowledge of where the asbestos is located and make sure that the management is in accordance with the regulations.

Ensuring compliance with the duty to manage asbestos is a complicated and onerous task. The named duty holder must have a clear competent understanding of the protocols required and must ensure that procedures are followed on a daily basis in order to comply. This task can be greatly assisted by the appointment of a professional asbestos consultancy.

About The Author

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Andrew is an experienced Business Unit Director and Project Director with 32 years construction industry experience including 9 years as Project Director for Atkins. Andrew has a history of successfully delivering a wide range of projects within the healthcare, education, rail, telecommunications and infrastructure sectors both in the UK, and overseas.

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The Hazard

Asbestos, a category 1 human carcinogen was extensively used in construction materials prior to prohibition of its use, in the UK, in 1999. Any building or structure which was built prior to 2000 is likely to contain asbestos containing materials.

Legislative Requirement

In the UK the Control of Asbestos Regulations 2006 (CAR 06) came into force on 13th November 2006, bringing together three previous sets of regulations covering the prohibition of asbestos, the control of asbestos at work and the asbestos licensing regulations. These regulations were then updated in 2012 (The Control of Asbestos Regulations 2012). Asbestos Containing Materials (ACM’s) are known to exist within the highway boundary, in roads, drainage, structures, associated buildings and other assets. Road tunnels, depots and other buildings are considered to pose the highest risk for highway works. ACM’s only pose a risk to health if the material is disturbed and the fibres become airborne and can then be inhaled.

H E (Highways England) asbestos management strategy complements existing requirements under the Construction Design and Management Regulations (CDM) 2015. It will form the basis for ensuring asbestos issues are included in health and safety plans and files, design risk assessments and other assessments as required by the Control of Substances Hazardous to Health Regulations (COSHH) 1992, as detailed in the appropriate H E standards. HSG 264 Asbestos: The survey guide, published by the HSE in January 2010 replaces and expands on MDHSIOO, surveying, sampling and assessment of asbestos containing materials.

As an asset owner, H E will audit and monitor H E Service Providers’ and Major Project Providers’ compliance with H E policy.

The risks from asbestos will vary with circumstance, from inadvertent disturbance of the asbestos containing material during the repair, refurbishment and demolition of the premises or structure, to accidental damage by occupiers or even from normal occupation of a building which is in a poor state of repair.

An asbestos management plan is a written document which details and records what actions the duty holder needs to take in order to reduce the risk of exposure to an absolute minimum.

A common misconception is that an asbestos management survey of a highways asset or structure will make the duty holder compliant with the regulation. The reality is that the asbestos survey is the starting point, a data gathering exercise, on which to base the management plan.

Failure to carry out this assessment correctly or re-assess at regular intervals may result in the deterioration of asbestos containing materials being overlooked, causing a potential for exposure and the possibility of prosecution by the HSE.

In order to manage the asbestos containing materials within highway assets they must first be positively identified or presumed to be present. The presumptive method of asbestos management requires the duty holder to assume that all unknown infrastructure fabric contains asbestos and that procedures are put in place to ensure that the material is dealt with accordingly. This method of asbestos management is extremely impracticable and greatly restricts maintenance procedures. As such the most common starting point for compliance with the regulation is an asbestos management survey.

In the case of hidden assets, for example drainage, the assets must be presumed to contain asbestos unless there is evidence to the contrary. All survey/sampling should take maximum advantage of planned traffic management required for other work e.g. geotechnical investigations, routine maintenance, principal bridge and other investigations or work streams.
Asbestos Management

Asbestos Management Surveys
Its purpose is to locate, as far as reasonably practicable, the presence and extent of any suspect ACM's which could be damaged or disturbed including foreseeable maintenance and improvement activity, and to assess their condition. They may involve minor intrusive work. The extent of intrusion will vary and depend on what is reasonably practicable. A Management Survey should include a ‘material assessment’ of the condition of the ACM’s and their ability to release fibres into the air. This ‘material assessment’ will give a good initial guide to the priority for managing ACM’s as it will identify the materials which pose a high risk.

The survey will usually involve sampling and analysis to confirm the presence or absence of ACM’s. A Management Survey can be completed using a combination of a desk study of other records including drawings and principle bridge inspection reports, sampling ACM’s and presuming ACM’s or, indeed, just presuming. Any materials presumed to contain asbestos must also have their condition assessed (i.e. a material assessment). Appointed surveyors will have due regard to the requirements of HSG 264 Highways Agency standard 63/5. It is anticipated that for the majority of highway assets a Management Survey will be undertaken. Sampling should only take place if advised by the surveying organisation.

A good asbestos survey will
• Include an inventory of non asbestos materials as well as asbestos materials.
• Be performed by a UKAS accredited company which gives assurance of the surveyor’s competency and confidence that performance and quality is regularly audited.
• Keep the areas not accessed to an absolute minimum and must ensure that any area which can be accessed by maintenance staff should be included.
• Be set out in a clear format reducing the need to cross reference different areas of the report.

A poor asbestos survey will:
• List asbestos containing materials only, leading to confusion and ambiguity when the report is being interpreted on site if items are not clearly recorded (ambiguous recording of location for example “Under the drain”).
• Have an overwhelming amount of detail on the report plan leading to misinterpretation.
• Have many cross referenced samples.
• Have many non accessed areas.

An asbestos management survey is a complex document with a lot of information included within. It is not advised that the client merely print out the plan included in the survey and use that as the sole basis for the asbestos register. The plan should only be a guide to be used in conjunction with the information in the body of the report.

Gone are the days of paper records. With technology so readily available electronic records of the asbestos information should be kept on an easily accessible electronic format. Systems such as NexGen (Lucion Services’ purpose built risk management software) enables users to search for records, keep track of multiple property portfolios and view reports as they progress through their life cycle. Unlike buildings with listed rooms, the surveying of asbestos on highways can cover large areas of road with little to identify an exact location. With the use of GPS technology, this can help rid reports of ambiguity and ensures precise pinpointing of areas.

Asbestos Refurbishment And Demolition Surveys

A Refurbishment and Demolition Survey is needed before any refurbishment or demolition work is carried out. This type of survey is used to locate and describe, as far as reasonably practicable, all ACM’s in the area where the refurbishment work will take place or in the whole asset if demolition is planned. The survey will be fully intrusive and involve destructive inspection, as necessary, to gain access to all areas, including those that may be difficult to reach.

A Refurbishment and Demolition Survey may also be required in other circumstances, e.g. when more intrusive maintenance and repair work will be carried out. For buildings they should only be conducted in unoccupied areas. For other assets e.g. bridges, consideration should be given as to how the area can be made safe during refurbishment or demolition. It is likely that Refurbishment and Demolition surveys will be required if major structures or buildings are to be demolished or refurbished. Advice should be taken from the surveying organisation.
Asbestos Management Plan

The asbestos management plan is a written document which takes information regarding the location of asbestos in the building, structure or asset (found in the management survey) and ensures that:

- The person(s) responsible for the management of asbestos is named in the document.
- Records of the location, condition, maintenance and removal of all asbestos containing material in the premises or area are maintained and kept up to date.
- If there is a risk of exposure due to its condition or location, then materials are repaired, sealed or removed.
- The materials are maintained in a good state of repair and the condition regularly monitored.
- Anyone who is likely to disturb it is informed about the material’s location and condition, and receipt of the information is formally recorded.
- Arrangements and procedures are in place, so that work which may disturb the material complies with The Control of Asbestos Regulations 2012.
- The plan is reviewed at regular intervals with arrangements made if circumstances change.

The competent person named in the asbestos management plan should be trained in:

- The location of asbestos in buildings, structures and assets and how to recognise it.
- The associated health effects related to asbestos exposure.
- The risks associated with working in areas affected by asbestos contamination.
- The reasons for adopting the control measures.
- The procedures detailed in the risk assessment.
- The use of personal and respiratory protective equipment and decontamination facilities including practical demonstration.
- The control limits and action levels, their meaning, and the importance of air monitoring to check compliance with them.
- The general procedures to be followed to deal with an emergency, such as an uncontrolled release of asbestos dust into the workplace or break-out of a fire.
- Procurement of competent contractors.

Keeping Records Up To Date

The key compliance issue regularly found on highways structures and assets is keeping records collated and up to date. All asbestos containing materials within a building, asset or structure have the potential to deteriorate with age and disturbance, giving rise to a potential asbestos fibre release.

After assessing vulnerability of the materials the nominated person carrying out asbestos inspections should be sufficiently competent in knowing the signs of deterioration and also ensure the asbestos action plan is kept up to date. An asbestos awareness course certificate does not prove adequate competency to carry out such works.

Procurement Of Asbestos Consultancy And Removal Services

The HSE recommends, and H E requires, that specialist asbestos surveying and laboratory testing organisations should be UKAS accredited to ISO 17020 and 17025 respectively. Furthermore, the AAPs may recommend that there is a requirement to undertake Management Surveys and/or Refurbishment/Demolition Surveys.
H E service providers will be responsible for obtaining approval from the H E Area Performance Manager, prior to the issue of the works order for the proposed specialist services commission to the H E Service Provider, via the usual approval route.

In planning for surveys the following issues need to be considered:

- Whether records indicate a strong likelihood of ACM’s or not.
- The risk posed by working under traffic management compared to the likely risk of disturbing ACM’s during planned maintenance work. However, the likelihood of exposure to asbestos and the need to avoid exposure should be assessed properly.
- Known consistency of materials/components based on contract limits during the original construction work and the repeated detailing on bridges and culverts. This will allow representative sampling and assessment work to take place. However, previous modifications to assets need to be considered.
- Similarity in the appearance of construction details in buildings and other similar structures.
- Combining survey work for asbestos with other maintenance activities within planned traffic management measures.
- Whenever possible combine asbestos surveys with any planned inspections to take advantage of shared access arrangements.

A competent person named in the asbestos management plan should be confident that the supplier chosen has the quality and competency to carry out the works. More information on the recent consequences of non compliant procedures can be found on the latest section of Lucion’s website as well as the HSE’s own website.

It is important to always procure the analytical services of the consultant separately from the asbestos contractor to ensure independence and quality of service. Such companies can assist in the procurement of asbestos removal contractors and ensure, by way of asbestos abatement consultancy, that any asbestos removal works are carried out efficiently, expeditiously and to the regulations.

Asbestos In Soils And Made Ground

Prior to the 1980s any building, or structure will most likely have been demolished without taking out the asbestos. It is not uncommon to find asbestos materials including loose asbestos fibre in aggregate soil and made ground beneath roads, verges, pavements and on brownfield sites close to highways.

Exposure to such hazards will need to be risk assessed during any works which disturb the soil in areas known to be brownfield sites or where aggregate has previously been brought to site for landscaping or foundation purposes. More information on asbestos in soil or contaminated land can be found here.

Conclusion

The consequences of not having a robust and competent asbestos management plan can be serious from a health and safety and regulatory viewpoint. The amount of asbestos containing materials present within the road network should not be underestimated. A thorough and robust area asbestos management plan including strategies for developing and implementing asbestos action plans is needed to ensure Highways England and the Management Agent Contractor that the control of asbestos regulations and associated approved codes of practice are followed.
How Lucion Can Help...

At Lucion we have developed an industry leading approach to support infrastructure organisations and local authorities in identifying, assessing and mitigating their risk of asbestos. Lucion offer a range of guides available online including an asbestos on highways podcast available to download for free.

To speak with Author of the white paper, Andrew Wise, or one of our specialist consultants about managing asbestos on highways, call 0345 5040 303 or email enquiries@lucion.co.uk

About Lucion Environmental

Lucion Environmental specialise in the surveying, identification and analysis of asbestos containing materials. As an independent company with no links to licensed asbestos removal contractors we are able to ensure the delivery of impartial, trusted inspection and testing services to our clients across the world.

Lucion Environmental is part of Lucion Services, a group of risk management companies with unique specialisms in five core areas that comprise of the identification, measurement, control, remediation and education of risk management. Together we offer our customers a holistic approach towards risk management, tailored to their requirements.