

Asbestos

UK 4th edition, May 2021 Effective from August 2021



Asbestos

RICS professional standard, UK

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Figure 1 © Elliott Environmental Surveyors Ltd.



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RICS standards framework

RICS' standards setting is governed and overseen by the Standards and Regulation Board (SRB). The SRB's aims are to operate in the public interest, and to develop the technical and ethical competence of the profession and its ability to deliver ethical practice to high standards globally.

The RICS <u>Rules of Conduct</u> set high-level professional requirements for the global chartered surveying profession. These are supported by more detailed standards and information relating to professional conduct and technical competency.

The SRB focuses on the conduct and competence of RICS members, to set standards that are proportionate, in the public interest and based on risk. Its approach is to foster a supportive atmosphere that encourages a strong, diverse, inclusive, effective and sustainable surveying profession.

As well as developing its own standards, RICS works collaboratively with other bodies at a national and international level to develop documents relevant to professional practice, such as cross-sector guidance, codes and standards. The application of these collaborative documents by RICS members will be defined either within the document itself or in associated RICS-published documents.

Document definitions

Document status	Definition						
RICS professional standards	Set requirements or expectations for RICS members and regulated firms about how they provide services or the outcomes of their actions.						
	RICS professional standards are principles-based and focused on outcomes and good practice. Any requirements included set a baseline expectation for competent delivery or ethical behaviour.						
	They include practices and behaviours intended to protect clients and other stakeholders, as well as ensuring their reasonable expectations of ethics, integrity, technical competence and diligence are met. Members must comply with an RICS professional standard. They may include:						
	mandatory requirements, which use the word 'must' and must be complied with, and/or						
	• recommended best practice, which uses the word 'should'. It is recognised that there may be acceptable alternatives to best practice that achieve the same or a better outcome.						
	In regulatory or disciplinary proceedings, RICS will take into account relevant professional standards when deciding whether an RICS member or regulated firm acted appropriately and with reasonable competence. It is also likely that during any legal proceedings a judge, adjudicator or equivalent will take RICS professional standards into account.						
RICS practice information	Information to support the practice, knowledge and performance of RICS members and regulated firms, and the demand for profession services.						
	Practice information includes definitions, processes, toolkits, checklists, insights, research and technical information or advice. It also includes documents that aim to provide common benchmarks or approaches across a sector to help build efficient and consistent practice.						
	This information is not mandatory and does not set requirements for RICS members or make explicit recommendations.						

UK regulatory hierarchy

Type of legislation/ guidance	Description/status						
Acts of Parliament	Primary legislation.						
Statutory Instruments/ regulations	Legislation made pursuant to an Act of Parliament.						
Approved Codes of Practice (ACOPs)	Guidance approved by the Health and Safety Executive (the HSE) with the consent of the Secretary of State. ACOPs give practical examples of good practice and advice on how to comply with the law. They have a special legal status. If employers are prosecuted for a breach of health and safety law, and it is proved that they have not followed the relevant provisions of the ACOP, a court can find them at fault unless they can show that they have complied with the law in some other way.						
Guidance	Guidance, other than an ACOP, prepared or sanctioned by the government or a government agency (the HSE in the case of health and safety law). It is used to give technical advice and help people interpret, understand and comply with the law. Following guidance is not compulsory and employers are free to take other action, but if they do follow guidance they will normally be doing enough to comply with the law.						

Note the following:

- HSE guidance publications, such as <u>L143</u>, may include text with both ACOP and guidance status.
- Guidance is also produced by bodies other than the government and government agencies, such as the CL:AIRE guidance on <u>Asbestos in soil</u> (CAR-SOIL).

Notes on references to UK law and guidance in this professional standard

References in this document are generally to the law and guidance that applies in England, Scotland and Wales (Great Britain). Different legislation applies in Northern Ireland. However, for practical purposes the detail, requirements and duties are the same across all four countries. The main legislation relevant to asbestos is as follows.

• Employers' general health and safety duties under the <u>Health and Safety at Work etc. Act</u> <u>1974</u> apply in Great Britain. The equivalent legislation for Northern Ireland is the Statutory Instrument <u>Health and Safety at Work (Northern Ireland) Order 1978</u>.

- The Control of Asbestos Regulations 2012 are the specific asbestos regulations in Great Britain, whereas in Northern Ireland the regulations that apply are The Control of Asbestos Regulations (Northern Ireland) 2012.
- In terms of construction, <u>The Construction (Design and Management) Regulations 2015</u> apply in Great Britain; in Northern Ireland <u>The Construction (Design and Management) Regulations (Northern Ireland) 2016</u> apply.

The guidance referred to in this professional standard is prepared by the HSE, with the exception of CAR-SOIL.

Glossary

Term	Definition					
Asbestos containing	A term used to describe any material that contains asbestos.					
material (ACM)	Use of this acronym in relation to asbestos – established for many years – is not to be confused with the recent adoption of 'ACM', following the Grenfell fire, to mean aluminium cladding material.					
Asbestos insulating board (AIB)	A low-density asbestos board extensively used for compartmentalisation.					
Asbestos management plan (AMP)	A document, developed from the asbestos register, that details an organisation's approach to managing asbestos.					
Asbestos register	A document that details the location of asbestos within a property.					
Asbestos survey	The process of surveying a property for asbestos containing materials. Different levels of asbestos survey are available.					
Certificate of reoccupation	A document issued by a UKAS accredited organisation following the removal of asbestos by a licensed contractor.					
CIRIA	Construction Industry Research and Information Association.					
Duty to manage	An obligation placed upon a dutyholder under Regulation 4 of <u>The Control of Asbestos Regulations 2012</u> .					
Dutyholder	The person or persons deemed responsible for ensuring compliance with the duty to manage requirements.					
HSE	Health and Safety Executive.					
Management survey	A type of asbestos survey undertaken to ensure asbestos containing materials that may be disturbed during the normal day-to-day management of a property have been identified.					
Non-occupational exposure	The term used when a person who is not designated as an asbestos worker has been exposed to asbestos fibres.					
Occupational exposure	The term used when a person who is an asbestos worker has been exposed to asbestos fibres.					
PPE	Personal protective equipment.					
RAMS	Risk assessment and method statement.					

Term	Definition				
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals. See <i>UK REACH</i> .				
Refurbishment and demolition survey	A type of asbestos survey that builds upon the management survey. The survey needs to be specifically designed to ensure that it is appropriate for the refurbishment and/or demolition of a building.				
RPE	Respiratory protective equipment. It is important to note that different types of RPE can be used for asbestos, and each type will provide a different level of protection.				
UK REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 – originally a regulation of the EU, adopted to increase the protection of human health.				
United Kingdom Accreditation Service (UKAS)	The UK's sole national accreditation body appointed by the UK government to 'assess against internationally agreed standards, organisations that provide certification, testing, inspection and calibration services' (<u>UKAS website</u>).				

1 Introduction

Asbestos is the general term used for a group of six fibrous silicate minerals. Any product or material containing one or more of these fibrous silicates falls under the legal definition of asbestos. The risk from particular asbestos containing materials (ACMs) is determined by their friability: the ease with which they release fibres. The higher the friability, the greater the potential risk.

The presence of ACMs in buildings has been linked to a range of diseases. All types of asbestos are classified as group 1 carcinogens by the World Health Organization (WHO). This classification is given to substances that are known to be carcinogenic to humans. Worldwide, more than 107,000 people die each year from asbestos exposure, and over 5,500 of these deaths occur in the UK (see Appendix F).

The widespread use of asbestos has implications for the following RICS professional groups and pathways:

- building control
- · building surveying
- commercial property
- dispute resolution
- environment
- facilities management
- geomatics
- machinery and business
- management consultancy
- minerals and waste
- · personal property and fine art
- planning and development
- project management
- · quantity surveying
- residential
- rural practice and
- · valuation.

For further information on how each professional group is affected, see Table 1 in Chapter 3.

The prevention of exposure to asbestos is a legal requirement for **all** organisations, including property-related businesses. The requirement for such prevention has been put in place in many countries across the globe, and across industry sectors and governmental

organisations, in order to protect individuals from harm. Property professionals are legally required to recognise and accept personal responsibility for preventing exposure to asbestos and minimising risks.

The hazards posed by asbestos to RICS members and RICS-regulated firms include:

- · to a member's own health
- to employees' health
- · to clients' health
- criminal prosecution
- reputational damage to self and client
- economic damage to self and client
- · civil damages and
- · bringing RICS into disrepute.

Details of potential risks are set out in Chapter 4.

1.1 Purpose of this document

This UK professional standard is intended to assist RICS members and RICS-regulated firms in the normal course of their duties, to ensure that they and their clients comply with UK legislation, and that no one is put at risk from asbestos.

It is not intended to assist RICS members and RICS-regulated firms specifically in the undertaking of asbestos surveys. Guidance on such surveys is set out in <u>HSG264 Asbestos:</u> <u>The survey guide</u>, an HSE publication.

While issued as a UK professional standard, this document contains material that may be of assistance to RICS members practising in other jurisdictions, including UK-employed staff sent to work in other countries. All organisations and individuals must comply with asbestos legislation applicable in the region in which they are working. The principles underlying the UK requirements arose from a costly national and international learning experience, and RICS considers these principles (if not necessarily the exact details) to be good practice globally.

This professional standard summarises the principles for complying with the duties contained in *The Control of Asbestos Regulations* 2012.

Property professionals are legally required to recognise and accept their personal responsibility under the duty of care requirement of the *Health and Safety at Work etc. Act* 1974 to manage and control asbestos-related risks. They also have a general ethical duty to ensure that the advice they give is morally and legally sound.

Asbestos can impact on all stages of a building's life cycle. Figure 1 indicates the impact it can have at each stage of the cycle, involving all types of property professionals.

Property professionals outside the UK will also need to consider the legal jurisdiction of the country in which they work. It is still legal to produce and use asbestos in many parts of the world; see Appendix F for details.

1.2 Effective date

This professional standard is effective three months after publication.

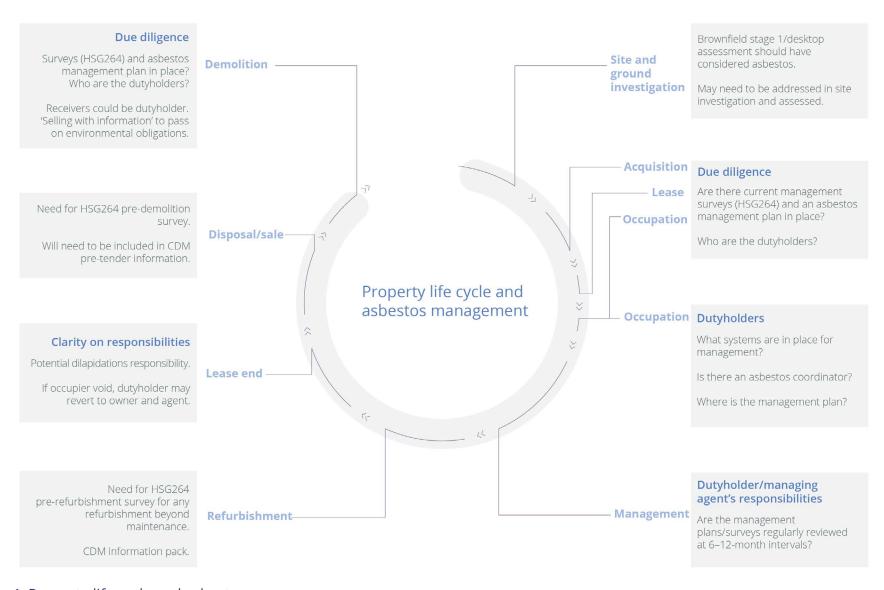


Figure 1: Property life cycle and asbestos

2 Asbestos

2.1 What is asbestos?

In the UK, all types of asbestos are regulated and their use is prohibited.

Three main types of asbestos fibre were commonly used:

- crocidolite (blue asbestos)
- · amosite (brown asbestos) and
- chrysotile (white asbestos).

There are also three rarer types – tremolite, anthophyllite and actinolite – which were not often mined commercially.

Asbestos fibre was added to building materials, as well as other mechanical and electrical products, because of the properties of the fibres:

- thermal resistance
- · high tensile strength
- weather resistance
- sound insulation and
- chemical resistance.

Products and materials containing asbestos were in use throughout the 20th century, with the peak period of production during the 1960s and 1970s. Its use was finally prohibited in Great Britain in 1999 and in Northern Ireland in 2000, with a few very limited exceptions.

It has been estimated that there are over 3,500 different products that contain asbestos. The most common are building and industrial materials such as bitumen-, plastic- and resinbased products, thermal insulation (pipe and boiler lagging), boards, panels, textiles and other composite materials. See Appendix A for more information on common ACMs.

2.2 Examples of common asbestos products

The following sections describe types of asbestos products. Material case studies are published separately on the RICS website.

2.2.1 Asbestos insulation

Asbestos insulation includes products used for heat, sound and fire protection, as well as other insulation purposes. It includes:

hard set or hand-applied insulation to pipes, boilers and vessels

- pre-formed sections of pipe insulation
- asbestos lagging and asbestos infill (asbestos used to fill voids, applied during the
 construction of floors, and packed around cables where they pass through floors
 between adjacent storeys, or through walls and partitions between adjacent rooms or
 spaces) and
- millboards, used to insulate electrical equipment and for thermal insulation.

These materials are regarded as being highly friable and can have an asbestos content of anywhere between 6% and 85% (the latter for lagging materials).

2.2.2 Asbestos coating

Asbestos coating includes various mixtures containing asbestos that were widely used as surface coatings for fire protection purposes, or as both heat and sound insulation. This does not include textured decorative coatings, commonly known as Artex (see section 2.2.5). Most of these coatings were applied by mechanical sprayers, but some were applied by hand.

Sprayed coatings most often have no binding agent at all and are extremely friable, with a high content of between 55% and 85% asbestos fibre, so even structural vibration is likely to lead to fibre release. Always seek specialist advice when this material is identified.

2.2.3 Asbestos insulating board (AIB)

AIB is a lightly compressed board made from asbestos fibre and hydrated Portland cement or calcium silicate, with other filler materials. It was developed as a fire-retardant board and was then used as a general all-purpose building board.

Regarded as having medium friability, AIB commonly has a content of between 15% and 25% asbestos fibre, with older boards containing up to 40%.

2.2.4 Asbestos cement

Asbestos cement is most often a mixture of chrysotile asbestos fibres, around 10% to 15% content, and cement, moulded and fully compressed to produce a range of asbestos products, such as profiled roofing sheets and cladding, flat sheets, gutters, drainpipes, pressure pipes and flues, and synthetic roof slates. It was also often used as shuttering.

Asbestos cement was widely used on the exterior of buildings and for drainage products, as it is weatherproof and waterproof. Amosite and crocidolite asbestos have also been used in asbestos cement and may sometimes be present along with the chrysotile, but in smaller quantities.

As the asbestos fibres are mostly firmly bound into the cement matrix and not readily made airborne, work with asbestos cement does not pose the same risks as work with asbestos insulation, AIB and sprayed asbestos coatings. Almost all work involving asbestos cement will not be licensable but should follow the guidance in the HSE's <u>Asbestos essentials</u> series of documents; some work may be classed as notifiable non-licensed work.

However, there may be exceptional circumstances where asbestos cement has been so badly damaged and broken up, or so badly weathered, that the work may become licensable. A risk assessment prepared by someone with adequate skill, knowledge, experience and insurance cover will be required to determine whether a licence is required or the work is notifiable.

2.2.5 Textured decorative coatings

Textured decorative coatings, or Artex, containing asbestos are thin decorative and textured finishes, such as paints and ceiling plasters, used to produce visual effects. These coatings are solely decorative in purpose and any thermal or acoustic properties are incidental. The proportion of asbestos in such coatings is normally low, between 2% and 5% chrysotile, but can be less than 1%.

2.2.6 Thermoplastic floor covering

Asbestos-containing floor tiles were manufactured from a plastic resin. A common variety of thermoplastic floor tile had a chrysotile content of between 10% and 25%.

The less-common PVC tiles had a lower proportion of chrysotile, below 10%. The bitumen adhesive used to fix the tiles to the floor may also have trace chrysotile content.

3 Regulations and guidance

The matrix on the following page (Table 1) shows the applicability of various regulations and guidance covering asbestos to all RICS professional groups. Regulation 10 of *The Control of Asbestos Regulations* 2012 requires **all** surveyors to have asbestos awareness training, and this should provide the more comprehensive knowledge expected of an RICS member.

3.1 The Control of Asbestos Regulations 2012

This section is a summary of the main points of *The Control of Asbestos Regulations* 2012. For further details, please refer to the HSE Approved Code of Practice and guidance <u>Managing</u> and working with asbestos (L143).

3.1.1 Regulation 4: Duty to manage asbestos in non-domestic premises

There is a specific requirement – a legal duty – to manage the risks from asbestos in non-domestic premises. This includes all industrial and commercial buildings, such as factories, warehouses, offices and shops. The duty also covers public buildings such as hospitals, schools, museums, libraries, leisure centres, churches and other religious buildings, in addition to road and rail vehicles, aircraft and offshore installations, as well as structures and installations (such as bridges) and street furniture (such as street lighting). The duty applies to the 'common parts' of multi-occupancy domestic premises, such as purpose-built flats or houses converted into flats. Even where the duty to manage under Regulation 4 does not apply, Sections 2 and 3 of the *Health and Safety at Work etc. Act* 1974 apply to anyone conducting business, such as landlords of domestic premises, in that they have a duty to ensure their undertaking does not present a risk to the health and safety of people.

This can be done by carrying out a survey to enable an asbestos register to be compiled, assessing the risks from any identified asbestos and then making sure the risks are managed by passing on asbestos information to anyone liable to disturb it. This is known as the **duty to manage** (see section 4.2.3).

With regard to residential dwellings, landlords have a duty to fulfil the same obligations under the *Defective Premises Act* 1972 and *Homes (Fitness for Human Habitation) Act* 2018, and normally in respect of the private areas of domestic dwellings they will have duties under Section 3, regarding duty of care, of the *Health and Safety at Work etc. Act* 1974.

		Building control	Building surveying	Commercial property	Dispute resolution	Environment	Facilities management	Geomatics	Machinery and business	Management consultancy	Minerals and waste	Personal property and fine art	Planning and development	Project management	Quantity surveying	Residential	Rural	Valuations
Regulations	4	/	~	1	/	~	/	~	/	~	~	~	/	1	/	1	~	~
	5	~	/	1	/	/	/				1	1		/		-	1	
	6	~	~	/	~	/	/		~	~	~	/	/	~	/	~	/	~
	7				/	1	/				/			/		/	/	
	8	/	/	~	/	/	~				~			/		/	/	
	9	~	/	~	/	1	~				/			/		/	~	
	10	/	~	~	~	/	~	/	~	~	~	1	~	/	~	/	~	~
	11	/	/	~	/	-	1				~			/		1	/	
	14	V	/	~	/	/	/				1			~		/	/	
	15	/	/	~	/	/	-				/			/		/	/	
	16	/	1	1	/	-	/		~		1	/		1		1	/	
	17	~	/	~	/	/	/	/	~	~	1	/	/	/	/	1	/	~
	24	/	1	1	/	1	1	/	~	1	/	/	/	/	/	/	/	/
	27	/	/	~	/	/	/		~		/	~		/		/	/	
	UK REACH regulatuions		/		/	/	/		~			~		/			/	
	Hazardous waste regulations		/	~	/		1							/			/	
	CDM	/	1		/	~	1							/	/		/	
Guidance	CL:AIRE		/		1	1					/				/		/	

Table 1: Applicability of asbestos regulations, related regulations and guidance to RICS professional groups; numbered regulations refer to The Control of Asbestos Regulations 2012

Under Regulation 4, organisations that have to meet this obligation are called **dutyholders**, defined as being anyone who has contractual maintenance or repair responsibilities, or in the absence of a contract or tenancy, those that are in control of the premises. Clearly, if you have control over premises and the repairs and building work that go on in those premises, you have a legal duty to manage the risks from asbestos to ensure people are not exposed. The HSE guidelines <u>The duty to manage asbestos</u> can be summarised as follows.

- Take reasonable steps to find materials likely to contain asbestos.
- Presume materials contain asbestos unless there is strong evidence to suppose they do not.
- Assess the risk of anyone being exposed to asbestos from these materials.
- Make a written record of the location and condition of ACMs and presumed ACMs, and keep it up to date (the management survey).
- Repair or remove any material that contains or is presumed to contain asbestos, if necessary because of its location, condition or the likelihood of it being disturbed.
- Prepare and put into effect an asbestos management plan (AMP) to manage exposure risk and ensure that:
 - information on the location and condition of ACMs is given to people who may disturb them during work activities
 - any material known or presumed to contain asbestos is kept in a good state of repair
 - the condition of known and presumed ACMs can be monitored and
 - the AMP and the arrangements made to put it in place can be reviewed and monitored.

A dutyholder cannot delegate their statutory duties to a managing agent. If a contract is in place that places all Regulation 4 duties within the contract, there may be a conflict between criminal law and contract law.

An asbestos register or survey does not constitute an AMP. The existence of a register or survey shows you are **partially** complying with the duty to manage, but only an AMP and its implementation constitute **full** compliance.

The suggested contents of an AMP are shown in Appendix D.

The duty to manage will impact on RICS members in the following ways.

- Own premises: their organisation itself is likely to be the dutyholder. This means they will need to manage any identified ACMs in the buildings their staff occupy, which in turn means having an AMP and survey information in place.
- Managing agent: if they are acting as a managing agent on behalf of the landlord they
 cannot, in law, take on the statutory duties. These still remain with the landlord, since the
 landlord is the dutyholder. The surveyor can commission surveys and management plans
 on behalf of the landlord, but ultimately it will always be the landlord's statutory duty to
 comply. However, a landlord may pursue the surveyor at law if the surveyor's actions or

inactions contribute to the landlord's failure to comply. This may include failing to carry out a contractual duty or, outside of a contract, in the tort of negligence if the surveyor fails in a general (non-contractual) duty.

Third-party clients: if the surveyor has been engaged by a client to carry out
refurbishment and building works, depending on the contractual terms, they will
probably have a direct responsibility to gather sufficient asbestos information before
work starts (see Regulation 5). This will include ensuring the client issues information on
asbestos as part of the required pre-construction information under <u>The Construction</u>
(<u>Design and Management</u>) Regulations 2015 ('the CDM Regulations').

The surveyor should inform all clients of this duty, including overseas clients, to ensure they are aware of their obligations.

If the landlord is absent, the managing agent may be considered to be in charge of the property and may acquire additional dutyholder responsibilities.

If the situation is not clear, the facts in each situation will ultimately be considered by a court should things go wrong. All parties are expected to work together to control the risk from asbestos. While a dutyholder cannot delegate their statutory duties to, for example, a managing agent, that same managing agent has other duties under several sections of the *Health and Safety at Work etc. Act* 1974 to act responsibly in controlling risk so far as reasonably practicable. Whoever is in effective physical control of premises and on the spot will carry a lot of the practical responsibility for achieving compliance, but resources to enable this have to be available from the ultimate owner.

3.1.2 Regulation 5: Identification of the presence of asbestos

Regulation 5 supplements Regulation 4 where the duty to manage does not apply. In such circumstances, it imposes a duty on the employer to identify the presence of asbestos and put controls in place before starting work.

Regardless of whether an asbestos register is present, or the building is residential (and therefore outside the scope of the duty to manage), there is a clear duty to identify where asbestos is present before any building work is carried out, including refurbishment, maintenance, demolition, repairs, installation work or any other work that may disturb the fabric of the building. This may simply involve a review of the AMP. If this is not comprehensive enough to cover the planned works, additional investigation will be required.

Anyone carrying out any type of building work, whatever its size and nature, has a legal duty to take measures to identify whether asbestos is present in the work area. In practical terms this usually means carrying out an intrusive survey of the work area, or at the very least undertaking laboratory analysis of building material samples suspected of containing asbestos.

Regulation 5 also obliges the contractor to investigate further if there is any doubt about the information the client has supplied to them, or if no information is supplied.

In most cases, a refurbishment and demolition survey will be required in order to comply with Regulation 5, even if a management survey has been carried out and an asbestos register exists.

RICS members who have been instructed by clients to oversee refurbishment, demolition and work that involves dismantling the building fabric may be revealing areas that are not listed on the asbestos register. In these instances, a refurbishment and demolition survey should be commissioned to inspect inside the building fabric. Because this survey needs to reflect the intended building work, the asbestos survey company should be given as much information about the planned work as possible. When the survey is carried out, the asbestos surveyor will only look at those areas affected by the planned work, and will not unnecessarily disturb or access areas that are out of scope. Doing this is more likely to produce a value for money quotation as the asbestos surveyor will not be allowing for unforeseen eventualities.

3.1.3 Regulation 6: Assessment of work that exposes employees to asbestos

This regulation obliges employers to assess the risk to employees prior to carrying out any work that could disturb asbestos, and then take specific measures to control and monitor exposure. In the majority of cases, this will relate to companies undertaking the removal of asbestos, whether it is licensed or non-licensed work (see Regulation 8). However, this will also apply to RICS members carrying out due diligence, condition surveys, pre-works inspections and other such surveys where exposure might occur.

There are different requirements for risk assessments depending on whether the work is licensed or non-licensed, but as a minimum for any type of work, the assessment should cover:

- a description of the work, including the scale and duration
- the type of asbestos being worked on and its condition, or, if not known, the most likely ACM to be encountered
- the likely concentration of fibres in the air and whether this exceeds either the control limit or short-term exposure limit
- what respiratory protective equipment (RPE) and personal protective equipment (PPE) are required, as well as procedures for personal decontamination
- what control measures will be put in place and
- what arrangements are in place to deal with asbestos waste and any emergency situations.

3.1.4 Regulation 7: Plans of work

Employers are obliged to prepare a plan of work or method statement prior to carrying out any work with asbestos.

This regulation applies to anyone who works on asbestos. As with Regulation 6, in the majority of cases this will be companies undertaking the removal of asbestos, whether it is licensed or non-licensed work (see Regulation 8).

This plan of work is usually produced in conjunction with the risk assessment (see Regulation 6) as it directly relates to the risk from actually working on asbestos.

The plan of work should be specific to each site and should be a practical, readable document that can be easily followed by operatives on site.

In terms of asbestos work, the method statement is usually referred to as the plan of work. As the plan of work incorporates a risk assessment, it is also a RAMS document (risk assessment and method statement). It also goes some way to satisfying the content of the construction phase plan required by the CDM Regulations.

RICS members who are commissioning or engaging in asbestos removal work should make sure they are given a copy of this document prior to work beginning. It should then be reviewed by someone who is familiar with the contents and requirements of such documents, who can make any necessary comments. If there is no-one in the organisation who has the knowledge and experience to do this, appropriate external assistance should be sought.

3.1.5 Regulation 8: Licensing of work with asbestos

Anyone carrying out work on high-risk materials has a legal duty to obtain a licence to do this work.

This regulation applies to asbestos removal contractors and it generally covers work on sprayed coating, insulation/lagging materials and AIB. Work on other asbestos products may be deemed to be licensable if the control limit is likely to be exceeded.

For RICS members who are involved with asbestos removal work on behalf of their clients, it is important to understand the difference between licensed and non-licensed work, and the consequences of misinterpreting the different categories of work. In order to avoid this, many organisations take the view that they will use a licensed contractor to carry out all work to remove or remediate asbestos, whether it is licensed or not, or appoint a consultant analyst to advise and assist on this.

Table 2 shows the three different work categories and the arrangements that need to be in place before carrying out each type of work.

Non-licensed work	Notifiable non-licensed work	Licensed work			
Requirements:	Requirements:	Requirements:			
• risk assessment	• risk assessment	• risk assessment			
• control of exposure	• control of exposure	• control of exposure			
• trained workers	• trained workers	• trained workers			
• insurance	• insurance	• insurance			
	 notification before work starts 	 notification 14 days in advance 			
	• medical every 3 years	• medical every 2 years			
	• health records	• health records			
		• licensing			
		• emergency arrangements			
		 designation of asbestos areas 			

Table 2: The three different work categories when working on asbestos

As examples, asbestos cement roof sheets that have been damaged as a result of a fire would be classed as notifiable non-licensed work, as would floor tiles that can only be removed by scraping and therefore unavoidably breaking them. Asbestos cement panels or composite sheets that can be removed whole and are in a good condition would be classed as non-licensed.

Other examples of non-licensed work, which does not need to be notified, include short, non-continuous maintenance work involving AIB, such as:

- drilling holes for fittings
- repairing very minor damage
- · lifting ceiling tiles for access/inspection, and
- removing a single screw-fixed panel as part of a maintenance task.

Additional information regarding non-licensed work can be found in the HSE advice note <u>A0 – Introduction to Asbestos essentials</u>.

Refer to Appendix E for examples of licensed and non-licensed work.

3.1.6 Regulation 9: Notification of work with asbestos

It is the responsibility of the specialist contractor performing the work to notify the relevant authority, and there is a different notification period depending on whether the work is licensed or non-licensed.

When working on asbestos, unless the work is classed as non-licenced work, it is a legal requirement to notify the relevant enforcing authority (either the HSE or local authority) on a job-by-job basis.

The legal requirement for notification of licensed work is at least 14 days before the start date, using the online form. A plan of work (or method statement) and risk assessment have to be prepared at the time of the notification. The HSE does not approve notifications, but may use notifications to plan field visits.

Non-licensed work is work on lower-risk asbestos materials and products, as defined in Regulation 2 of *The Control of Asbestos Regulations* 2012. This work becomes notifiable non-licensed work if the asbestos is in a poor condition before work starts or it is likely to deteriorate during removal. Notification of this type of work can be made online at any time before the work starts.

3.1.7 Regulation 10: Information, instruction and training

Anyone liable to disturb the fabric of a building during repair, maintenance, refurbishment, demolition or other building work is required to receive the correct level of information, instruction and training in order to carry out the work safely and competently. This also applies to people who plan, supervise and manage this work, including RICS members who carry out building surveys.

Employers have a legal duty to give adequate information, instruction and training to ensure employees have the knowledge to be able to safeguard themselves, as this is an essential part of preventing exposure. Different levels of training can be given depending on how likely employees' work activity is to bring them into contact with asbestos.

RICS members should identify what level of training staff require by conducting a training needs analysis. A simple way of doing this is to divide employees into one of the following groups and allocate a level of training to each group. The level of training also depends on how much and what type of asbestos is in the building:

- general building occupants: a one-off email briefing or staff bulletin
- · those involved in survey work: awareness training
- those involved in building/maintenance work: awareness training
- building and premises managers, as well as health and safety/compliance staff: dutyholder training.

Staff who conduct building surveys of any type are legally required to complete asbestos awareness training, so they have a greater understanding of the likelihood of asbestos being present in the buildings they enter and what the potential risks are.

3.1.8 Regulation 11: Prevention or reduction of exposure to asbestos

Employers have a legal duty to take steps to prevent exposure to asbestos and, at the very least, put in place measures and controls to reduce exposure to as low a level as is reasonably practicable.

Whenever possible, preventing exposure by completely avoiding any disturbance is the preferred option, for instance by routing cabling away from the ACM completely. This will not always be possible (e.g. during asbestos removal work), in which case the requirement is to reduce exposure to a minimum.

Parts of the wider property sector, for example smaller dutyholders, are often less familiar with asbestos policies and procedures in general and have a lower level of compliance. Consequently, in prosecutions for cases of asbestos being disturbed on site (for instance during the refurbishment of schools or shops), it is fairly common to be able to prove this regulation was not complied with.

It is important for RICS members to understand that if asbestos is disturbed on site and there has been no survey or sampling undertaken beforehand, the HSE can more easily prove that no one took any action to prevent exposure because there was no attempt to identify whether asbestos was present or not (also breaching Regulation 5).

3.1.9 Regulation 14: Provision and cleaning of protective clothing

Protective clothing, as well as RPE, is legally required to be provided to anyone working on ACMs. Once any PPE has been issued it is legally required to be used, stored and maintained properly.

RICS members would not usually be issued with specialist PPE; however, RICS' <u>Surveying</u> <u>safely</u> provides general guidance on PPE for typical surveying work. Specialist PPE is usually only necessary for asbestos surveyors and contractors (see section 4.1.2, *Duties to staff*).

3.1.10 Regulation 15: Arrangements to deal with accidents, incidents and emergencies

Employers should have procedures describing what to do if there is an accidental, unplanned or uncontrolled release of asbestos.

This regulation imposes a duty on employers to have written procedures describing how they would keep people safe in the event of asbestos spreading, and how they would go about cleaning up the contamination.

In buildings where it is foreseeable that asbestos could be disturbed – premises with a significant number of ACMs on the register – the building owner should have emergency procedures in place to deal with such an outcome.

These emergency procedures can be incorporated into the AMP (see Regulation 4).

If the uncontrolled release of asbestos fibres is judged to have been significant, i.e. above the control limit, the incident should be reported to the HSE under <u>The Reporting of Injuries</u>, <u>Diseases and Dangerous Occurrences Regulations 2013</u> (RIDDOR). It is recommended that specialist advice be sought before such a decision is made.

RICS members may sometimes be asked by their clients about retrospective exposure. There is currently no test or screening that can be carried out retrospectively to assess what level

of exposure, if any, has occurred during an incident. Workers who are suspected of having been exposed to asbestos should also be given a copy of the incident report that is kept in their personnel file. The HSE recommends advising them to provide a copy of this to their GP for retention in their medical record.

3.1.11 Regulation 16: Duty to prevent or reduce the spread of asbestos

Anyone who has asbestos on their premises, or in items they are trading or restoring – which could be anything from gas masks to steam engines – or is in charge of building work has a legal duty to ensure asbestos is not spread.

If you have identified asbestos before work starts (complying with Regulation 5), you are significantly less likely to spread it (complying with Regulation 16) and will therefore not be exposing anyone (complying with Regulation 11).

As described in Regulations 4 and 5, the key to successful asbestos management is to control work on the fabric of the building so that accidental disturbance of known or unknown ACMs does not occur. All maintenance and building work should be designed and managed so that the presence of ACMs is identified before any work begins.

Before carrying out any work that may involve the disturbance of asbestos, or those parts of the building that may contain ACMs, it is essential to assess whether asbestos is present and, if this is believed likely, positively identify it by means of sampling or surveying. This information should then be used to either remove the asbestos before the planned building work or tell workers how to avoid disturbing it in situ.

Asbestos could also be spread if licensed or non-licensed work is carried out in such a way that fibres are not contained properly. This could be due to a poorly erected enclosure for licensed work that 'leaks' fibres, or non-licensed work where dust is being generated over and above what is expected.

3.1.12 Regulation 17: Cleanliness of premises or plant

This regulation mainly applies to asbestos removal activities. Licensed work has a clearly defined set of procedures for confirming fitness for reoccupation; this is known as the four-stage clearance procedure. Non-licensed work on lower-risk materials also needs to be adequately checked for cleanliness on completion, although there are not the same requirements for air testing and handover procedures.

Third-party support for asbestos removal work can be provided by asbestos consultancies. These are usually accredited laboratories and survey companies whose core business is to advise clients and dutyholders on how to comply with all aspects of asbestos regulations.

Their services may include:

 air testing during asbestos removal work, plus other background, leak or reassurance testing, as well as personal sampling of operatives and other personnel

- assisting with the management of asbestos removal, such as inspecting enclosures, witnessing smoke tests, attending progress meetings and designing works, and
- clearance testing on completion.

The HSE recommends that clients appoint an independent United Kingdom Accreditation Service (UKAS)-accredited laboratory directly, rather than via a contractor.

Clearance testing is the asbestos equivalent of practical completion. This adds weight to the recommendation that the laboratory performing this test should be appointed independently (by the client or their agent) to ensure integrity and impartiality, and not subcontracted by the asbestos removal company or building contractor.

Licensed work

Licensed asbestos removal work is certified as being complete by means of a certificate of reoccupation, incorporating a four-stage clearance air test. Unlike other air tests, clearance tests are mandatory on all licensable works inside an enclosure – such as works involving AIB, insulation and sprayed coating – and are regarded as equivalent to the statutory inspections more commonly associated with electrical or gas systems.

Laboratories engaged to do clearance testing are required by law to be accredited by UKAS to meet the relevant criteria in ISO/IEC 17020 and ISO/IEC 17025.

The standard of cleanliness required is very high and may be difficult for the contractor to achieve in some circumstances, for example if there are traces of water due to leaking pipes in the work area or debris and dust caused by blown plaster or earth floors.

Non-licensed work/non-notifiable licensed work

Lower-risk non-licensed work (such as the removal of asbestos-containing floor tiles or asbestos cement products) does not usually require an air test to prove fitness for reoccupation. The most important step is to carry out a thorough visual examination to ensure no visible asbestos debris remains. This can be undertaken by the contractor who undertook the work, or a third party such as an asbestos analyst to provide independent verification.

However, it is common for clients who have commissioned such work to want additional verification of cleanliness. The sampling of airborne fibres will achieve this, so air testing can be carried out for reassurance. This reassurance air testing is not carried out to the same strict four-stage procedure described previously, but does consist of air testing in the area where the work has taken place.

3.1.13 Regulation 24: Storage, distribution and labelling of raw asbestos and asbestos waste

This regulation concerns arrangements regarding asbestos waste and provides best practice advice to help property professionals meet the legal core principles.

Asbestos waste is described as any ACM that is ready for disposal. In most cases, this is waste that has been generated by asbestos removal, so it becomes the responsibility of the asbestos contractor. All asbestos waste must be disposed of at designated waste sites. This includes **any** waste containing recognisable fragments of **any** ACM, or 0.1% asbestos fibre, as stated in the Environment Agency document <u>Technical Guidance WM3: Waste Classification</u> - <u>Guidance on the classification and assessment of waste</u>.

Any ACMs that have been removed will need to be suitably bagged prior to disposal. There are different rules depending on whether the waste is defined as being fibrous or bonded. Small amounts of asbestos waste – such as a few bags – can be transported in a van as long as the company holds a Waste Carrier Licence. Larger amounts will need to be loaded into a sealed skip on site and removed by a similarly licensed carrier.

Skips are taken to landfill sites that are licensed to take hazardous waste (as defined by <u>The Hazardous Waste (England and Wales) Regulations 2005</u>). The transportation of waste is controlled by a consignment note system, which is passed down to each successive person in the chain, from the contractor who produced the waste, to the carrier, to the end receiver.

These waste requirements do not include the transport of asbestos samples, the movement of ACMs to another facility for cleaning (which might be performed for artefacts, for instance) or the movement of items for restoration, such as steam engines.

The issuing of a consignment note is a legal requirement under *The Hazardous Waste* (*England and Wales*) *Regulations* 2005. As part of project completion, RICS members should request a copy of it from the asbestos contractor so it can be kept with the other project documentation. The client has a duty of care to ensure the asbestos removed from their premises has been disposed of properly.

3.1.14 Regulation 27: Labelling of products containing asbestos

This regulation concerns the labelling of asbestos products and provides best practice advice to help property professionals meet the mandatory core principles. It applies to goods or articles for sale or use, and not the labelling of in situ ACMs.

Supplying asbestos-containing products is prohibited by law. However, an exemption may be granted in special circumstances.

Anyone proposing to supply or obtain an article that contains asbestos should first check whether the HSE or another body, such as the Office for Rail and Road, has issued generic certificates of exemption allowing the supply, providing the conditions set out in the exemption are met.

Buildings are not considered to be 'articles' and so can be sold while still containing asbestos.

The heritage industry and auctioneering sector may come across asbestos in such products as:

- insulation to pipes on steam trains
- rope material around other heating elements on steam trains
- insulation and coatings in diesel trains
- exhaust wrapping on classic cars
- brake linings and clutches on historic vehicles
- filters in gas masks
- AIB backing for paintings
- AIB mountings for miscellaneous artefacts.

3.2 Enforcement action

If the regulations are breached, different regulatory bodies can take different types of enforcement action.

Health and safety on construction sites, which asbestos-related work falls under, is regulated in the UK by the HSE and its field inspectors, and supported by local authority inspectors. The purpose of enforcement is to:

- ensure dutyholders take action to immediately deal with serious risks
- ensure dutyholders comply with the law
- promote and achieve sustained compliance, and
- ensure dutyholders who breach health and safety requirements, and directors and managers who fail in their responsibilities, are held to account.

The HSE's emphasis is on prevention but, where appropriate, it will enforce the law if it is being deliberately flouted.

The duty to manage regulation also applies to landlords for offices, shops, residential lettings, buy-to-let property, etc. Environmental Health Officers will investigate breaches and refer them to the HSE as appropriate.

Enforcement options include:

- providing information and advice face to face or in writing
- · serving notices on dutyholders
- · withdrawing licences
- varying licences, conditions or exemptions
- · issuing simple cautions and
- prosecution.

A prohibition notice can be served when an inspector believes there is a risk of serious personal injury associated with a particular work activity or process or, if a serious deficiency in measures is identified, to prevent or mitigate the effects of major hazards. There does not need to be a breach of the law. Such a notice can take immediate effect or be deferred for safety reasons.

An improvement notice can be served when an inspector believes there is a breach of the law that needs to be remedied within a certain period of time. Failure to comply with either type of notice is a criminal offence and can result in prosecution.

A UK inspector who finds a suspected breach of the law may apply the <u>Fee for Intervention</u> scheme. This is a mechanism through which the HSE can recover the cost of carrying out its regulatory functions from those found to be in material breach of health and safety law.

In UK law, prosecutions for a breach of the regulations are regarded as a criminal rather than a civil offence.

3.3 UK REACH

UK REACH are the regulations for controlling chemicals in the UK, and part of their framework prohibits the marketing of articles to which asbestos fibres have been intentionally added.

The HSE has powers to issue an exemption from the prohibition imposed by UK REACH if there is a valid justification, and if it can be demonstrated that a high level of protection of human health can be ensured.

3.3.1 UK REACH exemption certificates

To date, the HSE has issued two exemptions relevant to RICS members:

- museum artefacts that may contain asbestos and
- heritage vehicles that may contain asbestos.

In the past, generic permissions have been issued to museums and heritage restoration groups, and any article supplied should have asbestos warning labels.

The <u>Asbestos – FAQs</u> section of the HSE website provides further guidance.

3.4 Asbestos in soils and construction and demolition materials

The presence of ACMs in soils and construction and demolition materials is a matter that is taken into account throughout the property life cycle: in site and land assessments for purchase due diligence, planning and development, demolition and site clearance, and waste disposal and recycling for the reuse of aggregates. Asbestos is also considered to be a contaminant, which is relevant to the assessment of contaminated land under Part 2A of the Environmental Protection Act 1990.

ACMs can range from intact materials such as asbestos cement sheets to highly damaged fibrous insulation and other asbestos debris, or bundles of asbestos fibres. Often, they are a legacy of demolition of previous buildings on the site, or the use of demolition arisings imported from other sites for made ground, or simply ACMs that have been discarded and become buried. They may be on the surface and therefore visible to the surveyor, or buried and only revealed during site investigations, ground works or demolition. They carry the same asbestos fibre hazards as ACMs in buildings.

Risk assessment and management of asbestos in soils and construction and demolition materials is a specialist and complex area. Suitably trained, competent and insured professionals and contractors should be used to provide advice or carry out work in this area. Comprehensive practical guidance has been produced by a Joint Industry Working Group (including RICS and supported by the HSE), which was published by CL:AIRE (Contaminated Land: Applications in Real Environments) and is known as CAR-SOIL. Other relevant guidance has been published by the Construction Industry Research and Information Association (CIRIA) and the Association of Geotechnical and Geoenvironmental Specialists (AGS).

4 Best practice

4.1 Mitigation of risk to surveyors and their clients

Failure to comply with asbestos regulations can lead to the individual or organisation suffering criminal prosecution, fines and civil damages not covered by professional indemnity insurance.

Non-compliance with asbestos regulations also poses an economic and reputational risk to clients. The immediate cost of addressing asbestos in their property, cost of management, impact on value and environmental liabilities need to be considered.

The consequences of not meeting individual and corporate responsibilities can have a devastating effect on the way that an individual is perceived by managers, colleagues, family and friends, as well as detracting from the reputation of the organisation as a whole. By failing in their legal duties, RICS members and regulated firms also risk bringing RICS into disrepute.

RICS members and regulated firms have a duty to cooperate and should be mindful that under their terms of engagement they could find themselves with elements of the dutyholder's responsibilities under *The Control of Asbestos Regulations* 2012 (see Chapter 3).

The term 'asbestos' has become synonymous with risk, disease and death. It is a material where even the products with the lowest risk can cause fear in building occupiers, and can prompt reactions ranging from apathy to paranoia. It is against this backdrop that surveyors and valuers report on the presence of ACMs.

For information on how asbestos may affect the valuation of real property interests, see <u>RICS</u> <u>Valuation – Global Standards</u> VPGA 8. Section 1.2, on inspection, states the following:

'Many matters may or will have an impact on the market's perception of the value of the relevant interest, aspects of which may only become fully apparent during an inspection of the property. These can include [...] hazardous materials kept on the property, such as (but not limited to) regulated items including chemicals, radioactive substances, explosive materials, asbestos, ozone depleting substances, oils, etc. or regulated activities being conducted such as waste management activity.'

4.1.1 Visiting sites

In property built prior to 2000, for RICS members' own health and safety, and as part of the general risk assessment required by the RICS member's employer, reasonable enquiries of the person in control of the property should be made as to whether the building is known

to contain or suspected to contain asbestos. If so, details of significant risks, and of any procedures in place to control these, should be requested.

If no information is available, the RICS member should proceed, taking appropriate care based on their asbestos awareness training and knowledge of likely asbestos locations. This should be recorded in a risk assessment and method statement prior to a survey being carried out.

If, during the inspection, the RICS member notes the presence of asbestos that in their opinion constitutes a serious and immediate risk to health, Section 3 of the *Health and Safety at Work etc. Act* 1974 requires them to inform the person in control of the premises as soon as possible, and advise them on the emergency measures required and who to contact to obtain specialist advice.

4.1.2 Duties to staff

RICS-regulated firms and RICS members may encounter asbestos as part of the day-to-day activities they perform. Regulation 10 of *The Control of Asbestos Regulations* 2012 require these individuals to be provided with awareness training to ensure this risk (no matter how minimal) is controlled. Firms have a legal duty to supply staff, whether employed or contracted, with PPE suitable for the role to be undertaken. Specialist PPE should only be issued subject to assessment, appropriate training and maintenance.

If a client's instruction involves the requirement for surveyors with no specialist asbestos training to attend site wearing – or being expected to use – appropriate RPE, the RICS member or regulated firm being instructed should consider whether their appointment is appropriate in this instance.

4.1.3 Own premises

RICS-regulated firms and RICS members have a legal duty to comply with *The Control of Asbestos Regulations* 2012 regarding the premises they occupy in the course of their business. In particular, this relates to Regulation 4, *Duty to manage asbestos in non-domestic premises*, if members are responsible for maintaining the fabric of the building (see sections 3.1.1 and 4.2.3).

4.1.4 Personal safety

RICS members and RICS-regulated firms should conduct their work in accordance with RICS guidance, health and safety legislation, and good health and safety principles in order to minimise the risk to their personal safety. RICS members and RICS-regulated firms are expected to refer to the relevant regulations and guidance for details, or consult an asbestos specialist.

4.1.5 Buildings of special architectural or historical interest

In buildings of architectural or historical interest, assessments could be restricted due to listed building status. It may not always be feasible to conduct destructive investigations

or remove all the asbestos. The AMP should reflect any restrictions imposed by the conservation authority.

4.2 Compliance with UK legislation

4.2.1 Preventing exposure

Inhalation of asbestos fibres from ACMs can cause a range of chronic and fatal diseases.

The fibres attack the vulnerable parts of the lung, such as the lining, upper bronchi and alveoli, which can cause diseases such as mesothelioma, asbestos-related lung cancer and asbestosis that only become evident after a latency period of between 20 and 50 years.

For asbestos fibres to enter the lung system, the ACM needs to be physically disturbed in some way. An ACM in good condition will present little to no risk because it will not release asbestos fibres.

Exposure to asbestos can be categorised as either occupational exposure or non-occupational exposure:

- Individuals experience occupational exposure if their work brings them into contact with ACMs. This includes professionals in both the licensed and non-licensed asbestos removal sectors.
- Individuals experience non-occupational exposure if they are exposed to a poorlymaintained ACM unexpectedly during the course of their work day or at home.

In order to prevent exposure, the ACM should be identified. Professionals should then ensure that it is not disturbed and is adequately maintained.

This can be achieved in three steps:

- 1 Locate the ACM.
- 2 Ensure all appropriate parties are aware of its location.
- 3 Ensure it is kept in good condition.

Locate the ACM

This can be achieved by sampling suspect material or carrying out an asbestos survey. Sampling is useful if there are few suspect materials. A suitably accredited surveyor or analyst will remove a small piece of the suspect material for laboratory analysis. Sampling is a hazardous activity and subject to the requirements of *The Control of Asbestos Regulations* 2012.

However, sampling does not involve a detailed inspection of the whole area in the way a full asbestos survey does. An asbestos survey is more likely to identify all ACMs in a building. There are two types of asbestos survey:

- management
- · refurbishment and demolition.

These are detailed in Appendix C.

Ensure all appropriate parties are aware of the ACM's location

Regulation 4 of *The Control of Asbestos Regulations* 2012 states that the appropriate parties must then be informed, in writing, of the location of the ACM. This information must include location plans and whether their work is likely to disturb the ACM.

Appropriate parties include individuals doing repairs and building work, but do not usually include normal building occupants. However, under a duty of care, building owners should make asbestos information available to any occupants who request it. In some locations, it may be prudent to advise staff if they could disturb ACMs during their normal duties, e.g. by pinning items to walls or ceilings.

Asbestos exposure can only be properly avoided by having a system for providing this information and accessing the asbestos register. This could also involve labelling ACMs or showing the register to contractors before work starts.

Ensure the ACM is kept in good condition

Any ACMs in a poor condition should be prioritised for repair or removal. If ACMs are in a good condition and are unlikely to be disturbed, they can be left in place as long as they are periodically checked for damage.

4.2.2 Assessing the risks from asbestos

Employers are obliged to assess risk to employees prior to starting any work with ACMs. In accordance with Regulation 5 of *The Control of Asbestos Regulations* 2012, they must then take specific measures to control and assess exposure.

The basic procedure for any health and safety hazard is to assess and control the risk from it. A hazard is defined as anything that could cause harm. However, there are many such hazards, so it is more useful to categorise them according to the degree of harm they can cause. The assessment of risk from a hazard needs to take into account the likelihood of it occurring, and then the severity of harm it would cause if it does occur.

This is the formula for assessing the level of risk:

Risk = likelihood of harm x severity of harm

If the risk assessment shows that the hazard could cause harm, and the degree of harm is deemed unacceptable, it is necessary to take measures to reduce the risk to an acceptable level. The risk that remains is known as the residual risk.

In summary:

- Hazards with an unacceptable level of risk need to have additional control measures put in place to produce a lower residual risk.
- A low-risk hazard does not need additional control measures.

The HSE provides guidance on risk assessments for asbestos in <u>L143</u> and <u>Asbestos essentials</u> <u>HSG210: A task manual for building, maintenance and allied trades on non-licensed asbestos</u> work.

The risk of exposure to asbestos is influenced by several factors:

- the type of material: whether it is friable or non-friable
- the condition of the material: whether it is damaged or not
- the surface treatment: whether it has any damage protection, and
- the extent: the quantity of ACM.

It is possible to work out the risk of doing different types of work on asbestos, based on:

- whether the work is on friable or non-friable materials
- whether hand tools or power tools will be used
- what control measures will be used for preventing fibre release and
- what training operatives have had.

An example of high-risk work is the removal of a large amount of friable ACM, for example pipe lagging, using power tools. This would need a robust set of control measures to control the spread of dust and prevent exposure. In the UK, the use of power tools is prohibited in all but the most exceptional circumstances.

At the opposite end of the scale, low-risk work could involve taking a sample of a non-friable or bonded material, such as a floor tile, where the work is quick and only involves hand tools.

This assessment of risk needs to be performed by the employer whose staff are carrying out the work. The risk assessment should be documented, available for inspection at the place where the work is being carried out and updated should any of the hazard criteria change. Risk assessments should be recorded in as simple and clear a manner as possible.

The outputs of a risk assessment that are most relevant to asbestos in buildings are:

- The asbestos register: this is produced following the asbestos survey and should identify the locations and condition of ACMs in the building. The dutyholder, normally together with their advisor/asbestos surveyor, should decide what the risk of fibre release from each material is and how to deal with that risk.
- The asbestos management plan (AMP) should then use the information in the asbestos register to aid asbestos management at the premises and therefore prevent exposure. Part of the AMP will be to assess the risks identified in the survey, along with the risks associated with using the space. Combining these allows for the prioritisation of actions and the development of a management strategy.

Asbestos work: if work on ACMs is to be carried out, the employer of the people
doing the work needs to assess whether the work is low risk (non-licensed) or high risk
(licensed).

4.2.3 Duty to manage asbestos

There is a specific requirement in the UK for dutyholders, those ultimately responsible for the maintenance of non-domestic premises, to manage the risks from asbestos. For buildings built before asbestos was banned in 1999, this is done by carrying out a survey to enable an asbestos register to be compiled, assessing the risk from any identified asbestos and then making sure the risks are managed by passing on asbestos information and creating an ongoing plan to manage the risks.

The duty to manage asbestos was introduced in 2002. Research at the time showed the occupational group most at risk from exposure to asbestos was the building, construction, repairs and maintenance sector, and that a quarter of annual asbestos-related deaths occurred in this sector.

In order to safely and responsibly manage asbestos for which you are responsible, take the following steps.

Step 1: find out whether asbestos is present

ACMs may be present if the building was constructed or refurbished before 2000. This can be ascertained by carrying out a survey or consulting others who may already have this information. Asbestos can also be presumed to be present based on knowledge of the type of construction or material involved. In the absence of any information on asbestos, this is the only way to proceed unless all materials present can be positively identified as not containing asbestos.

Step 2: assess the condition of any ACMs

Assess the type, amount and condition of any ACMs, or presumed ACMs, in terms of how likely they are to release asbestos fibres into the air if disturbed. This will help you decide what to do next.

Step 3: survey and sample for asbestos

Suitably trained and competent specialists can carry out an asbestos survey of the premises to identify ACMs, particularly if maintenance or refurbishment work, or the installation of wiring and/or other building services, is planned. The survey should identify what types of ACMs are present, where they are and what condition they are in (see Appendix C).

Step 4: keep a written record or register

Prepare a record based upon the survey that shows where the asbestos or presumed asbestos is, the type, and what condition it is in. This record needs to be simple, clear and always available at the premises so that anyone who needs to know where the ACMs are

can easily find them. The record could be an annotated plan or diagram, a written list or a computer-based record – storing it electronically can make it easier to update and distribute.

There may be some areas of the premises that are not made available or accessible for the asbestos surveyor to inspect, such as:

- roofs
- secure areas
- spaces such as lift shafts, electrical equipment, etc. that require attendance by other trades (e.g. a lift engineer or electrician) and
- concealed spaces within ducts, walls and partitions that require opening-up work to gain access

These should be noted on the drawing and it should be presumed that ACMs may be present until a proper check is made.

Step 5: act on the findings

Using the asbestos information, prepare and implement a plan to manage these risks. Give high priority to damaged materials as well as those likely to be disturbed, as these will need to be repaired, sealed or removed. If the material is in good condition and is unlikely to be worked on or disturbed, it is usually safer to leave it in place and manage it in situ.

Step 6: keep the records up to date

Unless it is a very low risk, any asbestos left in place will need to be managed by periodic reinspection. The time between inspections will depend on the type of material, where it is and its condition. The frequency of reinspection should depend on the risk assessment: the greater the risk of damage/deterioration, the more frequent the reinspection. For example, damaged AIB on a door in a frequently used corridor may need to be inspected weekly until it is removed. Check that the arrangements to control the risks set out in the plan have been put in place and are working effectively. The plan should be reviewed if there are significant changes that will affect these arrangements, for example if different sorts of work are carried out on the premises, or if any of the ACMs are removed. The overall management plan should also be reviewed at least every 12 months, or when significant changes within the organisation occur.

Step 7: provide the information to those who need it

Make sure that everyone who needs to know about the asbestos is made aware of its presence, e.g. maintenance workers, contractors, surveyors, etc. Asbestos can be labelled with a warning sign, or the register can be shown to anyone about to carry out work in the building. Whichever way this is done, the important thing is to make sure that those who might work on the material know that it contains, is presumed to contain or may contain asbestos before they start work. Similarly, make sure anyone who might accidently or inadvertently disturb or damage it is made aware of it, so that they take care to avoid doing so.

It may be prudent to carry out checks both prior to and following any work, to ensure ACMs have not been disturbed.

Certain premises may have responsibilities that are shared between more than one party. In these circumstances, all parties have a duty to cooperate and share information with the other parties. Anyone who is not a dutyholder, but has information on or control of parts of the premises, has a legal duty to cooperate with the dutyholder so they can fulfil their obligations.

Occupiers with multiple sites should take a strategic view across all sites, setting out minimum standards and objectives to be followed at each site.

4.2.4 Passing on asbestos information to those who need it

If asbestos has been identified within a building, exposure can only be prevented by passing this information on to anyone who may be exposed, whether by occupancy or by conducting maintenance, refurbishment, demolition or other building work. Information should also be passed on at the point of sale or letting to the new owner/occupier. When following construction works, the passing of information, in the form of a health and safety file, is a legal requirement under the CDM Regulations.

There are a number of different ways in which information on asbestos can be passed on to anyone carrying out building, maintenance or other installation work, and the more proactive this process is, the better and safer it is. It can be achieved in the following ways.

- Ensure the people that are planning the intended work have considered any asbestos risks. In order to prepare a suitable method statement with risk assessments, the client will need to supply this information to the contractor.
- Attach the asbestos register to any works order request or purchase order.
- Introduce a permit to work system, which controls all building work.
- Make maintenance work an authorised activity that can only proceed if the asbestos register is consulted.
- Ensure the asbestos register is available for inspection at reception.
- Consider labelling ACMs with the standard asbestos warning labels, particularly in plant rooms or other restricted areas where labelling is less likely to cause alarm or be the focus of deliberate damage.

Any information provided has to be clear, concise and easily understood by the end user.

There is no standard procedure for providing asbestos information. A large multi-building site, with lots of maintenance work going on in areas where there is known to be asbestos, will need a more robust system than a small shop that does not have any regular maintenance programmes.

It is important to decide how you can best disseminate this information. An organisation that relies on contractors using hand-held devices and electronic works orders will be more suited to web-based software. An organisation that does not use such a sophisticated

system could have a similarly effective, but less complex, way of sharing asbestos information.

Whichever way this is achieved, it should be bespoke to the organisation and frequently tested to ensure there are no failures in the system that may lead to asbestos being disturbed, with the resulting exposure risk and business costs.

An asbestos register is usually compiled following a management survey. The scope of a management survey is limited to identifying asbestos in surface materials, for example the outer facing of wall or ceiling material. It will not identify ACMs that are concealed within the building structure, fabric or services. In order to locate ACMs hidden in this way, a more intrusive refurbishment and demolition survey would need to be carried out prior to any building work that may expose them.

During the negotiation for the selling or letting of a property, and depending on the contractual role, it is important to either request or provide the asbestos register and AMP. Be aware that the AMP will be occupier-specific and may not be relevant to a different occupier, depending on how they will use the premises.

If these documents are not available or unsuitable for the proposed use, a note of this, along with the likely risk of any ACMs being present in the property and the need for a specialist asbestos survey and revised AMP, if appropriate, should be provided to the client.

4.2.5 Identifying asbestos before work

There may be asbestos in the property that is only revealed once work takes place. The asbestos register will generally only have identified asbestos in surface materials in readily accessible locations, such as walls or ceilings. Any building work that goes beyond these surface materials or locations may need a more intrusive asbestos survey.

Under the CDM Regulations, the client has a duty to provide all pre-construction information in relation to the property. This includes details of any asbestos surveys, asbestos registers and AMPs relating to the property. In helping the client compile pre-construction information, the principal designer needs to consider this information and provide it to the principal contractor, in order to help the principal contractor in the preparation of the construction phase plan.

In the event that no current, suitable and sufficient information is available, the principal designer will need to identify the gap in the information and arrange for the client to obtain a suitable project-specific refurbishment and demolition survey prior to works commencing. It is not considered good practice to rely on the principal contractor to obtain the refurbishment and demolition survey. If you do, consider the requirement for collateral warranties and adequate management of the process on behalf of the responsible person and/or the client. This should include a requirement that the asbestos surveyor is UKAS accredited for inspection, and ideally testing too. The earlier in the project the risks from asbestos are considered, the greater the likelihood that exposure is prevented.

There are many occupational groups that could come across asbestos when working in a building. Some of them are obvious, and some are less so. They include:

- architects, building surveyors and other professionals
- demolition workers
- construction operatives
- maintenance and repair staff
- general odd-job tradesmen
- plumbers
- electricians
- gas fitters
- painters and decorators
- carpenters and joiners
- fire and flood restoration technicians
- shopfitters
- plasterers
- roofers
- heating and ventilation engineers
- · telecoms engineers
- · computer and IT installers, and
- fire and burglar alarm installers.

This is not an exhaustive list, but even from this it is clear that it is a challenge for employers to establish that asbestos is not present in the work area before any work takes place. At the very least, it should be assumed that asbestos is present so that measures can be taken to prevent any disturbance.

There are various ways in which asbestos can be identified before work starts, such as:

- consulting existing asbestos information
- · carrying out sampling of suspect materials and
- undertaking a full survey of the area and/or building.

Users of the survey establish that the inspection was undertaken by someone competent, and that the information gathered is reliable. A poor survey is often worse than no survey at all, but the quality of the survey will not become apparent until work has already begun on site – when it may well be too late.

It is not just a poor survey that can lead to asbestos being disturbed on site. Not having any survey done at all is more likely to lead to incidents of accidental disturbance, as would (perhaps to a slightly lesser extent) proceeding with the work on the basis of the wrong type of survey. One example of this is using management survey information to plan building

work that should only go ahead if a more intrusive refurbishment and demolition survey has been carried out.

Disturbance and potential exposure could also occur if a survey has been completed but the survey information is not used as part of the planning and execution of the work. In this situation, it does not matter how thorough the survey was; if the information is not included, the survey is useless.

It is not only exposure and consequential long-term risks to health that should be prevented, as there are a number of other adverse effects:

- the spread of asbestos, resulting in the contamination of adjacent areas
- evacuation
- expensive clean-up costs and
- possible building closure.

In such cases, it is likely the regulatory authorities would take enforcement action, including criminal prosecution, and others affected may seek compensation through civil court proceedings.

See Appendix D for more information on asbestos surveys.

4.2.6 Training for people who may disturb the building fabric

In order for workers in the construction industry to have a better understanding of the risks from asbestos, there is a clear legal obligation for employers to give asbestos awareness training that is appropriate for the work they do.

Research has shown that although workers have a general awareness of what asbestos is, the extent of its use is not widely appreciated, nor is the fact that it is still present in millions of buildings in the UK. One of the recurring themes in research is that workers think asbestos was 'yesterday's problem', when quite clearly it still needs addressing today.

It is estimated that asbestos products are present in up to two million commercial premises in the UK – including hospitals, schools, universities, warehouses and offices – and around three million domestic and residential dwellings, from high-rise social housing to stately homes.

With an estimated two million workers in the building, construction and maintenance sector, a large number of people carry out work in buildings where asbestos is still present and the potential for accidental disturbance is high.

A survey of 500 construction workers by the Institution of Occupational Safety and Health identified that while 59% had received asbestos awareness training, 15% had never been provided with such training. Furthermore, 32% had never checked an asbestos register, while almost 25% believed they had been exposed to asbestos.

Any workers in the building and allied trades who are more likely to incidentally or accidentally disturb asbestos are legally required to have asbestos awareness training. This is so that they can take measures to reduce risks from asbestos.

Anyone who plans to work with ACMs is legally required to have suitable training to do so, in addition to awareness training. The nature of this training will depend on whether they are undertaking licensed, notifiable non-licensed or non-licensed work. They also require specialist insurance, and knowledge of handling procedures and waste disposal.

4.2.7 The need for asbestos strategies and management plans

The duty to manage referred to in section 3.1.1 goes further than just having asbestos surveys carried out in order to produce an asbestos register.

Bearing in mind the legal requirement is a duty to **manage** asbestos, by carrying out **only** a survey building owners are not fully complying with the law. Once the survey has been done, the survey information should then be used to proactively manage identified ACMs.

This can be achieved by preparing and implementing an AMP incorporating the survey information. It describes various procedures and arrangements for the ongoing management of the ACMs, in order to ensure the continued safety of occupiers and those planning and carrying out building work.

The AMP describes:

- where the asbestos is and its condition
- what remedial actions are required and their priority
- · where and how the asbestos information can be accessed
- roles and responsibilities of people managing asbestos in the building
- · levels of training required
- how the asbestos register is used to plan building and maintenance work
- how the asbestos information is provided to people that need it
- who is authorised to carry out asbestos checks
- the details of specialist companies that can undertake survey, testing and removal work and
- how the AMP will be reviewed and updated.

4.2.8 Asbestos strategy options

Leave and manage

This is based on the often-quoted opinion that, if left in place and not disturbed, asbestos poses no risk. However, this creates the need to continually manage and check the condition of ACMs, and consider their presence when planning works. Their presence could also deter potential tenants or purchasers of the premises, who may not be prepared to take on responsibility for their management.

Active approach to remove over time

This policy adopts the approach that, at convenient points in the occupier's tenure in a property, they choose to remove asbestos rather than leave it in place. This can be part of an ongoing maintenance and refurbishment strategy to always remove it when refurbishing an area, or in advance of undertaking maintenance. This reduces the degree of management over time, eventually providing a low-risk environment.

Leaseholders may consider an active strategy to avoid any potential dilapidations liabilities. However, the presence of asbestos should not be classed as a disrepair and there is no requirement to remove asbestos. Issues arise if the ACM is in disrepair and the cost of remedying any such breach is included under the terms of the lease. If a management report early in the lease had a low material assessment score and later reports had higher scores, this could be viewed as a deterioration in the condition of the material and remedial works may be claimed under dilapidations. An AMP will be specific to the occupier's use of the building and should not be passed on; however, the register showing its location should be provided at the end of the lease. Any tenant will need to demonstrate compliance with statutory requirements in their dealings with any asbestos in the property.

Management of information

Even if all asbestos is removed, the responsible person will still need to have a management plan in place to detail the previous presence of asbestos and where it was located, together with details of when and how it was removed. It should not be assumed that no asbestos is present, even if the management plan states that all asbestos has been removed.

The larger and more complex the organisation, the more detailed the asbestos management plan will need to be to ensure all parties are aware of its contents. Any incidents of accidental exposure that do occur will need to be investigated to identify how and why they occurred, so that corrective action can be put in place to prevent this happening again.

4.2.9 Procuring asbestos surveys and asbestos works

Clients should be aware of the steps to take to identify competent asbestos surveyors and contractors.

Clients are not expected to be experts in asbestos or asbestos-related work, and do not need to directly manage or supervise the work themselves. However, under the CDM Regulations they are responsible for ensuring appropriate arrangements are in place to manage and organise these projects. This means they must appoint people who have suitable skills, knowledge and experience, and provide them with sufficient information, time and resources to do the job properly.

Clients need to satisfy themselves that the companies they engage are appropriately resourced, have effective management systems and are competent to do the work. They need to be certain that the companies they engage will demonstrate high standards of workmanship and health and safety management, as well as maintaining appropriate levels of insurance and financial stability.

Because clients are at the head of the procurement chain and have the final say on how projects are run, they have many opportunities to set standards for project delivery, including health and safety management. Therefore, the law requires that clients:

- make suitable arrangements for managing a project and
- maintain and review these arrangements throughout the project to ensure health and safety risks are managed appropriately.

Under the CDM Regulations, the client has a duty to provide pre-construction information for any construction work. To ensure a survey is as comprehensive as possible, and therefore reliable, the client should also provide suitable information and support to the appointed asbestos surveyor. This should include:

- historic asbestos information
- as-built construction and service drawings
- access to all areas
- · the opportunity to open up areas and
- attendance by other trades.

Successful projects require good coordination and cooperation between all parties. Poor decisions and actions, as well as indecision and inaction, can have an adverse effect on how the work is delivered, causing contractors to fail to meet industry and legal standards, and potentially leaving clients with substantial criminal and civil liabilities, lengthy delays and disruption to projects.

In order to avoid this, a client should use a robust supplier approval process to select a shortlist of specialists. Then, using a clear, precise and accurate scope of work (or brief), each specialist can provide a quotation and technical proposal for the work on the exact same basis. The client can then use their judgement as to who is best suited to carry out the work. Price should not always be the final consideration, as this can often lead to poor-quality work being carried out.

Asking questions around the following topics will go some way to assessing the suitability of the specialist company:

- financial stability and insurance cover including bank reference
- resources and personnel to do the work
- health and safety capability
- membership of trade associations
- licenses to operate/accreditations
- examples of similar work
- · references and testimonials from recent projects and
- appropriate quality management systems.

It will be up to the client to justify the reasoning behind the selection of a non-UKAS-accredited organisation should a prosecution occur as a result of an inadequate survey.

Further information on commissioning asbestos surveys can be found in Appendix C.

4.2.10 UKAS accreditations and the selection of competent consultants

This section explains the difference between UKAS **accreditation** for asbestos inspections and ISO 9001 **registration/certification**.

Anyone who engages an external company to carry out any specialist work has a duty to take steps to ensure they have contracted a suitably competent organisation to do that work. This could mean going through a third-party verification system or using their own in-house supplier approval procedure, as well as relying on the various 'license to operate' schemes that are in place for some of the higher-risk activities, such as the Gas Safe Register for gas engineers.

In some cases, these licences are legal requirements: you cannot do that particular activity if you do not hold that licence. In other cases they are voluntary, which usually leads to the more responsible companies in that sector wanting to hold licenses as a way of differentiating the quality of their work from others.

In the asbestos consulting sector this is provided by formal accreditation, and a company can be accredited to carry out an activity such as surveying, air testing or laboratory analysis. Accreditation is granted by the United Kingdom Accreditation Service (UKAS), the UK's national accreditation body, and is awarded when a company has demonstrated its technical competence and conformity to the relevant international standard(s). The different asbestos-related activities covered by UKAS accreditation include:

- asbestos surveys and reinspections to ISO/IEC 17020: not legally required but strongly advised
- asbestos air testing, including four-stage clearance certificate of reoccupation to ISO/IEC
 17025: legally required, and
- asbestos laboratory sample analysis to ISO/IEC 17025: legally required.

Whether an asbestos survey or test report has been issued by a UKAS-accredited body can be determined by the presence of a UKAS accreditation symbol or specific reference to UKAS accreditation. The rules on using UKAS symbols are tightly controlled and detailed in the government publication National accreditation logo and symbols: conditions for use. Each accredited company is assigned a unique four-digit accreditation number, which enables traceability to its accredited scope on the UKAS website. It is a requirement that companies using a UKAS symbol must include their accredited company number below it. If a symbol is used without a number, this should be cause for alarm, and it is recommended to search for the company concerned on the UKAS website.

Regulation 20 of *The Control of Asbestos Regulations* 2012 requires employers who engage a laboratory to undertake air sampling and analysis of air samples to ensure the laboratory conforms to ISO/IEC 17025.

Regulation 21 of *The Control of Asbestos Regulations* 2012 requires employers who engage a laboratory to analyse ACMs to ensure the laboratory also conforms to ISO/IEC 17025.

UKAS-accredited companies work to a strict system of internal quality assurance procedures and are subject to rigorous external assessment to ensure that they maintain technical competence and act with impartiality, and that the quality of their work is maintained at the very highest standard. These companies are required to adhere to strict authorisation procedures by ensuring their staff are qualified to a minimum level, and they maintain training and audit records on these staff. Additionally, a prescribed programme of quality assurance checks are put in place, from planning the project through to undertaking the work on site and then issuing the final report.

It is possible to obtain registration to another standard, ISO 9001. This registration, or certification, serves a different purpose to accreditation and provides confidence that the company operates an effective quality management system, demonstrating that the company has general organisational and management procedures in place. However, it is not a demonstration of technical competence and therefore does not provide the same level of assurance that accreditation provides. ISO 9001 does not look at asbestos-related technical activities specifically, and does not demonstrate any sort of measure of the quality of work the company carries out.

Anyone who engages a UKAS-accredited company does so in the knowledge they are using a company that, in addition to carrying out a certain level of quality assurance audits and checks themselves, has demonstrated to an independent and authoritative third-party body that it has the technical competence and ability to undertake the service covered by its scope of accreditation.

Other countries have their own accreditation bodies, equivalent to UKAS, which have demonstrated their competence through peer evaluation and are signatories to a mutual recognition arrangement (MRA) operated by the International Laboratory Accreditation Cooperation (ILAC). Services provided by overseas bodies accredited by an accreditation body that is signatory to the relevant ILAC MRA (for testing and/or inspection) should be regarded as technically equivalent to those provided by a UKAS-accredited company – although their operating procedures may differ from those recommended in the UK by the HSE.

If you do not engage a UKAS-accredited company to carry out a survey, you should confirm that:

- the asbestos surveyors have passed either the British Occupational Hygiene Society (BOHS) P402 or Royal Society for Public Health (RSPH) Level 3 Asbestos Surveying qualification
- the company has a track record in carrying out a range of different survey types in different types of property
- the asbestos surveyors have sufficient knowledge of surveying your type of building
- the company is independent and will provide impartial advice

- the company is certified to a quality management system such as ISO 9001
- the company has sufficient knowledge to assess any health and safety risks
- the asbestos surveyors are audited as part of their work
- the company's insurance cover and policy excesses, in particular professional indemnity and public liability, include cover for asbestos-related work, and
- they are prepared to provide at least three references from other clients.

Failure to ensure that this has been done could render you liable in the event of an HSE investigation.

Appendix A: Common asbestoscontaining materials

Asbestos has many useful properties that have encouraged its use in buildings and plant. These include its great tensile strength; its non-combustibility; its resistance to heat, fire, electricity and chemical attack; its ability to be incorporated with and to bind other materials; and its relative cheapness and availability.

Consequently, it has been extensively used in almost all types of building – residential, commercial and industrial – throughout the world, and in a wide variety of situations and forms.

As well as being utilised for a wide variety of purposes, it has been applied and installed in a variety of ways, whether hand-applied as in the case of pipe lagging, fixed with adhesive (floor tiles) or sprayed (fire protection to steelwork).

The asbestos content of materials has also varied, depending on the reason for the asbestos being added in the first place. Lagging materials contain more asbestos, particularly if used around steam applications, so these products might have a content of up to 80% asbestos fibre. However, if the asbestos was being added as a binder or strengthener, the content only needed to be relatively low, around 10%.

The type of fibre used is also important. Crocidolite (blue) and amosite (brown) can withstand higher temperatures, so were found in lagging materials as well as AIB. Chrysotile (white) was more suited to use as a binder, so is the more common fibre type in cement products, plastics, resins and textured coating.

Crocidolite and amosite asbestos continued to be used in the UK until they were banned in 1985. It was at this point that asbestos use started to decline, although chrysotile (white) asbestos was not banned until November 1999 (May 2000 in Northern Ireland). During the 1990s, clients wanted asbestos-free new-build constructions, and the idea of eliminating foreseeable health and safety risks in buildings from the design stage onwards became standard practice.

The proportion of asbestos in different ACMs varies greatly and the proportion generally relates to its purpose. When present in small proportions, around 10%, it serves as a binding agent, but when present in larger proportions, over 15%, it serves as insulation (thermal or acoustic). The higher the proportion of asbestos, the greater the friability of the material.

Asbestos fibres range in size from those visible to the naked eye to very fine fibres measuring a few microns. Fibres that are visible to the naked eye are not composed of a single fibre but multiple fibres in a bundle.

Disturbing asbestos will release very fine fibres that have the ability to penetrate deep into the lungs. Because of the chemical and physical characteristics of the fibres, they cannot easily be expelled from the body and are not easily broken down. Asbestos fibres are termed bio-persistent and have the potential to accumulate in the body.

The table below explains more about the common groups of asbestos products. The dates relate to last use in the UK; however, this does not mean that asbestos-containing versions of these products have not been imported from elsewhere after these dates.

Product	Use	Dominant fibre type	Approx. date of last use
Loose	Mattresses/quilts for fire stopping and sound insulation	Crocidolite or chrysotile	1970s
Sprayed coating	Dry or wet applied anti- condensation or acoustic insulation, structural fire protection	All types	Mid-1970s
Thermal insulation	Pipes, boilers, pressure vessels, calorifiers	All types	Early 1980s
Asbestos insulating board (AIB)	Fire breaks, infill panels, partitions, ceilings, ceiling tiles, linings to roofs and walls, external canopies and porch linings	Amosite	Mid-1980s
Millboard	Fire protection, heat and electrical insulation	Chrysotile	Late 1970s
Paper, felt, cardboard	Reinforcement and lining of other products	Chrysotile	1980s
Ropes and yarns	Jointing and packing; boiler, oven and flue sealing; plaited tubing in electric cables	Chrysotile	1980s
Cloth	Fire blankets, mattresses, curtains, gloves	Chrysotile	1980s
Gaskets and washers	Hot water boilers for industrial power and chemical plant	Chrysotile	1990s
Strings	Seals for radiators	Chrysotile	1980s
Resin-based materials	Brake linings and clutch pads in machinery and lifts	Chrysotile	1990s

Product	Use	Dominant fibre type	Approx. date of last use
Drive and conveyor belts	Engines and conveyors	Chrysotile	1990s
Profiled sheets	Roofs, wall cladding, permanent shuttering	Chrysotile	1990s
Semi-compressed flat sheets	Bath panels, soffits, walls, ceiling linings, weather boarding, composite panels for fire protection or base for decorative facings	Chrysotile	1990s
Fully compressed flat sheets	Worktops, imitation roof slates	Chrysotile	1990s
Pre-formed moulded products	Troughs and conduits, tanks, drainpipes, flues, rainwater goods, window sills and reveals, fascias, soffits, ducts, copings, promenade tiles, early imitation slates	Chrysotile	1990s
Textured coatings	Decorative coatings on ceilings and walls (Artex)	Chrysotile	Late 1990s
Flooring	Floor tiles	Chrysotile	Mid-1980s
Bitumen products	Roofing felt, damp-proof courses, flooring adhesive, sink pads	Chrysotile	Early 1990s
Reinforced plastics	Toilet cisterns	All types	1980s

Table 3: Common groups of asbestos products

Many asbestos products had different mixtures of fibres depending on availability of stock, so dominant fibre type should only be used as a general guide.

Recent incidents of imported components, classed as 'asbestos-free' but containing a small quantity of asbestos, have been confirmed. The approximate date of last use should therefore only be taken as a guide for UK manufacture.

Appendix B: Duty to manage

B.1 Identifying the dutyholder

Table 4 explains how to identify the dutyholder in different situations (source: HSE <u>L143</u>).

Responsibility for premises	Who has the duty to manage under Regulation 4 of The Control of Asbestos Regulations 2012
The owner has sole responsibility for the premises, or has sole responsibility for the common parts of multi-occupied buildings.	The owner.
Under a tenancy agreement or contract, tenants (including employers or occupiers) are responsible for alterations, repairs and maintenance.	The tenant, or tenants in multi-occupancy premises.
Under a tenancy agreement or contract, the owner keeps responsibility for maintenance and repairs, and the owner has control over building access by maintenance workers.	The owner.
Under a tenancy agreement or contract, responsibility is shared between several people, e.g. owners, sub-lessors, occupiers and employers.	Each party, for those parts of the premises for which they have maintenance responsibilities. Note that employers occupying the premises also have a general duty of cooperation to comply with the requirements of any health and safety regulations under Regulation 11 of The Management of Health and Safety at Work Regulations 1999.
An owner/leaseholder uses a managing agent.	The owner. The managing agent acts on behalf of the owner but does not assume the owner's duties in law. The ultimate responsibility remains with the owner.

Responsibility for premises	Who has the duty to manage under Regulation 4 of The Control of Asbestos Regulations 2012
There is no tenancy agreement or contract.	The person in control of the premises.
The premises are unoccupied.	The person in control of the premises.

Table 4: Identifying the dutyholder for different types of premises

B.2 How the duty to manage applies to different premises

The following table explains how the duty to manage applies to different premises (source: HSE <u>L143</u>). RICS members are advised that all information in this table is subject to case law.

Type of residence	Type of occupation	Rooms or parts	Duty to manage applies?
Private house: single dwelling, including bedsits	Owner occupier	All	No
	Let to a single family	All	No
	Occupied by more than one family	Private rooms, e.g. bedroom, living room	No
	Rooms let to lodgers	Shared rooms, e.g. kitchen, bathroom, WC	No
House converted	Occupied by more than one family	Private rooms	No
into flats		Common parts for access and circulation, e.g. entrance hall, staircase, roof space	Yes
Garages, parking spaces	Integral to or linked with residence	Private	No
	Not allocated to any specific person	Common parts for access and circulation	Yes
Block of flats		Individual flats	No
		Common parts, e.g. foyer, lift, stairs, lobby, boiler and plant room, roof space, communal yard, garden, storerooms, bike shelter, external outbuilding	Yes
		Residual common parts, such as service riser ducts, that are only accessible via the flats	Yes
Flats over a shop or office, with or	Occupied by the shop or office owner	Private rooms	No
without a separate	Leased separately	Private rooms	No
entrance		Access and circulation areas	Yes

Type of residence	Type of occupation	Rooms or parts	Duty to manage applies?
Sheltered accommodation		Private rooms	No
		Common rooms, e.g. dining room and lounge	No
		Work areas, e.g. kitchen, staff rooms, laundry	Yes
		Common parts, e.g. foyer, lift, stairs, circulation areas, boiler room, storerooms, roof space, external outbuilding	Yes
,	Includes bed and breakfast if that is the main purpose	Private rooms occupied by the owner	No
		Guest accommodation and common parts (e.g. foyer, lift, stairs, circulation areas), storerooms, roof space, outbuildings	Yes
Tied cottages, accommodation	Leased or rent-free	All	No
Farm	Leased or rent-free	Farmhouse	No
		Farm buildings	Yes

Table 5: Application of the duty to manage to different premises; for plant, machinery, etc. refer to L143 Regulation 4

Appendix C: Guidance on how to commission an asbestos survey

The HSE has produced guidance on asbestos surveys and although this guidance is primarily aimed at those undertaking surveys, it does contain some useful information for clients. In this appendix, we have also included a checklist that can be used by dutyholders to help them comply with regulations and guidance.

Asbestos surveyors vary in their levels of diligence and competence. As a minimum, anyone undertaking an asbestos survey commercially should hold either the RSPH or BOHS qualification. These qualifications alone do not demonstrate competence, so they should be backed up with evidence of appropriate experience, insurance and most importantly a quality control scheme. It is the responsibility of the dutyholder to check these elements. This can be time-consuming and may require professional assistance.

Alternatively, the dutyholder can demonstrate that they have met the requirement to ensure competence by employing an organisation accredited by UKAS under ISO/IEC 17020 to undertake asbestos surveys.

In most circumstances, accreditation to ISO/IEC 17020 alone will be sufficient to demonstrate competence; however, if the premises are unusual the dutyholder might want to ask the surveying organisation about its experience in surveying these types of properties. The skillset needed to survey a small office will be different from that needed to survey an oil refinery or a listed building.

Two different types of asbestos surveys exist, and it is important to ensure you select the most appropriate survey for your needs.

C.1 Management survey

This is a survey of a property that has been designed to ensure it is possible to manage the asbestos within the property adequately. In order to perform an asbestos management survey, the asbestos surveyor will need to understand how the property is managed and which areas are regularly accessed. The expectation should be that the asbestos surveyor will access all of these locations when performing the survey. As an example, if there are high-level ceiling voids containing cabling that needs maintenance, the selected asbestos surveyor should inspect these locations.

These surveys are semi-invasive, in that the asbestos surveyor will look everywhere that is accessible, but they are not destructive. So, for example, they will not remove plasterboard or timber boxing or open up brickwork. A management survey looks at surface materials only.

C.2 Refurbishment and demolition survey

Property professionals should understand the difference between refurbishment and demolition, and the implications of the distinction between the two. It is important when commissioning an asbestos survey to ensure it is fit for purpose.

The term 'refurbishment' covers a wide range of activities, from the redecoration of a room through removal of walls and ceilings to complete strip-out back to shell. An asbestos survey needs to be undertaken that is appropriate for the level of refurbishment being performed. It is therefore important that the dutyholder details the scope of their works for the surveying organisation, to ensure an appropriate survey is undertaken. This should minimise the use of caveats and restrictions that appear in the final report.

Demolishing a property will require a survey to ensure all asbestos on site is identified prior to works commencing. This type of survey is destructive and is ideally only conducted once properties are vacated. When demolishing a property, it is likely the dutyholder will be appointing professionals such as architects and engineers to assist. If this is the case, seek input from these professionals in designing the survey. If conducted correctly, the survey report should contain no caveats or restrictions unless these have been previously agreed.

Asbestos survey reports may already exist, or may have just been received. It is important to note that this does not represent the end of the dutyholder's responsibilities. The next step they should undertake is a review of the report, with a view to identifying whether any immediate actions are necessary. With this in mind, it would assist the dutyholder if the asbestos surveyor provided an action plan. This may be buried in the report, so it may be easier to ask for this separately.

C.3 Survey factors to consider

These can be used as an aide memoire by RICS members and RICS-regulated firms to validate completed asbestos survey reports.

In particular, the following should be checked:

- The original instructions for the survey and report have been followed.
- The survey type (management, refurbishment or demolition) is correct.
- A survey of selected areas only (as opposed to the entire property) has the relevant areas listed.
- There is an executive summary detailing urgent actions.
- There is a certificate of analysis for samples that have been taken.
- There is a register detailing every asbestos item, whether it is an ACM identified by sample analysis, a visual cross-reference or a presumption.
- The drawings make reference to each ACM listed on the register.
- There is a photograph of each ACM listed on the register.

- Titles, reference numbers and descriptions are correct.
- There is a list of areas not accessed.
- The caveats and exclusions are as agreed during survey planning.

Appendix D: Suggested contents of an asbestos management plan

An asbestos management plan (AMP) should be clear and unambiguous. It should set out the aims of the plan, what is going to be done, when it is going to be done and how it is going to be done.

There need to be clear lines of responsibility, with each person involved understanding their role. A mechanism for regular monitoring and an annual review of the AMP to ensure that it is working properly should also be included.

The types of information that should be included in an AMP are as follows:

- · details of how the location and condition of known or presumed ACMs are recorded
- priority assessments, including priority assessment scores if algorithms have been used
- a table of priorities for action
- decisions about management options, including rationales
- a timetable for action
- monitoring arrangements
- employees and their responsibilities
- training arrangements for employees and contractors
- · a plan of implementation for new procedures, including those for external contractors
- the mechanisms for passing on information about the location and condition of ACMs to those who need it
- who will oversee the quality of the entries made on the AMP, and
- a procedure for the review of the AMP, including a timetable.

Appendix E: Licensed and nonlicensed work

Examples of the different types of asbestos work have been taken from the HSE website.

E.1 Non-licensed removal

- asbestos cement products (e.g. roof sheeting and guttering), provided the material is carefully handled and can be removed without breaking up; this includes work with asbestos cement that is weathered but not otherwise substantially damaged
- textured coatings (Artex) by removing the plasterboard backing as well to achieve virtually intact removal
- loosely fixed (i.e. screwed) AIB panels in order to gain access to areas for maintenance activities, e.g. to a ceiling void to repair lighting
- doors fire-proofed with AIB by demounting at the hinges and disposing of intact
- drilling into Artex for the installation of fixtures or fittings
- encapsulation and sealing of ACMs in good condition
- maintenance work on asbestos gaskets, including removal as part of repair and upkeep of equipment, and
- maintenance work involving floor tiles, bitumen roofing felt, brake linings and mastics.

E.2 Notifiable non-licensed removal

- asbestos cement products (e.g. roofing sheets) where the material has been substantially damaged or broken up (e.g. as a result of fire or flood damage)
- asbestos cement products where the removal activity will mean the material will be substantially broken up, creating significant quantities of dust and debris (e.g. demolishing an asbestos cement roof), and
- large-scale removal of Artex using steaming or gelling methods (e.g. beyond that required for maintenance activities such as installation/replacement of smoke alarms and fittings).

E.3 Licensed removal

- asbestos sprayed coatings
- asbestos insulation from boilers and pipes, and
- most work with AIB.

Appendix F: Effects and international attitudes

Regulations and guidance to control exposure to asbestos fibres have been in place for decades, and differing exposure limits have been applied over time. Initially, levels were set using gravimetric analysis, where a volume of air was drawn through a filter medium and the deposited material was weighed. Over time, the sampling methodology has changed and samples are now collected by drawing a known volume of air over a membrane filter and analysing this using microscopy.

Fully understanding the risk of asbestos has been difficult due to the long disease latency period but over time, as it became clear the thresholds imposed have not worked, the acceptable levels of exposure have been reduced. In the UK, after asbestos removal work, a level of fibres in the air of 0.01f/cm³ is achievable and measurable with the technology currently available. As a result, this has become the 'acceptable' level of exposure. In easily quantifiable terms, this equals 10,000 fibres per cubic meter. In mainland Europe, debate is currently taking place as to the acceptability of this level of exposure, as long-term exposure at this level may have the same effects on health as short-term exposure to a high level.

F.1 Asbestos health effects and diseases

The physical characteristic of asbestos that renders it hazardous to health is its crystalline structure, which gives it its fibrous nature, splitting into finer and finer fibres that are extremely durable. The fibres are microscopic, often less than 1 micron in diameter and 2 microns long, so are readily carried by air currents and can remain airborne for a considerable period of time.

Inhalation of any form of asbestos has serious health risks. If the fibres enter the body, they can embed themselves in the body tissue and remain intact, unaffected by natural digestion processes and bodily fluids, for many years.

The annual death rate for mesothelioma and other asbestos-related diseases in Britain is set to peak at around 5,500 to 6,000 around the mid-2020s, when it is expected that the number of deaths will start to decrease (source: Work-related ill health and occupational disease in Great Britain: Asbestos-related disease, HSE).

F.1.1 Mesothelioma

Mesothelioma is a cancer that affects the lining of the lungs (pleura) and the lining surrounding the lower digestive tract (peritoneum). It is almost exclusively related to asbestos exposure, and is incurable.

F.1.2 Asbestos-related lung cancer

Asbestos-related lung cancer is indistinguishable from lung cancer caused by smoking and other factors. It is estimated that the number of asbestos-related deaths from lung cancer match those from mesothelioma.

F.1.3 Asbestosis

Asbestosis is a serious scarring of the lungs that normally occurs after heavy exposure to asbestos over many years. Like silicosis caused by inhalation of silica dust from cutting concrete and stone, it results in progressive shortness of breath. In severe cases, it can be fatal.

F.2 World Health Organization

All types of asbestos are classified as Group 1 carcinogens by the WHO. This classification is given to substances that are known to be carcinogenic to humans.

Asbestos-related diseases take between 20 and 50 years to become evident; this makes their treatment challenging, as they often only become evident at a late stage. In March 2014, the WHO updated their policy statement, *Elimination of asbestos-related diseases*, which echoed the International Labour Organization's *Resolution concerning asbestos* in calling for a worldwide ban:

'Bearing in mind that there is no evidence for a threshold for the carcinogenic effect of asbestos [...] and that increased cancer risks have been observed in populations exposed to very low levels, the most efficient way to eliminate asbestos-related diseases is to stop using all types of asbestos. Continued use of asbestos cement in the construction industry is a particular concern, because the workforce is large, it is difficult to control exposure, and in-place materials have the potential to deteriorate and pose a risk to those carrying out alterations, maintenance and demolition. In its various applications, asbestos can be replaced by some fibre materials and by other products which pose less or no risk to health.'

The WHO estimates that about 125m people are exposed to asbestos in the workplace worldwide. In 2004, asbestos-related lung cancer, mesothelioma and asbestosis from occupational exposure resulted in 107,000 deaths and 1,523,000 disability-adjusted life years.

In addition, several thousand deaths can be attributed to other asbestos-related diseases, as well as to non-occupational exposure to asbestos. The WHO stated that it is:

- 'committed to working with countries towards the elimination of asbestosrelated diseases in the following strategic directions:
- by recognising that the most efficient way to eliminate asbestos-related diseases is to stop the use of all types of asbestos;

- by providing information about solutions for replacing asbestos with safer substitutes and developing economic and technological mechanisms to stimulate its replacement;
- by taking measures to prevent exposure to asbestos in place and during asbestos removal (abatement);
- by improving early diagnosis, treatment and rehabilitation services for asbestosrelated diseases and establishing registries of people with past and/or current exposure to asbestos.'

F.3 The EU

The EU first legislated on asbestos in 1983 with *Council Directive 83/477/EEC on the protection of workers from the risks related to exposure to asbestos at work.* Subsequent amendments to this were made over the years, and in 2009 these were repealed and replaced with directive 2009/148/EC, which stated:

'Asbestos is a particularly dangerous agent which may cause serious diseases and which is found in a large number of circumstances at work. Many workers are therefore exposed to a potential health risk [...]

Although current scientific knowledge is not such that a level can be established below which risks to health cease to exist, a reduction in exposure to asbestos will nonetheless reduce the risk of developing asbestos-related disease. It is accordingly necessary to provide for the establishment of specific harmonised procedures regarding the protection of workers with respect to asbestos.'

All prospective EU members are required to enact legislation to bring their laws into line with EU law. In 1999, directive 1999/77/EC set the deadline for the prohibition of chrysotile use as 1 January 2005; this was the date by which all member states were required to ban all asbestos use.

In theory, no country can join the EU unless it has agreed to this ban. However, it is reported that several countries have not enacted this directive.

Although the UK withdrew from the EU in January 2020, it is certain that there will continue to be strict UK regulation of asbestos in buildings in order to protect public health. Regulation 4 of *The Control of Asbestos Regulations* 2012 deals with the regulation of buildings and is not derived from EU law.

F.4 Global ban and continued use of asbestos

Out of approximately 200 countries in the world, only around 60 have banned the use of asbestos. Russia, India and China are the biggest users, accounting for 66% of all asbestos used in the world today – and these three countries account for nearly 40% of the world's population.

The following countries have banned the use of all forms of asbestos (the six regulated fibre types) and all general uses of asbestos (in construction, insulation, textiles, etc.). Certain countries have exemptions, usually for specialist seals and gaskets, and in a few countries there is an interim period where asbestos brake pads and linings are permitted.

Algeria	Denmark	Ireland	Monaco	Seychelles
Argentina	Egypt	Israel	Mozambique	Slovakia*
Australia	Estonia	Italy	Netherlands	Slovenia
Austria	Finland	Japan	New Caledonia	South Africa
				South Korea
Bahrain	France	Jordan	New Zealand	Spain
Belgium	Gabon		Norway	Sweden
Brazil	Germany	Kuwait	Oman	Switzerland
Brunei	Gibraltar	Latvia	Poland	Taiwan
Bulgaria	Greece*	Lithuania*	Portugal*	Turkey
Chile	Honduras	Luxembourg	Qatar	United Kingdom
Croatia	Hungary*	Macedonia	Romania	Uruguay
Cyprus*	Iceland	Malta*	Saudi Arabia	
Czech Republic*	Iraq	Mauritius	Serbia	

^{* 1} January 2005 was the final deadline for prohibiting the use of all forms of asbestos across the EU. Of the 27 member states, compliance with this directive has not been verified in these countries (source: <u>International Ban Asbestos Secretariat</u>, April 2018).

Note: the definition of 'asbestos-free' varies in countries outside the UK. Some countries, e.g. China, class less than 10% asbestos content as being 'asbestos-free.'

References

UK legislation

Defective Premises Act 1972

Environmental Protection Act 1990

Health and Safety at Work etc. Act 1974

Homes (Fitness for Human Habitation) Act 2018

The Construction (Design and Management) Regulations 2015 ('the CDM Regulations')

The Control of Asbestos Regulations 2012

The Hazardous Waste (England and Wales) Regulations 2005

The Management of Health and Safety at Work Regulations 1999

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 ('RIDDOR')

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 ('UK REACH')

Northern Ireland legislation

Asbestos (Prohibitions) (Amendment) Regulations (Northern Ireland) 2000

Health and Safety at Work (Northern Ireland) Order 1978

The Construction (Design and Management) Regulations (Northern Ireland) 2016

The Control of Asbestos Regulations (Northern Ireland) 2012

EU legislation

<u>Council Directive 1999/77/EC</u> – relating to restrictions on the marketing and use of certain dangerous substances and preparations (asbestos)

<u>Council Directive 2009/148/EC</u> on the protection of workers from the risks related to exposure to asbestos at work

<u>Council Directive 83/477/EEC</u> on the protection of workers from the risks related to exposure to asbestos at work

Industry standards and guidance

CL:AIRE, 2016: <u>Control of Asbestos Regulations 2012: Interpretation for Managing and Working with Asbestos in Soil and Construction & Demolition materials: Industry Guidance</u> (CAR-SOIL)

HSE <u>Asbestos essentials HSG210: A task manual for building, maintenance and allied trades</u> on non-licensed asbestos work

HSG264 Asbestos: The survey guide (HSE publication)

HSE Approved Code of Practice and guidance Managing and working with asbestos (L143)

Environment Agency <u>Technical Guidance WM3: Waste Classification - Guidance on the classification and assessment of waste</u>

ISO/IEC 17020: Conformity assessment — Requirements for the operation of various types of bodies performing inspection

ISO/IEC 17025 – General requirements for the competence of testing and calibration laboratories

ISO 9001 - Quality management system

RICS, <u>Surveying safely</u>

RICS Valuation – Global Standards VPGA 8: Valuation of real property interests

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