Asbestos and its implications for surveyors and their clients

3rd edition, guidance note

Failure to understand or communicate the risks arising from exposure to asbestos can have potentially life-threatening consequences. As such, asbestos-related matters are of major significance to surveyors and their clients. In addition, for those who are likely to encounter, or supervise others who might encounter, asbestos in their work activities, training in ‘asbestos awareness’ is a mandatory legal requirement.

With this in mind, the 3rd edition of this guidance note is intended to give its readers a balanced and pragmatic appreciation of the general issues surrounding asbestos, with particular regard to its use in buildings and structures.

Designed primarily as a starting point in the subject, this guidance note addresses the latest legislation and includes details of how this affects the role and responsibilities of surveyors in the many and varied services that they provide. The status of asbestos as anathema in the insurance industry is also considered.

The guidance has a strongly practical focus, including fully revised and expanded appendices, in order to help readers understand the dangers to health and business, comply with and advise clients on the regulations, protect their PI insurance and carry out the preparation and implementation of an effective asbestos management plan. It also explains the process of appointing asbestos surveyors to conduct asbestos surveys, asbestos contractors to carry out asbestos removal or management works, consultants to monitor such works.
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RICS guidance note

3rd edition (GN 38/2011)
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Acknowledgments

RICS would like to thank the following for their contributions to this guidance note:

**Lead author**
Paul Winstone, Watts Group plc

**Working Group**
- Barry Hall
- John Young
- John Richards, Thames Laboratories
- Tim Elliott, Elliott Environmental Surveyors Ltd
- Craig Bell, Health and Safety Executive
- Ross Udall
- Clive Curd, Gleeds
- Martin Barsley, Paragon Finance Plc
- Martin Wright
- Alan Cripps, RICS
This is a guidance note. It provides advice to RICS members on aspects of their work. Where procedures are recommended for specific professional tasks, these are intended to represent ‘best practice’, i.e. procedures which in the opinion of RICS meet a high standard of professional competence.

Although members are not required to follow the advice and recommendations contained in the note, they should note the following points.

When an allegation of professional negligence is made against a surveyor, a court or tribunal is likely to take account of the contents of any relevant guidance notes published by RICS in deciding whether or not the member had acted with reasonable competence.

In the opinion of RICS, a member conforming to the practices recommended in this note should have at least a partial defence to an allegation of negligence if they have followed those practices. However, members have the responsibility of deciding when it is inappropriate to follow the guidance.

Alternatively, it does not follow that members will be found negligent if they have not followed the practices recommended in this note. It is for each surveyor to decide on the appropriate procedure to follow in any professional task. However, where members do not comply with the practice recommended in this note, they should do so only for a good reason. In the event of a legal dispute, a court or tribunal may require them to explain why they decided not to adopt the recommended practice. Also, if members have not followed this guidance, and their actions are questioned in an RICS disciplinary case, they will be asked to explain the actions they did take and this may be taken into account by the Panel.

In addition, guidance notes are relevant to professional competence in that each member should be up to date and should have knowledge of guidance notes within a reasonable time of their coming into effect.
Definitions and abbreviations

Definitions

asbestos
The generic term for a group of naturally occurring fibrous mineral silicates. Asbestos is obtained by mining; the main producers are Canada, South Africa and parts of Russia and the Commonwealth of Independent States (CIS).

The three significant types of asbestos that have been commercially used in the UK are:

- crocidolite, commonly known as ‘blue’;
- amosite, commonly known as ‘brown’; and
- chrysotile, commonly known as ‘white’.

In the Control of Asbestos Regulations 2006 (CAR) the term ‘asbestos’ includes all three of the above types, fibrous tremolite and any mixture of those materials.

asbestos area
A designated area where, subject to Regulation 3(2) CAR, access is restricted to properly trained and equipped personnel.

asbestos survey
An inspection of buildings, structures, plant and land, conducted by an ‘asbestos surveyor’, where the prime objective is to determine or assume the location, type and condition of materials containing asbestos.

asbestos surveyor
A person or organisation who conducts an ‘asbestos survey’ of buildings, structures, plant or land, with the specific and single objective of identifying and reporting on asbestos-containing materials (ACMs). See subsection 1.6, Asbestos survey or inspection – surveyor or inspection?, for further clarification of this term.

client
A term generally used to describe the employer or person commissioning the inspection or survey. Where used in the context of the Construction (Design and Management) Regulations 1994 (CDM), it has a specific legal definition.

contaminant
A substance (or substances) present above normal background levels that has the potential to give rise to adverse effects.

contamination
In the 7th edition of the RICS Valuation Standards – Global and UK (the ‘Red Book’), ‘contamination’ refers generally to potentially hazardous or harmful substances in the site ground or structures around it, and is associated with land contamination.

Further guidance is given in the RICS guidance note, Contamination, the environment and sustainability, 3rd edition (2010).

contaminated land
‘Any land which appears to be in such a condition, by reason of substances in, on or under the land that […] significant harm is being caused or there is a significant possibility of such harm being caused’ (Part IIA, Environmental Protection Act 1990).

Note also the definition of ‘environmental damage to land’ under the Environmental Damage (Prevention and Remediation) Regulations 2009, Regulation 4: ‘contamination of land by substances, preparations, organisms or micro-organisms that results in a significant risk of adverse effects on human health’. Both of these definitions may be relevant in the case of asbestos.
control limit The accumulative exposure to asbestos over one of two alternative stated periods of time, measured in fibres per millilitre of air, over 4 hours or 10 minutes, which if exceeded triggers the designation of ‘respirator zones’ and the mandatory use and maintenance of respiratory equipment (see discussion of CAR in Appendix 1, Regulations).

deleterious materials A material or component that has the capacity to cause harm. In the property world, this term is usually associated with building materials or components that can result in the deterioration of the building fabric or structure, or that can constitute a risk to the health and safety of the occupants. Such materials are a financial risk to an investment in property; consequently, their use is often specifically prohibited by funds and other experienced investors.

dutyholder The person(s) legally responsible for ensuring that a Regulation is complied with (see Appendix 1).

hazard Something with the potential to cause harm.


respirator zone Designated area, triggered by exceeding ‘control limits’, to which access is permitted only to personnel wearing appropriate respirators (see Appendix 1).

risk The likelihood of harm occurring and the severity of the consequences.

Abbreviations

ACAD Asbestos Control and Abatement Division of Thermal Insulation Contractors Association
ACM asbestos-containing material
ACOP approved code of practice
AIC Asbestos Information Centre Ltd
ARCA Asbestos Removal Contractors Association
ATAC Asbestos Testing and Consultancy (a division of ARCA)
BOHS British Occupational Hygiene Society
CAR Control of Asbestos Regulations 2006
CAWR Control of Asbestos at Work Regulations 2002 (superseded by CAR)
CDM construction design and management
CDMC construction design and management co-ordinator
HBR RICS HomeBuyer Report
HSE Health and Safety Executive
HSV RICS Homebuyer Survey and Valuation service (superseded by RICS HBR in June 2009)
MDHS Method of Determining Hazardous Substances
PII professional indemnity insurance
RICS Royal Institution of Chartered Surveyors
TICA Thermal Insulation Contractors Association
UKAS United Kingdom Accreditation Service
1 Introduction

1.1 The context

Asbestos-related matters are of major significance to surveyors. Failure to understand or communicate the risks arising from exposure to asbestos, which is often found in buildings, can have potentially life-threatening consequences. As such, they command priority in the way in which they are addressed. Just as a developer would never delay soil investigations and associated contamination issues for a brownfield site and feeding those results back into the design and programme of the project, the considerations and implications for asbestos are similarly important and need to be resolved at the earliest opportunity.

The first edition of this guidance note, published in May 2003, acknowledged that at that time the whole subject of asbestos was seemingly shrouded in the mystique of the black arts, the secrets of which were confined to a few specialised practitioners. Since then, the situation for surveyors and other property professionals has changed considerably, and training in asbestos awareness is now a mandatory legal requirement.

With its myriad of different and useful properties, asbestos was the ‘wonder’ material of the 20th century and thus may be commonly found in all but the most recent types of building of this era. Of course, it has subsequently been proven that it can present a serious, and sometimes fatal, risk to the health of anyone who disturbs it, intentionally or inadvertently, in the course of an inspection or use of premises.

Asbestos has been at the top of many of the lists of deleterious materials prepared by property owners and investors. Its very presence, irrespective of the level of risk to health it presents, can have an adverse effect on the value of buildings, plant and machinery, and their liquidity. Consequently, asbestos is anathema to the insurance industry. The level of claims relating to asbestos (predominantly from the US market) has caused some insurers to stop trading, or to move out of this specialised market altogether, and has heightened the caution of those remaining. This has also led to a trend for the restriction or limitation of professional indemnity insurance (PII) provision for asbestos-related services.

Asbestos-related matters may also be one of the most highly regulated issues in the UK. Although the principal Regulations were rationalised in 2006, there is still a plethora of approved codes of practice (ACOPs) and official guidance dealing with its use, disturbance, treatment and removal.

To the novice, the whole subject may appear complicated and daunting, thus discouraging further interest or investigation and prompting the delegation of asbestos problems to the few active professional experts or asbestos contractors. Notwithstanding this, asbestos impacts virtually every service provided by surveyors, and so there is no alternative but to fully understand and address the risks to them and/or their clients.

1.2 Purpose of this guidance note

Asbestos can affect surveyors and their clients in a variety of ways – as employers, employees, advisers, owners, investors or occupiers of buildings. This guidance note is intended to give readers a balanced and pragmatic appreciation of the various issues surrounding asbestos, with particular regard to its use in buildings and structures.

This guidance note is pertinent to: clients commissioning surveys for ACMs or their repair, treatment or removal; surveyors carrying out or organising inspections of buildings that might contain ACMs; and persons instructing contractors or briefing other specialists. It is intended to provide such persons with a general understanding of the issues, to enable them to protect themselves and others, personally and commercially, who may be affected by their activities, and to assist them to meet their legal obligations.

It is primarily intended for surveyors who do not have specialist knowledge and expertise in respect of asbestos, but who provide a diverse range of property services, including management and valuation, agency, inspection and the provision of professional advice and services for a wide variety of building types and tenures. This guidance note
1.3 Mandatory asbestos awareness training

CAR (Regulation 10) requires that ‘every employer shall ensure that adequate information, instruction and training is given to those of his employees who are or who are liable to be exposed to asbestos, or who supervise such employees’. The broad definition of an ‘employer’ means that this duty similarly applies to the self-employed.

Paragraph 124 of the accompanying L143 ACOP Work with materials containing asbestos (HSE, 2006) lists examples of those who are likely to disturb asbestos while carrying out their normal everyday work, or may influence how work is carried out, and for whom asbestos awareness training is thus mandatory. Alongside the more obvious occupations such as construction and demolition workers, electricians and plumbers, paragraph 124 also lists ‘architects, building surveyors and other such professionals’.

The training should comprise both oral and written presentation and demonstration where necessary. It should cover the following topics in appropriate detail:

- properties of asbestos, its effects on health including the increased risk of lung cancer for smokers;
- the types, uses and likely occurrences of ACMs in buildings and plant;
- general procedures to be followed in the event of an emergency, such as uncontrolled release of asbestos dust into the workplace; and
- how to avoid the risks from asbestos, such as requiring confirmation of the absence of asbestos before undertaking work that will disturb the building fabric.

While this guidance note addresses all of these topics, in some case it only does so superficially. For example, it does not include photographs or detailed physical descriptions necessary to identify the different common forms of ACMs that might be encountered. It also does not incorporate any test or mechanism to prove and record that the reader has absorbed and understood the necessary information.

Therefore, while providing a good grounding to the general appreciation of asbestos and its implications for the built-environment, following this guidance should not be considered sufficient alone to satisfy the requirements of Regulation 10 of CAR 2006. Most importantly, paragraph 147 of the ACOP states that refresher training is required and ‘should be given at least annually’. It suggests that this could be as part of other health and safety updates. It is strongly recommended that readers falling into the category where asbestos awareness
is a statutory requirement attend appropriate course(s). The course(s) should be given by suitably experienced and competent trainers who will keep attendance records and any test results to provide to future employers or statutory officers, if requested.

1.4 Structure of this guidance note

As the guidance is intended for readers with a wide variation in their experience, appreciation of and interest in asbestos, the main text essentially summarises the key issues. More detailed information, charts and tables are contained in the appendices.

Each of the various professional services provided by RICS members is also addressed in section 5, Services offered by surveyors, to demonstrate how asbestos may impact each particular specialism, giving examples and case studies where appropriate.

1.5 Principal documents referred to in this guidance note

This guidance is based on other guidance notes and publications produced by RICS and the HSE, as well as relevant case law. It considers existing Regulations and official codes of practice and, where appropriate, these are identified in the text (see References).

As for all circumstances where the law is concerned, the final arbiter will be the courts. However, in the absence of relevant case law, surveyors must rely on informed opinion. Expert legal opinion has been sought in the matters of liability and implications for surveyors – in particular, in respect of their limitations and exclusions – for the following:

- **Control of Asbestos Regulations 2006 (CAR):** These are the key legislation in respect of works associated with or involving ACMs. These superseded the Asbestos (Licensing) Regulations 1983 (as amended), the Asbestos (Prohibition) Regulations 1992 and the Control of Asbestos at Work Regulations 2002 (CAWR). For details of the current legislation, see Appendix 1, Regulations.

  At the time of writing, the HSE was consulting on proposals to introduce revised Control of Asbestos Regulations to implement the changes required to comply with the European Commission’s reasoned opinion on the UK government’s transposition of Directive 83/477/EEC, as amended by 2003/18/EC, on the protection of workers from the risks of exposure to asbestos at work.

  The reasoned opinion confirmed the European Commission’s view that the UK has not fully implemented Article 3(3) of the Directive, which provides for the exemption of some types of lower risk work with asbestos from three requirements of the Directive: notification of work, medical examinations and record keeping.

  The required changes mean in future fewer types of lower risk work will be exempt from the three requirements.

- **HSG 264 Asbestos: The survey guide:** This is the other key document, which was produced by the HSE. The previous (2nd) edition of this guidance note included details of MDHS 100, but since 29 January 2010 it has been superseded by HSG 264.

1.6 Asbestos survey or inspection – surveyor or inspector?

Legislation and guidance on asbestos, both specific and general, has been published by various regulatory and professional bodies but with little commonality, especially in the terminology employed. In such documents asbestos is variously referred to as deleterious material, hazardous material, a contaminant and a source of contamination. Although all of these terms can legitimately apply to asbestos, confusion can arise as each often has a very specific meaning that can differ subtly depending on the document. ‘Definitions and abbreviations’ at the beginning of this document details how certain terms are used within this document.

Other associated words that are frequently used in connection with asbestos are ‘survey’, ‘inspection’, ‘surveyor’ and ‘inspector’. These terms are often used colloquially and thus can cause confusion with other non-asbestos related services that use the same terminology.

In the first two editions of this guidance note, in an attempt to distinguish and separate these, the terms ‘asbestos inspector’ and ‘asbestos
inspection’ were used. However, this has not been adopted widely by the construction industry or in the HSG 264, thus in order to avoid confusion the meanings given in the following paragraphs are used in this guidance note.

1.6.1 Surveyor

A surveyor is a professional who carries out one or a combination of professional services that involve the survey of buildings or property (e.g. a building surveyor, a general practice surveyor or a valuer). To have ‘chartered surveyor’ status, the surveyor must be a member of RICS.

The survey of buildings can be for a variety of purposes. Asbestos will generally be just one of a number of matters to be taken into consideration and not the prime objective of the service provided. The surveyor’s involvement with asbestos is thus only incidental, as part of the general service provided.

Numerous HSE publications, including in particular HSG 264, use the term ‘survey’ in relation to investigations solely concerning asbestos. However, this term has been historically and by definition linked to RICS, and has specific meaning to members and their clients in the context of the various different services they provide. It is thus strongly suggested that the terms ‘asbestos surveyor’ and ‘asbestos survey’ are used by RICS members whenever appropriate in the context of asbestos. This has particular relevance in respect of PII (see section 7, Insurance).

1.6.2 Asbestos surveyor (previously termed ‘asbestos inspector’)

An asbestos surveyor is a person or organisation that conducts an asbestos survey (previously termed ‘inspection’) of buildings, structures, plant or land, with the specific and single objective of identifying and reporting on ACMs. An asbestos survey is an inspection of buildings, structures, plant and land, where the sole objective is to determine or assume the location, type and condition of materials containing asbestos. (See section 8, Asbestos survey, for further details.)

The information could be required for a number of purposes, such as the compilation of an asbestos management plan or an asbestos register, or to determine the existence of ACMs prior to demolition or alterations of buildings, plant or equipment that might disturb ACMs.

At present there is no mandatory qualification for asbestos surveyors, and so anyone, including surveyors, can provide the service provided that they are competent and have the necessary specialist knowledge and experience appropriate for the specific project (see Appendix 2). Services provided by RICS members are subject to the provision of appropriate PII.

The term ‘asbestos surveyor’ is not widely used at present, but it is in the interest of all surveyors that the distinction of this term is widely appreciated throughout the property industry, and especially by clients, to avoid confusion or misunderstanding.

The level of expertise to be expected in respect of asbestos-related matters is, of course, far greater for an asbestos surveyor (commissioned for a project that is exclusively concerned with asbestos) than that reasonably required of a surveyor, who is obliged to comment on asbestos incidentally among many other topics.

1.6.3 Surveyors who are also asbestos surveyors

Where a member of RICS offers both services, particular care must be taken. It is important that where asbestos is concerned, the client is made aware of the scope of the specific service that will be provided, either as a ‘surveyor’ or an ‘asbestos surveyor’. It must also be made clear as to the difference between a ‘building survey’ and an ‘asbestos survey’, in particular regarding the limitations of the former.

In order to avoid any misunderstanding, it is strongly recommended that within the explanation of the limitations of a service involving an inspection of a property or structure that is not an asbestos survey, a phrase such as the following is included: ‘we will not be carrying out an inspection for materials containing asbestos’ and where appropriate, ‘we strongly recommend that an asbestos surveyor is separately instructed for this purpose’.

1.7 Asbestos survey report or management plan

There is often confusion between an asbestos survey report and an asbestos management plan. The survey report is the confirmation of the results of the asbestos survey and is prepared by the
asbestos surveyor. It is undertaken by the asbestos surveyor and its purpose is to identify the location, type, condition and degree of exposure of materials and/or components proven to, or suspected of, containing asbestos. Also, where appropriate, the report includes an assessment of the risk of the release of harmful fibres that might endanger anyone who is likely to inhale them. Its purpose is to enable other parties to make judgments and decisions on the actions necessary to prevent, avoid or generally manage those risks.

The survey, and thus the report, may be restricted to a particular part(s) of a building (e.g. prior to refurbishing, physically altering or demolishing it), or it may encompass the entire building. In the latter case the report could be used to establish the potential financial implications of the presence of ACMs prior to the purchase of land or a building. However, by far the majority of reports are required as the first stage of the development of a plan by a party that manages ACMs during the occupation of the building.

In the case of non-domestic premises (see Appendix 1) Regulation 4 of CAR requires the dutyholder to produce, use and maintain the plan to manage ACMs that are known or might reasonably be suspected to be in their demise. Depending on the experience and knowledge of the dutyholder, the production of the plan may often require the technical assistance of the asbestos surveyor. In any case, the plan is specific to the particular building or part and its current or intended future use, the details and implications of which will only be known by the dutyholder.

Unlike the survey report, which is based on the assessment of land or building(s) at a particular point of time and thus may go out of date, the management plan is a live document that needs to be regularly reviewed and updated to reflect any changes in the physical arrangement or use.

1.8 Hierarchy of principal documents

Regulations are legal requirements made under statute. Compliance is mandatory.

ACOP gives practical advice on how to comply with the law. If the advice is followed, then it is accepted that the relevant aspects of the law has been observed. Alternative methods to those set out in the ACOP can be used, however, if prosecuted for breach of health and safety law and it is proved that the relevant provisions of the ACOP were not followed, it will be necessary to show that the law has been complied with in some other way, or a court will find fault.

Guidance is informed authoritative advice. It does not have the legal implications of an ACOP and its credibility derives from the status of the publishing organisation.
2 Risk to surveyors

2.1 General

The general health issues associated with asbestos for the public at large are summarised in Appendix 3. This section addresses the risks from the perspective of the surveyor.

The risks arising from asbestos are broadly of two types: asbestos-related diseases and commercial/economic loss. These are discussed in the following subsections. (For understanding of the subtle difference between hazard and risk, refer to the definitions given at the beginning of this guidance note.)

2.2 Asbestos-related diseases

Two factors must be taken into account here:

- the health of surveyors; and
- the health of others (e.g. occupants, visitors, neighbours, contractors and the general public).

The term ‘asbestos-related diseases’ is used here to refer to illness or death arising from the inhalation of asbestos fibres.

Inhalation or ingestion may occur during the inspection, maintenance, alteration or demolition of components, plant, equipment or buildings containing ACMs. Such activities, without adequate control, can release significant quantities of respirable airborne asbestos fibres.

The greatest current risk now is to workers who disturb asbestos, often inadvertently, in the course of their work when inspecting, repairing, altering, extending or demolishing buildings. The cumulative effects of exposure increase the risk of the disease, which is significantly higher for anyone who smokes tobacco.

As construction professionals and building surveyors, RICS members are therefore included in the list of persons considered to be at greatest risk in the HSE L143 ACOP Work with materials containing asbestos.

2.3 Commercial/economic loss

The following matters are examples of how the discovery of asbestos could have a commercial/economic impact:

- emergency or unplanned stoppage of production and/or cessation of services;
- evacuation of a building, or parts thereof, including the costs of the provision of temporary alternative accommodation and facilities;
- loss of immediate income, due to closure or boycott by customers (e.g. in the case of cinemas, theatres or shops);
- strikes or walkouts by employees or occupants;
- adverse publicity (e.g. for blue-chip companies or schools);
- reduction in value or rental income;
- loss of liquidity of asset (difficulty or inability to sell, lease or license the premises);
- costs of remedial works (removal or treatment and decontamination);
- financial responsibility for injured employees or other parties;
- criminal prosecution (leading to substantial fines and even imprisonment); and
- civil damages for negligence.

In considering loss, it is important to note that similar, or possibly greater, commercial economic risk can also arise from taking an overly cautious and unrealistic stance as from ignoring the problem. Such an unprofessional approach could result in unnecessary fear and concern, and needless remediation or removal works. There is also the possibility of criminal prosecution if persons are exposed to the risk of asbestos by unnecessary works.

It is the responsibility of the surveyor to take a balanced and professional view dependent upon the individual circumstances. The surveyor must tread a fine line between caution and pragmatism, and rely on the published guidance that is available.
It is strongly recommended that weight be given to information produced by relevant professional organisations and institutions (such as RICS), official authoritative government departments and the HSE rather than private organisations, which may have a commercial interest and bias. As an example, there is debate as to the level of risk arising from white asbestos. For the avoidance of doubt, see Appendix 4, Legal issues arising and cases, for a summary of the HSE’s view on this.

2.4 Legal implications

Like all health and safety regulations, those relating to asbestos are part of statutory legislation and offences are subject to criminal, not civil, law.

In addition conviction can result in RICS members losing their ‘chartered surveyor’ status by their membership being withdrawn.
3 Surveyors’ responsibilities

3.1 General duty

Members of RICS provide a wide range of property services, each with different motivations and objectives and each requiring very different levels of skill and knowledge. These differences are reflected in members’ attitudes towards asbestos with regard to both the level of risk that it presents to them personally and the extent to which they are involved with it in their everyday activities.

Irrespective of personal views and the level of involvement, all RICS members, with all of the moral and ethical responsibilities that their membership entails, have specific obligations set out in the RICS’ Royal Charter (see www.rics.org/royalcharter), which states:

3. The objects of the Institution shall be to secure the advancement and facilitate the acquisition of that knowledge which constitutes the profession of a surveyor, namely, the arts, sciences and practices of [...] securing the optimal use of land and its associated resources to meet social and economic needs [...] and to maintain and promote the usefulness of the profession for the public advantage.

The government has repeatedly expressed its concern regarding the protection of workers and the general public from risks to health arising from asbestos in buildings. In response, RICS has consistently confirmed its willingness to assist in this matter in every reasonably practicable way.

As a minimum, every RICS member – whether acting in the capacity of an inspector, owner, manager, occupier of or adviser on buildings and land – needs to be aware of the health and other implications of asbestos, and the statutory obligations imposed on various parties with relation to asbestos. They also need to be familiar with the regulatory requirements and able to provide the necessary professional and impartial advice to enable competent expert assistance to be sought and given.

To many people, including some surveyors, asbestos is a material to be avoided wherever possible. Because of the perceived risks, there may be a tendency for surveyors to try to evade or opt out of any involvement with it whatsoever. However, because of professional and statutory obligations, this is not possible.

Many surveyors will appreciate the commercial advantages of taking the lead in providing advice or services in connection with a matter that has such serious financial implications for the property world. In any case, surveyors should be aware of the potential commercial disadvantages of not doing so.

In view of the size of the RICS membership, and the significant and prestigious positions held by many members in the property world, it is unlikely that the UK and EC objective of managing the risk of asbestos within the workplace can be achieved within the desired timescale, or even at all, without the support, commitment and influence of RICS members.

3.2 Statutory responsibility

Irrespective of financial and commercial considerations, the surveyor’s prime concern must be the risk to health and of bodily injury.

Notwithstanding contractual obligations and conditions of engagement, section 7 of the Health and Safety at Work, etc. Act 1974 requires everyone at work (including surveyors) to do that which is reasonably within their control to take reasonable care for the health and safety of themselves and other persons who may be affected by their acts or omissions at work. (This embraces passive as well as active responses – including the failure to warn or act.)

Accordingly if, during the course of an inspection, a surveyor identifies or reasonably suspects the presence of materials that may contain asbestos, and the risk to health is considered to be serious and immediate, this should be reported irrespective of the scope and conditions of engagement.

It is the responsibility of the individual surveyor to decide on the criteria in the particular circumstances. An example of ‘serious and
immediate’ risk would be the existence of substantial debris from materials reasonably suspected of containing asbestos, with the potential for releasing airborne fibres if disturbed, in an area where unprotected persons are present or are likely to enter in the near future.

Ideally, the person in control of the premises should also be informed and given advice on emergency or other action to be taken, which as a minimum should include seeking immediate advice from a suitable specialist.

Where this could breach client confidentiality, it is suggested that this duty may be discharged by informing the client, clearly pointing out the need for the occupants to be informed as soon as possible and recording this notification. The duty to inform the appropriate parties will then pass to the client.

In giving this emergency advice, either verbally or in writing, on the presence of ACMs care should be taken to make it clear that this is not conclusive or exhaustive and that there may be other asbestos present in other locations. Typical wording for this might be:

> During our inspection we noted the following material(s) that might contain asbestos. This was in a poor condition and may thus be releasing respirable fibres. We stress that this is not conclusive and in addition there may be other asbestos-containing materials elsewhere in the premises. We strongly recommend that you prevent (access to this area and) the disturbance of these materials and seek the advice of a specialist asbestos surveyor.

The only exception to the foregoing is where ACMs are specifically excluded from the surveyor's inspection, the surveyor is aware that others either have carried out, or will imminently be conducting, an asbestos survey and this is noted in the terms of engagement.

Depending on the circumstances, failure to carry out this duty could result in the criminal prosecution of the surveyor or the latter's client, as appropriate.

### 3.3 Contractual responsibility

The scope of a surveyor’s contractual responsibility will depend on the client’s specific requirements. It is important that these are made clear in the instructions received and confirmed prior to providing the service. (See subsection 8.4, Briefing for an asbestos survey, for further advice.)

The requirements should be as detailed as possible, so that the expectation of both parties is clear. Where this is not so, case law suggests that the courts will take into account the status of the instructing parties, differentiating between the inexperienced domestic client and the informed commercial manager or owner of a portfolio of properties, and will tend to give greater sway to the former.

RICS has published various guidance notes in this area, including *Building surveys and inspections of commercial and industrial property*, 3rd edition (2010), and *Building Surveys of Residential Property* (2003). These guidance notes set out advice on best practice (see RICS guidance notes at the beginning of this publication for further details of their legal status), while the current edition of the *RICS Valuation Standards – Global and UK*, (the ‘Red Book’) establishes some mandatory requirements for RICS members undertaking valuations.

All of these publications include specific and indirect references to asbestos (see section 5 for relevant extracts from these publications). There can thus be no doubt that, just like other common defects and concerns in buildings, surveyors are expected to have sufficient knowledge of asbestos and its possible implications according to the type of service that they are providing.

Similarly, just as surveyors are reasonably expected to be aware of the peculiar and specific defects associated with a particular form of construction (e.g. timber-framed or system-built buildings), they are also expected to be conversant with the likely uses of asbestos commonly associated with the age and type of properties. It is only the extent of the knowledge reasonably required that is in question. Asbestos awareness training is mandatory for those surveyors who may reasonably be exposed to asbestos in the course of their business activities or where supervising such personnel.

Unless specifically stated, or inferred by the client’s brief or associated correspondence, a surveyor will be judged on whether the latter has acted with the skill and care that could reasonably be expected of a reasonably competent surveyor in similar circumstances offering similar services. If
a surveyor is putting him or herself forward, either directly or indirectly, as an ‘asbestos surveyor’ with specific and special skills in this field, a greater degree of knowledge and expertise on asbestos may reasonably be expected.

In considering this, it is important to remember that the standards of the reasonably competent surveyor are not static, but constantly develop as technical knowledge is enhanced and standards of technical competence are improved.

In determining whether a surveyor has acted with reasonable skill and care, the court will take notice of the circumstances surrounding the original survey, and the knowledge, general guidance and information available to the surveyor at the time the service was provided. The surveyor will then be judged by the comparable standards of a reasonably competent surveyor at that time.

RICS has invested considerable time and effort in organising asbestos road shows and asbestos awareness training throughout the UK, as well as publicising the relevance of asbestos-related matters via its various in-house publications, thus raising the level of general knowledge on this subject. It should be noted that with regard to asbestos, the benchmark will change with the publication of this guidance note.
4 Responsibility of others (employer, landlord, tenant and occupant)

4.1 General

There are many Regulations, both specific and general, that apply to various parties according to the roles they perform and the particular circumstances of each case. Many of the requirements are duplicated; for example, there is a requirement to carry out risk assessments generally under the Management of Health and Safety at Work Regulations 1999, and specifically for ACMs under CAR 2006. In such cases, compliance with the latter will satisfy the requirements of the former, in so far as this relates to the risk from ACMs.

This section summarises the aggregate responsibilities imposed by these numerous Regulations as they apply to employers, landlords, tenants, managers and occupants of buildings. Reference should be made to Appendix 1 for specific details of particular legislation.

Many of the issues arising will have implications for, and will thus be relevant to, several parties concurrently. For brevity and to avoid repetition, not all of the relevant information is repeated for each role in the following subsections. For example, reference to delegating duties to others is referred to in subsection 4.4, Landlord, but could equally apply to subsection 4.5, Tenant. It is therefore necessary to read and understand the responsibilities and issues arising in connection with each role to appreciate the full picture.

4.2 Employer

4.2.1 General

In health and safety Regulations, ‘employer’ is the term used to describe anyone who employs another person to perform a service, including the self-employed.

In the case of asbestos considerations, the term applies to the employer of surveyors who visit or inspect properties containing ACMs and workers who carry out operations that could disturb asbestos. It also includes the employer of those occupants of the premises who may be put at risk by these activities in the workplace.

Every employer has general responsibilities for the health and safety of employees and other persons, which include:

- conducting works in such a way that employees and others are not exposed to health and safety risks (this applies to omissions, i.e. failure to act, as well as actions);
- being aware of hazards to health and safety arising from the work activity or workplace, assessing the risks arising and taking appropriate measures as reasonably practicable to remove, reduce or control these;
- providing information to employees and other persons about the work or workplace that might affect their health and safety; and
- providing appropriate equipment and adequate training for employees.

In addition, an employer may also be a ‘landlord’, ‘tenant’ or ‘managing agent’, in which case the relevant duties described in subsections 4.4–4.6, respectively, will also apply. In particular, CAR imposes specific duties on the employer in respect of asbestos. Table 1 summarises the employer’s responsibilities under CAR.

In essence, it is the employer’s responsibility to know whether or not the workplace contains asbestos, and whether the proposed activity may expose employees or others to asbestos. The employer is also liable to take appropriate measures to prevent, reduce or control the risk arising to the lowest level reasonably practicable in the circumstances.

4.2.2 Employer of chartered or other surveyors

Unless it is a sole trader, a surveying firm will also be an employer with responsibilities for the safety and welfare of employees both permanent and
### Table 1: Employer’s responsibilities under CAR

<table>
<thead>
<tr>
<th>Scope/subject</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Applicability</strong></td>
<td>Applies to all employers and self-employed persons</td>
</tr>
<tr>
<td><strong>Assessment</strong></td>
<td>Prior to any works in premises that might expose employees to asbestos, undertake a suitable and sufficient assessment as to whether asbestos is liable to be present, and if so, its type and condition — the default being to presume that it is present and not chrysotile (white asbestos) alone</td>
</tr>
<tr>
<td><strong>Prevent exposure</strong></td>
<td>Prevent the exposure of employees to asbestos so far as is reasonably practicable</td>
</tr>
<tr>
<td><strong>Reduce exposure</strong></td>
<td>Where unable to prevent, reduce exposure to the lowest level reasonably practicable, without relying on respirators</td>
</tr>
<tr>
<td><strong>Minimise number</strong></td>
<td>Ensure that the number of employees who are exposed is as low as is reasonably practicable</td>
</tr>
<tr>
<td><strong>Control measures</strong></td>
<td>Ensure that no employee is exposed to a concentration of asbestos in inhaled air, which exceeds the ‘control limit’ (see Appendix 1)</td>
</tr>
<tr>
<td><strong>Immediate response</strong></td>
<td>If the control limit is exceeded, inform the employee or the latter’s representative and take immediate steps to remedy the situation</td>
</tr>
<tr>
<td><strong>Protective clothing</strong></td>
<td>Unless the quantity liable to be deposited on clothes is not significant, ensure that adequate and suitable clothing is provided for and worn by employees exposed to, or liable to be exposed to, asbestos, as well as properly maintained and/or disposed of as required</td>
</tr>
<tr>
<td><strong>Emergency measures</strong></td>
<td>Have emergency procedures in place, with information on the emergency arrangements made available to the relevant accident and emergency services (internal and/or external), unless the risk assessment shows that because of the quantity of asbestos present the health risk is only slight</td>
</tr>
<tr>
<td><strong>Prevent/limit spread</strong></td>
<td>Prevent the spread of asbestos from any place where work is under the employer’s control or, where this is not reasonably practicable, reduce the spread to the lowest level reasonably practicable</td>
</tr>
<tr>
<td><strong>Monitor exposure</strong></td>
<td>If the exposure to asbestos is liable to exceed the control limit, monitor the exposure of employees by air monitoring at regular intervals and whenever a change occurs that may affect that exposure, and keep suitable records</td>
</tr>
<tr>
<td><strong>Information, instruction and training</strong></td>
<td>Give adequate information, instruction and training to all employees liable to be exposed to asbestos, as well as to their supervisors (asbestos awareness training is mandatory where there is a risk that employees will be exposed to asbestos)</td>
</tr>
<tr>
<td><strong>Medical surveillance</strong></td>
<td>Where appropriate, ensure employees who are exposed to asbestos are subject to adequate health surveillance and maintain their health record (see Appendix 3)</td>
</tr>
</tbody>
</table>

Temporary (see Table 2). In addition, the Regulations do not make any distinction between a self-employed person and an employer or employee. For the purposes of this subsection, only employees who inspect buildings or conduct other services that could expose them to asbestos are
### Table 2: Employer's mandatory responsibilities concerning exposure to asbestos while inspecting or administering works

<table>
<thead>
<tr>
<th>Scope/subject</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Applicability</strong></td>
<td>Applies to any work involving exposure to any form of asbestos – this includes air monitoring, the collection and analysis of bulk samples and building or land inspections for management, condition, valuation or similar purposes, but not all of the Regulations apply (see Appendices 1 and 10, under the heading ‘Regulation 3(2) exceptions’)</td>
</tr>
<tr>
<td><strong>Risk assessment</strong></td>
<td>Prior to starting work, assess the likely level of risk and the nature and degree of exposure, and produce a plan to prevent or control this</td>
</tr>
<tr>
<td><strong>Training</strong></td>
<td>Inform and instruct employees about the risks that they may face, the appropriate control measures and their use of personal protective equipment (PPE) provided by the employer (asbestos awareness training is mandatory, with specific mention of ‘construction professionals’ in the Regulations)</td>
</tr>
<tr>
<td><strong>Equipment</strong></td>
<td>Provide suitable PPE and ensure that it is properly used and maintained (including testing of respirators)</td>
</tr>
<tr>
<td><strong>Monitor</strong></td>
<td>Monitor and record exposure where appropriate</td>
</tr>
<tr>
<td><strong>Health records and medical surveillance</strong></td>
<td>Where exposure to respirable fibres exceeds stated limits, ensure regular medical surveillance is conducted, with records to be kept for at least 40 years</td>
</tr>
</tbody>
</table>

considered. The responsibilities associated with risks in the workplace (including offices) apply equally.

### 4.2.3 Employer of unlicensed persons carrying out asbestos works

Major works involving asbestos insulation, coating or insulation board, or the clearance of contaminated land may only be carried out or managed by a person or organisation holding a licence issued by the HSE under Regulation 8 of CAR 2006 (see Table 3).

This guidance note is not intended for employers of licensed asbestos removal contractors, who are expected to be familiar with all the Regulations and controls that apply to their specialist work.

It is instead designed for the building owner or occupant arranging for employees to carry out general low-risk maintenance, building works or other activities involving ACMs.

Those activities for which an asbestos licence is not needed are set out in paragraph 2 of Regulation 3. They are referred to in this guidance note and generally referred to as the ‘Regulation 3(2) exceptions’ (see Appendices 1 and 10).

### 4.3 Dutyholder for non-domestic premises

Regulation 4(1) of CAR was first introduced as part of CAWR and, under the transitional arrangements, came into force on 21 May 2004. It has subsequently been incorporated unchanged into CAR 2006.

The ‘dutyholder’ responsible for the management of asbestos in non-domestic premises, as set out in Regulation 4(1) of CAR 2006, is ‘every person who, by virtue of a contract or tenancy, has an obligation for the repair or maintenance of those premises, or, in the absence of such, the control of those premises or access thereto or egress there from’.

This includes those persons with any extent of responsibility for the maintenance or control of the whole, or part of the premises.

Parties who may be dutyholders include landlords, tenants, occupants (subtenants or licensees), managing agents and managing contractors. Where there is more than one dutyholder, the relative contribution required from each party in order to comply with the statutory duty will be
shared according to the nature and extent of the contractual or tenancy repair obligation or the physical control of each.

This Regulation does not apply to domestic premises (i.e. private dwellings). However, legal precedents have established that common parts of flats (in housing developments and blocks of flats) are not part of private dwellings and are thus classified as ‘non-domestic’. Regulation 4 therefore also applies to them. It does not, however, apply to the individual flats or houses; kitchens, bathrooms or other rooms within a private residence that are shared by more than one household; or to communal rooms within sheltered accommodation.

Typical examples of common parts are: entrance foyers; corridors; lifts, staircases and their enclosures and lobbies; common toilets; boiler rooms; roof spaces; plant rooms; communal services, risers and ducts; external outhouses; canopies; and gardens and yards. (See Appendix 5 for a flowchart to help identify the dutyholder in a variety of types of premises, tenures and modes of occupation, and Appendix 6 for a table showing whether residential premises are likely to be classified as domestic or non-domestic for the purposes of Regulation 4).

For ease of reference, the duties of Regulation 4 are summarised in Table 4. (For full details, see Appendix 1.)

### 4.4 Landlord

Landlords may also be employers of caretakers, concierges, security staff and in-house maintenance crews who work in their premises, in
Table 4: Duties of Regulation 4 of CAR

<table>
<thead>
<tr>
<th>Scope/subject</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-operate</td>
<td>Take reasonable measures to enable other employers (tenants, other occupants and neighbours) to fulfil their duties</td>
</tr>
<tr>
<td>Locate ACMs</td>
<td>Take reasonable steps to locate materials likely to contain asbestos and assess their condition; presume that materials contain asbestos, unless there is strong evidence to the contrary; and keep an up-to-date written record of the location, type (where known), form and condition of any ACMs</td>
</tr>
<tr>
<td>Risk assessment</td>
<td>Assess the risk of exposure from known and assumed ACMs</td>
</tr>
<tr>
<td>Prepare a management plan</td>
<td>Prepare and implement a written plan to manage these risks (see section 10 for details and advice on the management plan)</td>
</tr>
<tr>
<td>Review and monitor</td>
<td>Regularly review and monitor the plan to ensure that it is current and is being implemented, and record the findings and actions</td>
</tr>
<tr>
<td>Provide information to others</td>
<td>Give necessary information to anyone who is liable to work on or disturb the ACMs, as well as to the emergency services necesssary to enable them to comply with their duties under CAR to manage asbestos (see subsection 4.7).</td>
</tr>
</tbody>
</table>

which case the duties of the ‘employer’ will also apply (see subsection 4.2).

In addition, if landlords own non-domestic premises for which they are responsible for maintenance or repair, or over which they exert control to any extent, then under CAR they also have specific duties in respect of the management of ACMs (see subsection 4.3, Dutyholder for non-domestic premises). However, the landlord can transfer the responsibility for maintenance and repair and/or the control of premises, and the CAR duties that go with this, to another party, although the landlord will still hold some legal responsibility (see subsection 4.8, Delegation). This can be arranged by entering into an appropriate contract that appoints a managing agent or a contractor to take on these responsibilities.

In order for an agent or contractor to take on and share legal responsibility, the contract must give them unfettered decision-making powers. The agent or contractor must also be given financial control to authorise the necessary expenditure to arrange asbestos surveys and to produce and instigate a plan to manage asbestos (see subsections 4.6 and 4.8.)

Irrespective of any responsibility for maintenance, repair or control of the premises, the landlord also has a duty to co-operate with other dutyholders, including tenants and occupants, as far as is necessary to enable them to comply with their duties under CAR to manage asbestos (see subsection 4.7).

4.5 Tenant

Tenants may also be employers, in which case the duties of the employer outlined in subsection 4.2 will also apply. In addition, if tenants rent or occupy non-domestic premises for which they are responsible for maintenance or repair, or over which they exert control to any extent, then under CAR they also have specific duties in respect of the management of ACMs in the parts for which they are responsible (see subsection 4.3).

Under the same conditions stated in subsection 4.4, the tenant has a duty to co-operate with other dutyholders, including the landlord and other tenants, to enable them to comply with their duties under CAR to manage asbestos (see subsection 4.7). Similarly, if the tenant is a dutyholder then all other persons have a duty to co-operate with the tenant. This encompasses the landlord, the managing agent, other occupants and neighbours, including those who designed or built the premises or who have information that would help to locate ACMs or confirm their absence.

These duties are identical to those of the landlord,
as set out previously in subsection 4.4. The extent of responsibility will be determined by the covenants contained in the lease or other form of contract or, in the absence or lack of clarity of these, by the actual circumstances on site – i.e. those parts over which the tenant has actual physical control. As the final resort, the courts will allocate responsibility as they deem appropriate. However, it is strongly recommended that such issues are resolved and formally agreed with all parties (the other occupants and the landlord) at the earliest opportunity, to avoid recourse to the courts.

It may also be advantageous to arrange for an assessment of ACMs in the entire building, irrespective of individual control, and to produce a single, comprehensive management plan, or at least the asbestos register upon which decisions will be made. If this course of action is chosen, care will need to be taken to allocate responsibility for the distribution, safekeeping and updating of such documentation.

### 4.6 Managing agent

Very often, as in the case of an absentee landlord, the physical and financial control of premises may lie in the hands of a managing agent or facilities manager. The managing agent has a significant role and may be acting as the appointed ‘agent’ of the landlord, thus assuming the role of dutyholder and the legal responsibilities to arrange for the management of ACMs in the building. The managing agent is also obliged to co-operate with the tenants and other occupants in the fulfilment of their duties (see subsection 4.5).

The extent of the managing agent’s control and ability to finance or instruct the preparation of an asbestos register and/or a management plan will depend on the terms of contract. As a minimum the agent should inform the landlord of its duties under CAR and advise as to how these may be complied with and the penalties and potential consequences of failure to do so (see subsection 4.8).

### 4.7 Everyone: duty to co-operate

Regulation 4(2) of CAR 2006 gives ‘every person’ a duty to co-operate so far as is necessary to enable the dutyholder to comply with the duties specified under this Regulation.

#### 4.7.1 Possible parties

Possible parties include the landlord, tenants, occupants (members of staff and safety representatives), managing agent, contractors, designers, and construction design and management co-ordinators (CDMCs) of building works in non-domestic premises. Under the scenarios envisaged by L127 ACOP The management of asbestos in non-domestic premises (HSE, 2006) to the Regulation, possible parties are:

- anyone with relevant information on the presence (or absence) of asbestos; and
- anyone who controls parts of the premises to which access will be necessary to facilitate the management of asbestos (i.e. its inspection, control, removal, treatment or monitoring).

#### 4.7.2 Costs

Co-operation does not extend to paying the whole, or even part, of the costs associated with the management of the risks of asbestos by the dutyholder(s), who must meet these personally.

Guidance in the L127 ACOP states in paragraph 35 that ‘architects, surveyors or building contractors who were involved in the construction or maintenance of the building [and who] may also have such information would be expected to make this available at a justifiable and reasonable cost’. Presumably this would be limited to the costs of printing, administration and delivery.

#### 4.7.3 Extent of assistance

The duty to co-operate is not subject to any limitation or exclusion. It is not tempered by reasonableness or ‘reasonable practicability’, and there is thus a mandatory obligation to do whatever is necessary to co-operate with the dutyholder. For example, a landlord has a lease covenant that, in the event of the default of the tenant, gives the landlord the right to enter and carry out works to ensure compliance with statutory provisions. In this case, the landlord would, as a last resort, be personally obliged to pursue this option and claim back the costs as part of the service charges.

Short-lease tenants, licensees or other occupants who control access, but do not have any contractual maintenance liabilities, would be required to permit the landlord reasonable access to fulfil his or her duties.
4.7.4 General duty of co-operation

Regulation 11 of the *Management of Health and Safety at Work Regulations* 1999 requires employers who share a workplace to co-operate in order to comply with the relevant statutory provisions.

4.8 Delegation

As a general point of health and safety law, legal responsibility cannot be delegated. Therefore, if a dutyholder – for example, a landlord with full repairing obligations – employs a managing agent or a contractor to take over this contractual responsibility, both parties will be deemed to be the dutyholders, and either or both can be prosecuted for contravention of any of the provisions of CAR.

For a successful defence, according to health and safety Regulations, the person charged would have to prove that the commission of the offence was due to the act or default of another person, not being one of his or her employees, and that the person charged took all reasonable precautions and exercised all due diligence to avoid the commission of the offence.

In addition, in the event of any criminal proceedings, the defendant must, within a specified period of time, serve a written notice identifying (or assisting in the identification of) the dutyholder(s) responsible. In the case of England and Wales, this is seven clear days before the court hearing. In Scotland, it is the same period before the intermediate diet, or the first diet, where the proceedings are summary or solemn, respectively.

Of course, in this case the landlord would need to have determined that the appointed party was competent and properly resourced to fulfil the duty. The same would apply if a tenant appointed another party to undertake inspections of the premises and to identify materials containing asbestos.

To avoid any confusion or misunderstanding about the extent of duties, a managing agent or contractor who is unable or unwilling to take on such onerous statutory responsibilities should ensure that the contract specifically excludes any ‘duty to manage asbestos’ responsibilities.

If a person intends to employ others on the basis that they are not responsible for their health and safety, then legal advice should be sought before proceeding.
5 Services offered by surveyors

5.1 General

Surveyors provide a wide range of services, and the type, extent and scope of inspection and investigation required for each varies accordingly. For example, the scope of service required for a valuation is very different from that needed for a building acquisition survey.

In addition, the scope of inspection will vary according to the specific requirements, as set out in the terms of engagement agreed in each case. These may range from a general overview of major significant matters – for example, noting the presence of insect-infestation of timber, or its decay, as part of a wider, all-encompassing survey of a building – to a much more detailed analysis of this particular issue. An example of this would be to establish the detail required for the preparation of a specification for remedial treatment or management of the timber problems.

In both cases, the element concerned is the same – timber components – but the depth of detail required is very different and is what actually dictates the nature, duration and extent of the inspection or investigation required. Thus there are elements that are only incidental and form part of a wider picture, and those that are specific and confined solely to a particular subject or a limited number of subjects. In both cases the degree of knowledge, experience and training required by the surveyor may also be very different, and this will be reflected in the performance of the services that can be reasonably expected from that surveyor.

The same consideration applies equally to asbestos. The expectations of an asbestos surveyor commissioned for a project that is only and specifically concerned with asbestos are different from those reasonably required of a surveyor obliged to comment on asbestos incidentally among numerous other matters.

For the purposes of this guidance note, and to differentiate between these two levels of service, it is presumed that the ‘incidental’ consideration refers to asbestos as only one part of a building survey or valuation and is undertaken by a surveyor or valuer; and the second ‘specific’ type refers to an asbestos survey, which is conducted by an asbestos surveyor.

The term ‘asbestos surveyor’ is not widely used at present, but it is a useful way of distinguishing the levels of expertise, knowledge and experience required for this specialism from the general knowledge of all matters affecting buildings that is required of the ‘surveyor’. The differences between these terms are discussed in subsection 1.6.

The following subsections address the possible implications of asbestos for the various services provided by surveyors. The subsections are named after each of these services and contain examples of typical situations, which are used to illustrate the relevance for a particular service. However, the situations are not unique to any one service and are often equally appropriate for other types of service. It is therefore important that service areas are not viewed in isolation, but are read in conjunction with all of the others and with the general advice given throughout this guidance note.

5.2 Auctions and tenders

Auctioneers should be aware of the possibility that buildings, land and other items which they sell or auction on behalf of others may contain asbestos. In addition, they should be aware of the risks associated with its inadvertent disturbance or uncontrolled removal.

External lagging or insulation should be obvious, however, old industrial plant and machinery, particularly boilers, pipes and calorifiers, as well as components that could be ‘hidden’ (e.g. in the form of gaskets, washers or as ‘flash arresters’ in electrical fuse boxes), may also contain asbestos.

Plant and equipment containing asbestos can only be sold if either:

- it is fixed within the building and is being sold as part of that building in situ; or
- it is part of a vehicle or mobile plant, for example, a tractor or crane.
This second condition, however, is covered by Registration, Evaluation, Authorisation and restriction of Chemicals (REACH) – an EU Regulation which came into force on 1 June 2007 and replaced a number of European Directives and Regulations with a single system. A good case would also have to be made for HSE accept it and issue an Exemption Certificate (e.g. Heritage Railways).

Under Regulation 4 of CAR, the seller must inform the buyer of the presence, or reasonably presumed presence, of asbestos and its condition as the buyer is liable to disturb it. Plant and equipment is sometimes sold with a condition attached that it is removed and dismantled by the purchaser.

There is a danger that without specific sale conditions, this work may be carried out in a hurry and illegally by untrained, unskilled workers, without the use of appropriate personal protective equipment (PPE) or controls. Such workers may be interested only in preserving the plant with value (possibly only scrap value), which could result in the careless stripping and discarding of unwanted insulation and cladding. Not only is this illegal, but the uncontrolled removal of plant, equipment and components containing asbestos can result in the contamination of adjacent plant, surfaces, services or even entire buildings. The disruption involved in the specialised decontamination subsequently needed may thus far exceed the proceeds of the sale of the plant.

Depending on the terms of engagement and the particular circumstances, including the degree to which they have control over the removal operations, auctioneers may be liable for this contamination. In any case, in the previous example, the consequences could seriously damage professional reputations and careers.

Just as it is now common practice to refuse to sell electrical goods without first obtaining a test certificate, it is prudent to refuse to sell products that are likely to contain significant amounts of asbestos without considering the risk to:

- members of the general public attending the sale;
- auctioneering staff (inspecting, valuing, displaying and delivering the products);
- potential purchasers examining the items;
- purchasers or their contractors when removing or dismantling items; and
- other premises or products, through contamination (see also subsection 5.6, Fine arts and antiques).

5.3 Reinstatement cost assessments

Surveyors undertaking reinstatement cost assessments should be aware of the following considerations in respect of damage (caused by fire or otherwise) to buildings containing asbestos components and materials.

If it is necessary to replace damaged components that contain asbestos, for example, corrugated asbestos cement sheeting to the walls and roofs of industrial buildings, surveyors should note that since 1999 it has been illegal to purchase and use material containing any form of asbestos. (There are a few exceptions, such as specialist filters used in laboratories and scientific institutions, but generally these are outside of the scope of the majority of buildings that surveyors regularly cover.)

Asbestos materials have numerous qualities and the original components may have been providing a number of different and separate functions, such as fire protection and thermal and sound insulation. It may be difficult to find a suitable replacement material with all of the required qualities, and a combination of various materials or components may therefore be necessary.

However, substitute materials may lack the strength and qualities of the original components. For example, some mineral fibre (asbestos-free) roof cladding is up to 15 per cent weaker than the original asbestos. The supporting structure may therefore need to be adapted or redesigned to account for this. There may also be difficulty in finding compatible replacement materials, such as matching profiles of corrugated cladding or sheeting, although manufacturers have developed replacements for the more common types.

As well as considerations of replacement, there is the risk of the potential contamination of neighbouring buildings and land during a fire or explosion. Research by the Health Protection Agency concludes that generally the health risks to the general public arising from fires are likely to be minimal. The following are some of the factors that
help to reduce the risks from exposure:

- fibres can become trapped in larger sections of material, preventing them from being released into the environment;
- respirable fibres are only a small part of the total released;
- some fibres may actually disintegrate due to very high temperatures;
- the length of exposure to the asbestos will usually be short; and
- the weather conditions will affect local fibre concentrations.

The situation may be far worse in the event of a general explosion. This is particularly the case with asbestos cement products, which have been known to explode in serious fires due to the intense temperatures generated. A blast could spread asbestos products, which are usually relatively lightweight, over a large area in the form of contaminating rubble and debris. This may then need to be cleaned or disposed of as contaminated waste, at considerably greater expense than untainted material that could have been recycled. This was possible, for example, in the aftermath of the 9/11 tragedy, regarding the collapse of the Twin Towers of the World Trade Centre in New York in 2001.

Because of their relative cheapness and durability, asbestos materials were extensively used in low-cost industrial and agricultural buildings. The cost of treating, decontaminating and clearing up asbestos after a fire or other disaster in such premises could be substantial and could represent a significant proportion of the cost of reinstating the property.

If this consideration is outside of the expertise of the valuer or scope of the cost assessment, then it should be clearly listed as a limitation in any accompanying documentation.

### 5.4 Historic and listed buildings

It is highly unlikely that buildings constructed prior to 1800 will have had asbestos materials incorporated as part of their original design. However, ACMs may have been added during their lifetime, as part of structural alterations, general refurbishment or the replacement of services installations, in the form of fire protection or thermal or sound insulation. Consequently, unless it can be guaranteed that the historic building is entirely original, it cannot be assumed that it is free of asbestos, and care should be taken when inspecting, repairing, altering or demolishing it.

Where it is known that ACMs have previously been removed, it should not be assumed that all materials have been addressed, or that the work was undertaken properly. Surveyors should be aware of the potential of some concealed debris remaining, particularly where sprayed insulation coatings are involved.

### 5.5 Agricultural and rural undertakings

As asbestos was a cheap, durable and readily available material, it was frequently used in the past in all types of agricultural and rural buildings. The most common form was asbestos cement products, owing to its water-resistant quality and its ability to be moulded into various profiles as wall cladding, roof sheeting, pipes and gutters, and other rainwater goods, cisterns and tanks.

Other forms of asbestos may have been incorporated into these buildings as well, perhaps as internal linings, pipe insulation or lagging. However, these are not such common forms, as they were not suitable for the main use for this economic sector, which was to serve as a cheap, waterproof external enclosure that could be quickly and easily erected, altered and dismantled. In poorly ventilated buildings, board materials can degrade due to condensation, softening the cement matrix and releasing the asbestos fibres.

While the material is intact and in good condition, the asbestos fibres are safe, as they are bound into and sealed by the cement matrix. The problem arises when this matrix is disturbed, whether by impact damage, fire or natural degradation due to age and exposure, with the latter accelerated by moss and lichen growth. Due to its vulnerability to impact damage, asbestos cement waste and debris is commonplace around farm buildings. The surveyor should also be aware of the possibility of the disposal of ACMs in the surrounding land, either buried in the ground or as hardcore for outbuildings or roads.

Very often, the enclosures are not used for human occupation, but as grain stores or animal
shelters. Such outbuildings may be well ventilated, dispersing and diluting any airborne asbestos fibres. Thus the health risks to workers are generally minimal, except when carrying out works to the asbestos materials during maintenance, repair, replacement, alteration or demolition. However, certain areas such as dairies, workshops and packing sites often have more intense occupation, and this should be reflected in the asbestos management plan.

A risk assessment must be carried out in each case, but in the case of asbestos cement materials, where the asbestos fibres are firmly linked in a matrix, it is likely that there will not be a requirement for employing licensed asbestos contractors (see Appendix 1, section 2.4, Regulation 3(2) exceptions). Notwithstanding this, the persons carrying out such work must be asbestos aware and competent (and must know the risks and be properly equipped). Certain basic health and safety precautions must be taken in every case.

The fragile nature of asbestos cement sheets, which become more brittle with age, means that the risk of injury from falls when working on roofs or at height is often far greater and more immediate than that of contracting an asbestos-related disease. The control measures should therefore be commensurate with the risks arising.

The Rural and Industrial Design and Building Association (RIDBA) has published an advice note entitled Working with Asbestos Cement Products (2006) which gives guidance on this matter. (See also subsections 5.3, Reinstatement cost assessments, and 5.10, Dilapidations, leases and agricultural tenancies.)

5.6 Fine arts and antiques

Surveyors involved in such aesthetic pursuits as those associated with fine arts and antiques may believe that asbestos is irrelevant to their activities – which is often the case. There are, however, circumstances when the ability to recognise materials that might contain asbestos, and an awareness of the health risks arising, may be essential to their own well-being, or that of others.

For example, it may be necessary to inspect or search for a work of art in an attic, undercroft, store or cellar that could be heavily contaminated by deteriorating or damaged ACMs, perhaps in the form of pipe or boiler lagging. In addition, the physical removal or movement of an item for sale may entail the disturbance of an adjacent ACM. In such case, there may be a need to enlarge an opening in a partition or ceiling to remove a work of art, or to dismantle ornate panelling, thereby damaging or leaving asbestos materials exposed.

Although not commonly encountered, it should also be appreciated that asbestos was on occasion woven into materials or fabrics, e.g. ancient funeral shrouds.

In order to meet the responsibilities as an employer, it is an essential legal requirement to have a basic awareness of asbestos, including its various forms and likely locations, and to know when to seek specialist advice. (See also subsections 5.2, Auctions and tenders, and 5.4, Historic and listed buildings.)

5.7 Quantity surveyor/cost consultant

The role of the quantity surveyor varies considerably and the legal responsibility for asbestos, like most other health and safety hazards, depends to a large degree on the surveyor’s autonomy with regard to design and contractual decisions.

Often, a quantity surveyor will only be interpreting, refining or devising a way of measuring the requirements of other designers, such as architects, service engineers or even the client. On some occasions, a quantity surveyor may be choosing materials, dictating methods and sequences of working, or selecting and appointing contractors or other specialists, perhaps in the role of project manager or as the employer’s agent. In both cases, the surveyor takes on the role and responsibilities of a designer and, in the latter case, possibly those of the client as well.

The issues for which a knowledge and understanding of asbestos would be relevant include the following:

- personal safety, when visiting properties containing unsealed or damaged asbestos for the purposes of estimation, measurement or contract administration;
- the financial implications of works involving the disturbance, treatment or removal of asbestos;
- programming issues;
the preparation and review of tenders – i.e. the level of competence required of removal contractors, asbestos surveyors and other specialists, and the factors to be taken into account in their assessment and appointment;
assessments of reinstatement costs, and works to fire-damaged premises; and
advice on tax relief for the costs of remediation of contamination (see subsection 5.12, Tax advice).

Since 1999 it has been illegal to specify the use of materials that contain any form of asbestos, except in very few and specialist circumstances, such as for highly specialist filters for which a suitable alternative is not yet available.

5.8 Valuations

Where a valuation is provided the valuer must comply with the current edition of the Red Book. In particular, the valuer will include in the terms of engagement the extent to which investigations will be carried out and whether those investigations may be limited or assumptions are made.

Subject to any specific requirement in the UK valuation standards (UKVS) within the Red Book, this subsection gives guidance on the matters relating to asbestos of which the valuer should be aware, bearing in mind that the valuer is not expected to possess specialist knowledge.

Asbestos is a common hazard (irrespective of the actual risk) and, depending on the circumstances, its presence or condition can materially affect value. As a result, it cannot be ignored but to the extent to which it should be commented on is not as straightforward.

While asbestos may not constitute an active risk to health in situ, the costs of its treatment or removal can be considerable. In addition, the cost of building alterations or maintenance that involve the disturbance of asbestos will be increased. Accordingly, knowledge that asbestos is present can adversely affect the value of an interest in a property. The actual effect on the value of the premises as an investment will vary according to the amount and type of asbestos, its condition and location, the ease with which it can be treated (or removed if necessary), the size and type of the building and its current or intended use. The presence of a small amount of asbestos in good condition should have only a negligible or no effect on the value of a property.

When providing a valuation, the asbestos element is one of a number of matters to be considered. The surveyor therefore cannot be expected to devote the same degree of time, attention and detail to this single topic as in a specific, stand-alone asbestos survey (see subsection 1.6).

If, in rare cases, the valuer considers that the presence of asbestos is an overriding consideration, it would be appropriate to decline to provide a valuation until a specialist asbestos report has been obtained. Another option would be to agree that the valuation will be qualified with a clear and unequivocal statement that asbestos is present and that a specialist report will be obtained. It is more usual for the presence of asbestos to be only one of a number of matters to be considered, any one of which may affect the valuation.

The following enquiries are recommended during an inspection for the valuation:

- Where a building was built after 2000, in the absence of any information to the contrary, it is reasonable to conclude that it does not contain any ACMs and no further enquiries are required.
- In buildings built prior to 2000, for the valuer’s own health and safety and as part of the general risk assessment by the valuer’s employer, reasonable enquiries of the person in control of the property should be made as to whether the building is known or suspected of containing asbestos. If so, the details of significant risks arising, and of any procedures in place to control these (e.g. site rules) that need to be complied with, should be requested.
- In non-domestic buildings, the dutyholder is legally required to have a written plan for managing all known or suspected ACMs. In its absence, or as part of the plan, there may be survey reports and an asbestos register.
- The CAR 2006 and the Regulation 4 duty to manage asbestos do not apply to work for domestic clients or to domestic properties, respectively. Therefore in the majority of cases these statutory documents will not be available to surveyors inspecting domestic residential buildings. (These exclusions are not absolute in all circumstances, and reference should be
made to the appropriate Regulations for precise details, if required.)

• Depending on the circumstances, for example if a plan that is made available includes a succinct summary of the ACMs with significant risks, it may be appropriate for the surveyor to peruse the document personally. In such case, important considerations include the currency, the completeness of the areas inspected and the basis on which the information has been obtained, e.g. type of asbestos survey or other means. In many cases the sheer size and complexity of the document will preclude this. However, like the management of any other significant physical hazard, the person in control of the premises has the responsibility for ensuring that visitors are made aware of and safeguarded from them.

Like other important documents such as fire assessments and Building Regulation certificates, the availability or absence of these asbestos documents should be noted, including any reasonable inference that may be drawn. Where appropriate, a recommendation should be made for the client’s legal advisers formally to check their existence and/or validity, as appropriate. However, it is reasonable for the valuer to rely on the occupant’s assurance that the information is current and accurate, where there is no obvious physical evidence to the contrary noted during the visit.

Inspection of the premises should be to the extent dictated by the commission, and as agreed with and confirmed to the client. If, during the inspection, the surveyor notes the presence of asbestos that, in the surveyor’s opinion, constitutes a serious and immediate risk to health, the person in control of the premises (which may include the householder or, in the case of vacant properties, the estate agent or property manager) should be informed as soon as possible, and should be given advice on the emergency measures required. This should be confirmed in the report, together with details of the person informed, and a note of the date and time where appropriate. There may, however, be issues of client confidentiality or sensitivity to be considered (see subsection 3.2, Statutory responsibility).

Any assumptions made should be recorded. Where appropriate, the record should clarify the basis of these assumptions – for example, from details obtained from reports, documents or other information supplied by others – or confirmed by the surveyor during the inspection.

5.9 Building surveys

The term ‘building surveys’ is often used generically and may be interpreted in a variety of ways by different parties. It is therefore essential that the context, including scope and limitations, is made clear from the outset when agreeing the terms of engagement for a particular purpose.

A building survey is very different to an asbestos survey that has the sole aim of identifying and reporting on materials containing asbestos. For the latter, the scope and depth of investigation and comment on asbestos is much greater, which is outlined in section 8.

RICS has published guidance notes to clarify these issues for building surveys of particular types of premises, and for particular purposes. These guidance notes include Building surveys and technical due diligence of commercial property (2010) and Building Surveys of Residential Property (2004). The Red Book and the RICS HomeBuyer Report practice note, 4th edition (2010), may also be of help.

RICS members are, of course, required to be familiar with RICS’ official minimum requirements for each of the services that they provide. The services provided by members vary regarding the way in which asbestos is addressed, both specifically and by implication as a deleterious or significant material. The services also have subtle differences in terms of the scale of investigation that it is usually deemed appropriate to undertake. It is not within the scope of this document to consider these differences in depth. Moreover, such RICS publications are regularly reviewed and the relevant parts may therefore be changed.

The matters of significance, which may vary in each case, are:

• applicability (e.g. to England and Wales, Scotland or the UK as a whole);
• specific references to asbestos and quoted examples;
• indirect references to asbestos, for instance, as a contaminant, a deleterious material or a pollutant;
• tests of competence and the employment of specialists;
• areas or elements that are routinely required to be inspected or not (e.g. roof spaces, floor voids, and the common parts of leasehold property);
• services installations;
• land contamination; and
• sources of information (e.g. the asbestos register, management plan or health and safety file).

It is likely that the scope of inspection for a building survey will be greater than that for a valuation (see subsection 5.8), potentially involving a degree of opening up of access covers or floor voids. Therefore the degree of investigation and enquiry should reflect the degree of risk entailed.

5.10 Dilapidations, leases and agricultural tenancies

5.10.1 General

A schedule of dilapidations is a document that records breaches of contract in relation to building fabric and service installations. A measurable breach must exist before a tenant has a liability to pay damages to the landlord, or vice versa.

Although many buildings have asbestos in their fabric or service installations, it is currently extremely rare for asbestos to be specifically addressed in leases or licences. It is therefore necessary to consider it in the generality of other building components that are usually less harmful and more easily repaired or replaced.

5.10.2 Dutyholder

In non-domestic premises, the dutyholder is the person or organisation named in the lease or licence as responsible for the maintenance of the demise. If this is not clear, it is the person(s) who controls access to or egress from the demise.

The dutyholder does not have to be resident or occupy the premises. Unless the repairing covenants are back to back, the head tenant may be the dutyholder for part of a building occupied by a sub-tenant.

When a lease or licence ends or is terminated for any reason then the role of the dutyholder will revert to the person or organisation retaining responsibility for, or physically in control of, the building. In some cases, a head tenant or landlord may suddenly be in this position, with the duty to manage asbestos, albeit possibly only for a short period while a new occupant is sought.

The duty is not subject to any qualification such as reasonably practicability, but the assessment as to whether asbestos is, or is liable to be, present is tempered by the requirement that the steps taken are ‘reasonable in the circumstances’. Thus if the property is vacant and there are adequate controls in place to protect visitors and security guards, it may be reasonable to make widespread presumptions without sampling to prove or disprove them.

5.10.3 Presumptions

In certain circumstances, the risk assessment for the production of the management plan may be based on the default position that a material or component is deemed to contain asbestos until proven otherwise and, furthermore, that it is the most dangerous type.

This approach should not be taken without careful consideration, as it may be reasonable for the advisers of another party (e.g. incoming tenant or a repossessing landlord) to rely on these presumptions in their assessment of the nature and costs any repair works or reinstatement that is justified (see subsection 2.3, Commercial/economic loss). Thus, for example, where the composition of a damaged board-like material is not known but in the management plan has previously been presumed to contain asbestos, rather than repairing this the dilapidations schedule may require its removal and disposal by a licensed contractor and its replacement with a substitute board.

5.10.4 Repairing covenants

In the case of any repairing covenant, there must be some form of deterioration since the contract was entered into because a breach of covenant exists. The mere presence of asbestos will not constitute a breach of covenant, and there is no contractual obligation to repair or remove it unless it has been damaged or has deteriorated.

With regard to deterioration, it is established law that in order for there to be a breach of covenant, the deterioration must be greater than
that usually expected for that type of building over the term of the lease – that is, below the standard contemplated by the covenant. This may be relevant when considering external asbestos cement cladding or roofing, which degrades naturally as a combined result of age and exposure.

Where actionable damage has occurred, the landlord, tenant and professional advisers should be aware of the potential additional complications and costs that ACMs can create. For example, the use of any material containing blue, brown or white asbestos is illegal, with these types having been banned in 1985, 1992 and 1999, respectively. Therefore, it will not be possible to replace damaged ACMs like for like, and a suitable substitute material or component will be required.

In some cases, it may not be possible to replace all of the properties of the ACM using a single substitute material or component. Instead, a combination of materials or components may be required, with the supporting structure adapted to suit this.

Unless the works are subject to the Regulation 3(2) exceptions, they must be carried out by a licensed asbestos contractor. A detailed explanation of asbestos licensing requirements is given in Appendix 1. Even when there is no requirement for the use of a licensed asbestos contractor, the persons carrying out the work must be competent and properly equipped for such activities.

5.10.5 Compliance with statutory requirements

Many leases include a covenant requiring compliance with the current statutory requirements. Failure to comply with CAR is a criminal offence. In addition, the inclusion of a parallel contractual requirement also provides the opportunity for civil action, to preserve the party’s interest or obtain financial recompense in the event of any breach of a lease covenant.

There are two key areas of concern with regard to asbestos: first, ensuring that works involving ACMs are properly carried out by competent persons, using appropriate controls; and second, ensuring that any asbestos that remains is properly managed.

In the former case, the danger is that an incompetent person may contaminate parts or even the whole of a building and/or neighbouring premises, with all of the risks to health and additional financial burden that this could entail. An example of this would be the contamination of common service risers in a multi-let office building during the refurbishment of a tenanted area in the top storey.

In the case of the statutory duty to manage asbestos, Regulation 4 of CAR only applies to non-domestic premises. However, this also includes the common parts of housing developments and blocks of flats. Appendix 1 gives details of the Regulation, including how to identify the dutyholder(s), and Appendix 6 has a chart showing whether residential premises are likely to be classified as domestic or non-domestic for the purposes of Regulation 4.

Essentially, the Regulation requires the dutyholder (see subsection 5.10.2 for definition) to make an assessment of any ACMs in the parts of the demise for which the dutyholder is responsible, and to produce and implement a plan to manage these. The arrangements of the plan must be periodically reviewed and the condition of any remaining ACMs monitored.

The significance of the plan for potential purchasers or lessees is that it demonstrates that the content of asbestos has been identified – or at the least ‘presumed’. They are thus not likely to come across asbestos unexpectedly and be faced with unplanned expenditure in the future, except for any that is hidden from view and requires invasive investigation to reveal.

This has to be tempered with the appreciation that, without substantial dismantling and disturbance that is usually unacceptable to the occupants or owner, it is often not possible to discover all ACMs. It is thus common for there to be grey areas, such as those hidden in linings to service ducts, chimneys and in linings behind shop fittings, where the presence of asbestos or otherwise cannot reasonably be confirmed, perhaps until dismantling or demolition takes place. Its presence must therefore be presumed and managed accordingly until proven one way or the other.

The management plan has to be in writing, but its form is not prescribed. There is no requirement to commission an asbestos surveyor or other specialist to carry out any type of asbestos survey.
Although unadvisable, the plan can be based entirely on the presumption that all components or materials which are obviously not asbestos (such as concrete, stone, wood or glass) contain ACMs and are managed. This approach is not encouraged by HSE or RICS and is not recommended as a substitute for a proper asbestos survey as a basis for an asbestos management plan. Notwithstanding this, the management plan and its associated asbestos records is an important legal document and may be expensive to create in the event of its omission, or to reproduce if lost.

In extreme situations and where the covenants of the lease permit, it may be deemed reasonable – or indeed essential – for the landlord or head lessee to arrange for the provision of this essential information (the asbestos register) personally and to recoup the costs as part of the service charges. This is, however, not to be undertaken lightly as it raises questions as to the reasonableness of the scope, limitations and costs of conducting an asbestos survey, and this will in any case be limited to a ‘management’ survey.

The plan is owned by the dutyholder who prepared it, but the latter has a legal obligation to co-operate in making essential information available to other parties as necessary (see the following subsection).

5.10.6 Co-operation
Regulation 4(2) of CAR requires ‘every person’ (including both landlords and tenants) to co-operate to enable the dutyholders to comply with their duties (i.e. to assess the ACMs and to produce and maintain a management plan). The duty is without limitation (see the previous subsection for details on statutory compliance).

The various dutyholders of different parts of the premises will need to know the details of each other’s management plans, to ensure that all areas of the building are properly addressed and that there is no conflict or any unnecessary duplication.

The asbestos management plan is unique to the occupier and reflects the specific way in which the property, or parts thereof, are used, the number of persons involved and the processes undertaken. It may therefore be considered of little value to another incoming party, but it will contain core information regarding the assessment of the presence of ACMs and the risks arising. Often this will be in the form of an asbestos register recording the form, type, quantity and condition of known or presumed ACMs.

‘Every person’ has a statutory responsibility to make this core information available to other dutyholders as appropriate, even when there is opposition from the tenant or landlord regarding the confidentiality or usefulness of the information. It can be provided in a bespoke format with unnecessary or private information removed. This responsibility to co-operate remains, even if the tenant or landlord is no longer a dutyholder for the premises but has useful information.

It also applies even if there has been a cessation of trading by either party. In such case, notwithstanding the legal duty, the administrative disruption that follows can hinder or even prevent the discovery of this information, and it may be necessary to seek alternative sources. Where the identity is known, this should include the asbestos surveyor who carried out the asbestos survey and prepared the report that formed the basis of the register and/or management plan. Again, notwithstanding any privacy of contract or confidentiality issues, the core information must be made available.

Any release of documents should ideally be accompanied by an explanation of the limitations applicable to the original survey and commission. They should also come with a reminder that the information may now be out of date or no longer appropriate, depending on subsequent works carried out to, or the deterioration of the condition of, the ACMs. Prudent asbestos surveyors may offer to re-inspect and update the information, and prudent clients may require this, thus establishing contractual responsibility for the services provided.

Guidance in the L127 ACOP The management of asbestos in non-domestic buildings states that any costs associated with making the plan available are to be justifiable and reasonable. It is assumed that costs will be limited to the costs of retrieval and printing and not represent a proportion, or the whole, of the value of the plan to the new incumbent.

5.10.7 Removal
There is no statutory requirement to insist on the removal or treatment of asbestos. The government line is to encourage people to leave alone any ACMs that are intact, in good condition and unlikely to release respirable fibres. Although very unlikely,
if removal is subsequently deemed by the enforcing authority to have been inappropriate, there is the possibility that the instigator could be prosecuted for exposing people, including the asbestos strippers, to unnecessary risk to health.

In some circumstances, the asbestos may have been providing a number of different functions, such as physical enclosure, fire protection and thermal insulation. In order to restore these properties, as required by the lease, it may be necessary to provide a combination of components that are more complex and expensive than the original ACM. There may therefore be an element of essential ‘improvement’ required, the apportionment of the costs of which will depend on the circumstances in each case.

5.10.8 Adequacy of information provided

The management plan needs to be ‘suitable and sufficient’, and the courts are the final arbiter in this regard.

Unlike the tests of lifts and other life safety equipment, it is unlikely that the breach of a general lease covenant will give grounds for claiming the costs of conducting asbestos surveys in the absence of their availability at the end of a lease. The statutory requirement only applies in non-domestic premises and is limited to the management plan that is unique to the user of the premises. There is no specific requirement for an asbestos survey.

Even if the lease terms do expressly require this, there is likely to be a dispute about the scope of the survey, the extent of sampling and invasive disturbance, and privity of contract with the asbestos surveyor.

In order to avoid protracted disputes at the end of a tenancy, and for reasons of good management, dutyholder’s should be requested to provide details of the asbestos management plans as soon as possible after the demise has been occupied and the normal occupancy requirements are known.

5.10.9 New lease, licence and agricultural tenancy agreement

The repairing and maintenance covenants of a lease, licence or agricultural tenancy agreement will determine the identity of the dutyholder(s) responsible for the management of asbestos in the various parts of a building.

When new contracts are agreed for existing buildings constructed before 2000, to avoid any ambiguity, care should be taken to include reference to CAR and to clearly identify and allocate responsibility to the dutyholders for all the various parts of the premises.

The lease, licence or agricultural tenancy agreement should include a requirement for seeking the landlord’s permission for any works that may disturb known or suspected ACMs, and for updating the management plan accordingly. It would be useful to insist that a copy of the current asbestos management plan is given to the landlord as proof of compliance with Regulation 4 of CAR. In addition, the plan should include a right of entry in the event of the default of the tenant, and a right to prepare or update the plan on the landlord’s behalf and at the latter’s expense.

The costs of periodically monitoring any remaining asbestos and reviewing the plan(s) should be minimal. However, it would be prudent to consider whether the financial responsibility for the landlord’s areas should form part of the service charges.

5.11 Contract administration/project management

The implications of asbestos for contract administrators and project managers are similar to, and overlap with, those for quantity surveyors and cost consultants (see subsection 5.7). In summary, the main concerns are:

- the competence and resources of asbestos surveyors, specialist consultants and contractors;
- time and programming issues (taking account of the lengthy preparation and clearance operations often involved in asbestos removal or treatment);
- the exclusion of unauthorised persons from works in asbestos areas;
- methods of monitoring the safety and quality of works;
- the certification of removal or clearance prior to the re-occupation of stripped areas;
- proof of the proper disposal of contaminated waste; and
- preliminary items (e.g. power, water and space for any decontamination facilities required;
the location of sealed skips for contaminated waste; and the siting of exhaust outlets for air extraction hoses).

As a point of principle, investigations to determine the presence of ACMs should be carried out as early as possible in order to protect those who may need to visit the premises in advance of the main works, such as engineers, surveyors or even intruders.

The inspection should be a Type 3 refurbishment or demolition survey (for details, see subsection 8.3, Types of asbestos survey). If it is intended that all of the ACMs will be removed as part of the proposed building works, then it may not be necessary for the asbestos report to contain information or advice on how to manage the material, or to include a risk assessment.

All available relevant details of known ACMs should be included in the tender documents. Contractor’s risk clauses, such as ‘remove all ACMs encountered’, are prohibited by the Construction (Design and Management) Regulations 2007 (CDM). Where the full extent of ACMs cannot reasonably be determined in advance there must be a facility, such as an agreed schedule of rates, for the contractor to be paid for the removal or treatment of these materials.

If detailed methods of asbestos removal are dictated, then there is the possibility that the author may be deemed to be managing or supervising asbestos removal works, rather than simply administering the contract. In this case, under CAR, though subject to the Regulation 3(2) exceptions, an asbestos removal licence may be required.

The specification/bill of quantities and health and safety plan should always include instructions on what to do if any additional suspected ACMs are discovered during the term of the contract. Such instructions may include stopping work that might disturb the materials, and reporting the discovery to the person in charge of the site before seeking further instructions. If the works are only required to a part of a building or structure, then great care should be taken to ensure that they are strictly confined to the area that has been surveyed.

It is not sufficient to pass the information on ACMs to the contractor, particularly where this is in the form of a substantial document or one that lacks clarity. Checks are required to ensure that the risks are clearly understood and controlled in the contractor’s proposed method of working (construction phase plan for projects to which the CDM Regulations apply). It may be necessary to seek specialist advice from a suitably experienced asbestos surveyor in this regard.

Except in exceptional circumstances, asbestos removal or treatment works should be carried out in advance of other building operations. Where this is not feasible, great care should be taken to manage the risks arising from the concurrent operations.

### 5.12 Tax advice

RICS members should be aware that tax relief is currently available under certain circumstances in respect of works that are carried out in relation to asbestos.

As introduced by Schedule 22 to the Finance Act 2001, a 150 per cent tax deduction is available to companies incurring expenditure on land remediation, and both developers and investors may qualify. The term ‘land’ also includes buildings and ‘contamination’ can include asbestos. However, to receive the deduction the company must have acquired the land in its contaminated condition.

The tax relief is received as an allowable deduction in computing the profits of the company’s Schedule A business or trade. As such, it is claimed via the company’s self-assessment tax return. As with many forms of tax relief, a number of conditions must be met and technicalities overcome before the benefits can be obtained. (At the time of writing, this tax relief is currently under review.) Tax matters can be extremely complex and the law frequently changes, so advice should be sought from an expert in these matters.

### 5.13 Building control inspectors

Surveyors sometimes perform the role of either a local authority building control officer or an approved inspector administering the Building Regulations. Hereafter this role is referred to as a ‘building inspector’.

Building Regulations do not specifically address asbestos. Notwithstanding this, building inspectors may, in the course of their statutory duties,
encounter asbestos materials that are being disturbed or removed. An example of such duties that may result in contact with asbestos is carrying out periodic inspections during a building project that involves demolition, alteration or refurbishment of a property constructed prior to 2000. For their own health and safety building inspectors need to know safe working practices and control measures that are required to limit exposure and the spread of asbestos outside of the work areas. In this respect, building inspectors fall within the broad category of ‘building surveyors and other such professionals’ specifically identified in paragraph 124 of the ACOP to Regulation 10 of CAR as requiring mandatory asbestos awareness training.

There is inevitably close liaison with other associated statutory enforcement officers, and it is common for building inspectors to report suspected breaches of CAR to the HSE. Indeed, because of the limited number of HSE officers and the involvement of building inspectors in the majority of building projects, building inspectors are often more likely to be in a position to spot such breaches at the earliest stage.

An agreement has been made between the HSE Construction Division and the building control bodies represented by the Building Control Alliance, or BCA (representing Local Authority Building Control; the Association of Consultant Approved Inspectors; RICS; the Chartered Institute of Building (CIOB) and the Association of Building Engineers (ABE)), to work together in England and Wales to promote and encourage improved standards of health and safety in construction. This is established by the joint publication, Working Together for Health and Safety in Construction (HSE and BCA, 2010). Among other topics, this document includes ‘reporting serious concerns’, and one of the examples of ‘matters of evident concern’ listed in Annex 1 is ‘exposure to asbestos fibres when asbestos insulation, boarding (other than asbestos cement sheeting) or sprayed coating is being damaged/removed without an enclosure or clear segregation’ and cites the ‘risk of lung cancer (long term)’.

5.14 Construction design and management co-ordinator

Where a project involves building operations to which the CDM Regulations apply, the client is required to appoint a CDMC. The CDMC has an important role in managing the risks arising from works to buildings that are of an age and/or type that might contain ACMs.

The responsibilities include:

- advising the client on the need to obtain relevant information on the presence of ACMs in the building, or parts thereof, that will be disturbed by the proposed works (i.e. existing asbestos reports, registers, management plans and researching the history of any removal or treatment works);
- advising the client on the completeness and suitability of this information and the need for further investigations, seeking specialist advice where appropriate. Except where the construction of the building or structure is very simple and obvious, a refurbishment and demolition survey (formerly known as a Type 3 survey) will be required (see subsection 8.3);
- ensuring that the above is included in the pre-construction information given to contractors to enable them to take this into account in the preparation of their tender or quotation;
- where specifically requested by the client, reviewing the contractor’s construction phase plan to ensure that the risks arising from the disturbance of the ACMs have been incorporated and will be effectively managed; and
- ensuring that appropriate details of any ACMs remaining, and the risks arising from them, are identified and included in the health and safety file at the completion of the project.

5.15 Receivers/administrators

Asbestos can be a major consideration when a dutyholder ceases trading due to bankruptcy or insolvency. Often the cessation of trading in such circumstances is sudden and unplanned, involving the instant dismissal of an experienced management team. In the ensuing upheaval, documents that are not business critical can be lost (temporarily or permanently) including the asbestos register and/or management plan. Facilities management and/or maintenance contracts are abandoned and, with them, the designated dutyholders for the management of asbestos in
non-domestic premises. In the absence of any other obvious other parties, as the person in control of the premises, the receiver or administrator will, sometimes unintentionally, take over these statutory duties.

Once appointed, if the original organisation is not commercially viable, there will be a realisation of assets, possibly involving the sale and salvage of fittings, fixtures and plant. If these components contain asbestos or if adjacent ACMs (e.g. wall and ceiling, thermal or acoustic lagging) will be disturbed by their removal, then unless such operations are carefully controlled and licensed contractors are used, there is the potential for widespread contamination (see subsection 5.2).

As an interim measure while a decision is made on the future of the asset, there may be the opportunity for raising revenue on previously vacant properties by short-term licensing, or even allowing charitable organisations to occupy and thus safeguard the premises rent-free. In such cases, careful management is necessary to prevent the uncontrolled stripping out of redundant shop fittings and services, which may contain or conceal ACMs.

5.16 Legal enquiries

Surveyors are unlikely to be involved in conducting legal searches, however, it is useful to know the enquiries with regard to asbestos made by solicitors for commercial property transactions.

Commercial Property Standard Enquiries (CPSEs) are the set of enquiries used on most commercial property transactions. CPSE 1 contains the following enquiries, which are appropriate for every type of property transaction:

- Has asbestos been used in the present structures forming part of the property, or any premises of which the property forms part, including conduits, fixtures, plant and equipment?
- Has any asbestos been removed from the property in the past?
- Has inspection of a copy of the most recent survey or assessment carried out in relation to the property (whether by the seller or any other person) been made available for the purposes of complying with Regulation 4 of CAR 2006, or the written plan and any other records prepared for managing asbestos?

The CPSE 2 enquiry of property subject to a tenancy requests the supply of copies of any correspondence between the seller and its tenants in relation to CAR 2006, together with any surveys or assessments carried out by the tenants in compliance with those Regulations that have been supplied to the seller. Similar to CPSE 2, CPSE 4 enquiry for assignment of a lease requests the supply of copies of any correspondence between the seller and its landlord in relation to CAR 2006, together with any surveys or assessments carried out by the landlord in compliance with those Regulations that have been supplied to the seller.
6 Limitations and exclusions

6.1 General

Legal advisers to RICS suggest that the only way in which a surveyor can avoid the need for any mention of asbestos during an inspection of a property is if this is a specific requirement of, or has been agreed with, the client. This would always be on the understanding that the client has either already appointed or will appoint another party, perhaps a specialist (asbestos surveyor) to conduct an asbestos inspection and provide the necessary specialist advice. Such an agreement should be confirmed in writing with the client in the terms of engagement so that both parties are fully aware of the fact that asbestos will not be mentioned in the final report.

Irrespective of this, however, the surveyor has overriding obligations imposed by the Health and Safety at Work etc. Act 1974 and associated general health and safety Regulations, and is under a general duty to warn of potential danger (see section 3, Surveyors’ responsibilities). Consequently, where a surveyor identifies suspected or actual asbestos or associated contamination during the course of an inspection, which in his or her opinion presents an immediate significant actual or potential health risk, the surveyor should report it on a duty to warn basis. This should be done no matter terms of engagement that apply and the assumptions that have been agreed.

Where appropriate, this action should include the provision of advice on the emergency short-term measures to be taken, which in extreme circumstances could include the temporary evacuation of the contaminated area and prevention of unauthorised entry. It is anticipated that this will only happen in rare circumstances.

Where the surveyor is not capable of providing the necessary service or advice because of lack of knowledge, training or experience, then the client needs to be informed of this. However, the client should not be coerced into agreeing to an exclusion relating to asbestos. The surveyor should remember that a greater duty of care is required when dealing with the domestic client (the man or woman in the street), where it must be assumed that the degree of reliance on the advice and guidance of the surveyor will be greater than that of the informed and experienced professional client.

6.2 Excluding liability/caveats

6.2.1 Personal injury

As a point of law, surveyors cannot wholly exclude liability for personal injuries in respect of any report issued by them to their contracted clients, albeit they may not be insured for it. In addition, surveyors are not able to disclaim liability to individuals, including third parties with whom they have no contractual relationship, for personal injuries that arise as a result of their negligence in failing to identify asbestos.

The three criteria essential for establishing liability are the following:

a) there must be a duty of care owed to the injured party;

b) there must be proof that the duty has not been fulfilled; and

c) there must be a causal link between the breach of the duty of care and the injury or damage caused.

6.2.2 Damage other than personal injury or death

Section 2, Negligence Liability, of the Unfair Contract Terms Act 1977 (UCTA) states that:

In the case of other loss or damage, a person cannot so exclude or restrict his liability for negligence except in so far as the contract term or notice satisfies the requirement of reasonableness.

Where a contract term or notice purports to exclude or restrict liability for negligence, a person’s agreement to or awareness of it is not of itself to be taken as indicating his or her voluntary acceptance of any risk.

The initial consideration will be to establish whether the exclusion clause was incorporated in the surveyor’s terms of engagement. Therefore, any
standard terms of engagement must be made known to the client and agreed upon at the time when instructions are received. If they are not, there is a real risk that they will be of no contractual effect.

The various RICS guidance notes concerning inspections of residential, commercial and industrial properties require that the extent to which the inspection will be limited, along with any caveats and/or assumptions, should be agreed when taking instructions and confirmed prior to undertaking the survey. In the case of a residential survey, the model conditions of engagement prescribe the scope of the areas and elements to be inspected, and these can only be varied by specific agreement with the client.

There is a requirement, where appropriate, to explain the implications of any changes to the client, with the onus being on the surveyor to provide the explanation. These changes will include those caveats specifically required by the surveyor’s PI insurers, and should also include any specific exclusions on the PII policy. The RICS guidance note, Building Surveys of Residential Property (2004), states that the actual wording required by the insurance policy should be used verbatim.

In respect of liabilities arising in a contract between contracting parties, where one of them deals as a consumer or on the other’s written standard terms of business, the UCTA 1977 states the following:

As against that party, the other cannot by reference to any contract term:

(a) when himself in breach of contract, exclude or restrict any liability* of his in respect of the breach; or

(b) claim to be entitled:

(i) to render a contractual performance substantially different from that which was reasonably expected of him, or

(ii) in respect of the whole or any part of his contractual obligation, to render no performance at all.

except in so far as (in any of the cases mentioned above in this subsection) the contract term satisfies the requirement of reasonableness.

* For the surveyor there are two types of liability to be considered, in respect of negligence and of liability arising in contract.

This Act states two sets of circumstances in which the contracting parties may be able to vary the performance from that specifically stated in the contract. These are where the client is dealing as a ‘consumer’ with the surveyor, and where the client is not a consumer, but deals with the surveyor on the surveyor’s written standard terms of business.

Dealing as a consumer means, in practice, that the client has consulted the surveyor for the purpose of personal affairs and not in the course of business. A private individual wanting a house for personal occupation would be ‘dealing as a consumer’. In contrast, an investment company having a private residential property valued for the purpose of its business could not claim to be dealing as a consumer with the surveyor. In both circumstances, this is subject to the requirement of the ‘reasonableness’ of the term, namely that the term should be fair and reasonable to be included, having regard to all the circumstances that the parties knew, or ought to have known, at the time they made their contract.

In the case of limitations and exclusions, there are two main conditions for reasonableness to apply: both parties should be aware of first, the extent, and second, the implications, prior to the provision of the service.

UCTA 1977 expressly excludes contracts of insurance from its effects and does not apply to these, because the insurance will be taken out in a business or professional capacity, rather than in a ‘consumer’ or personal capacity. As a result this Act, which governs the use of disclaimers in English law, does not affect the position vis-à-vis the PI insurers and their surveyor clients. It is therefore open to insurers to exclude from cover all liabilities, including personal injuries, which occur as a result of negligent acts, errors and omissions arising from surveys or other services relating to asbestos.

Therefore the following is suggested wording for instructions/reports:

In accordance with your instructions we will not be carrying out an asbestos inspection. We understand that you have appointed a suitable specialist to advise you in respect of asbestos-related matters thus we will not be addressing these.

During our visit we noted several materials
which from their appearance might reasonably be expected to contain asbestos. These were [list materials]. This is by no means conclusive or non-exhaustive and therefore we recommend that you seek specialist advice from an appropriately qualified asbestos inspector. Details of suitable inspectors can be obtained from RICS or the Institute of Occupational Safety and Health.

6.2.3 HSG 264 Asbestos: the survey guide

Section 3 of HSG 264 includes a whole subsection entitled ‘Survey restrictions and caveats’. In paragraph 55, it warns that:

The value and usefulness of the [asbestos] survey can be seriously undermined where either the client or the [asbestos] surveyor imposes restrictions on the survey scope or on the techniques/method used by the surveyor. […] Any restrictions placed on the survey scope will reduce the extent to which ACMs are located and identified, incur delays and consequently make managing asbestos more complex, expensive and potentially less effective.

In paragraph 56 in the case of management surveys, pre-planning potentially difficult areas to access can be identified and appropriate arrangements made in advance of their inspection. The dutyholder should be advised of any areas (e.g. locked rooms) that could not be accessed and arrangements made for access at some later time.

In paragraph 57 for refurbishment or demolition surveys, it goes so far as to state that ‘there should be no restrictions on access unless the site is unsafe (e.g. fire damaged premises)’. Highlighted as advice for the client, paragraph 58 concludes that restrictions and caveats ‘should be included only where absolutely necessary and should be fully justified. Most can be avoided by proper planning and discussion. They must be agreed between the dutyholder and the [asbestos] surveyor and documented in the survey report’.
There are three main types of insurance cover that a surveyor might require: employer’s liability (only applicable if the surveyor is an employer); public liability; and professional indemnity insurance (PII).

Appropriate insurance is, of course, necessary for any service provided by a surveyor, but it has particular significance in view of the special health and economic risks associated with asbestos-related services.

It is neither necessary nor appropriate for this guidance note to address the issues of employer’s liability and public liability insurance. Surveyors are advised to contact their broker if details on either of these forms of insurance are required.

Rule 9 of the Rules of Conduct for Firms requires that a regulated firm ensure that all previous and current professional work is covered by adequate and appropriate PII which meets standards approved by the RICS Regulatory Board. How a firm meets this requirement is set out in the RICS PI policy (see www.rics.org/pi).

One of the PI policy requirements is that the RICS minimum policy wording, or more comprehensive wording, is obtained. The minimum policy wording is the absolute minimum standard of cover that RICS listed insurers agree to provide. Members are, of course, entitled to negotiate with their insurer for better cover than that provided by the minimum policy wording.

The minimum policy wording states that insurers will not be liable under the policy for the following:

- Any claim directly or indirectly resulting from the presence or release or possible presence or possible release of asbestos or asbestos containing materials in whatever form or quantity. Subject to the provisos below, this exclusion shall not apply to any such claim caused by a negligent act, negligent error or negligent omission in the conduct of professional business.

One of the provisos is that:

- Insurers shall not be liable for any such claim directly or indirectly resulting from asbestos surveys carried out by the insured.

The minimum policy wording aims to meet the needs of a general surveying practice. Those members and firms engaged specifically in carrying out asbestos surveys are advised to discuss their specific insurance requirements with their broker.
8 Asbestos survey

8.1 Background

The employer, occupant or person in control of the premises is required by law to be aware of significant hazards that may endanger employees, visitors or the general public, and to take reasonable measures to prevent or control these (see Appendix 1). This includes knowledge of the presence and condition of any ACMs in buildings for which he or she is responsible. It is this statutory requirement that gives rise to the need for an asbestos survey.

The CAR 2006 do not use the term ‘survey’, but instead refer to making an assessment as to whether asbestos is, or is liable to be, present in the premises. The Regulations also require an inspection to be made of those parts of the premises that are reasonably accessible, with a consideration of the condition of any asbestos that is, or has been assumed to be, present.

Historically, there has been no uniformly recognised procedure for conducting surveys for ACMs, or for interpreting and reporting the findings. There is therefore often considerable variation in the level of service and form of documentation provided by asbestos surveyors. In July 2001 the HSE published guidance in the form of MDHS 100, Surveying, sampling and assessment of asbestos-containing material. This was refined and replaced by HSG 264 in January 2010.

The scope and nature of an asbestos survey will vary according to the purpose for which it is required. The information may be needed in connection with specific activities, such as a proposed refurbishment or demolition, and may apply to the whole or only part of the premises, or to the production of a plan to manage asbestos in non-domestic premises to comply with Regulation 4 of CAR.

Notwithstanding this, the aim of an asbestos survey is to locate and report on, as far as is reasonably practicable, all of the ACMs present in a building, so that the risks can be assessed and managed. See Appendix 7 for a table giving guidance as to whether an asbestos survey is required in any particular circumstance and, if so, what type.

As the use of any form of asbestos was effectively prohibited in 1999, any building whose construction commenced after 2000 can reasonably be presumed not to contain asbestos, and a written record of such is sufficient. Similarly, unless there is evidence to the contrary, any building constructed prior to this date should be suspected of containing at least some form of ACM until proven otherwise.

For every building to which the CDM Regulations apply, there is a requirement to provide a pre-tender health and safety information pack as well as a health and safety file, which among other matters must identify any hazardous materials that were used in the construction or any renovations. Thus for buildings constructed after 1994 (the date of the first CDM Regulations) but prior to 2000, a desktop review of these documents, establishing confirmation from the designers or builders that no ACMs were specified or used in the construction of the building, should be adequate. In the remainder and majority of buildings, however, a far more detailed investigation will be required.

The age and type of a building can give some initial pointers as to the likely presence of asbestos and the locations of ACMs, but these cannot be relied upon. Even in older properties in which the use of asbestos was unlikely – for instance, Georgian houses – there is the possibility that later modifications may have incorporated ACMs, for example as fire protection, thermal or sound insulation or services installations (see subsection 5.4).

As described in Appendix 8, ACMs have been used extensively for many different purposes and in a variety of common building products. Many of these may not be immediately obvious and are likely to be found in roof spaces, cellars or plant rooms, or hidden inside services ducts, under floors, above ceilings or behind decorative or protective finishes, panels and fittings. Unless the inspector is given unrestricted access to look in every conceivable nook and cranny, remove fixed panels, take up floor and ceiling coverings and generally take the building apart, the inspector cannot guarantee to find every ACM.

In addition, although the chart in Appendix 8 lists the majority of ACMs commonly used, it is not
exhaustive. The full list is not known, as new and sometimes obscure ways in which this amazingly versatile material has been used continue to be discovered. In particular, where asbestos board materials were extensively used, it is not unusual to find that the off-cuts have been used elsewhere in the same development as a substitute for timber, or as packing pieces and shuttering.

A comprehensive survey would often be disruptive and destructive, involving a degree of disturbance that may not be generally acceptable or reasonable. A compromise often needs to be found, and the client should accept that without virtual demolition it may not be possible to find and identify every ACM. There is therefore a risk of subsequently discovering additional ACMs. That risk will be in inverse proportion to the extent of free access the asbestos surveyor is afforded.

Sometimes the best, or only, practical way for an inspection to be carried out may be in several phases, with the asbestos surveyor returning to the site to review parts of the building that are revealed and made accessible during the refurbishment or demolition works. If the client or asbestos surveyor is prosecuted for endangering health due to a lack or inadequacy of information on ACMs, he or she will be judged on what was ‘reasonably practicable’ at that time.

8.2 Identification of ACMs

Although different types of asbestos are often referred to by their colour (white, blue or brown) this is not a reliable indicator. Sometimes, because of a shortage of supply or an excess of particular types, coloured dyes were used by unscrupulous suppliers and different types of asbestos were mixed together.

By inspection alone, an experienced asbestos surveyor familiar with the full range of common asbestos products should be able to make an informed ‘presumption’ that a material may or does not contain asbestos. However, the only way to be sure is by analysis of representative samples of the material, using a microscope to examine the distinguishing characteristics of the fibres.

In the absence of any analytical or other evidence to support a reasoned argument that they are highly unlikely to be ACMs, materials that have a similar appearance to them must be presumed to contain asbestos.

Unless a survey is supported by sampling (see section 9, Sampling asbestos), an asbestos surveyor can only make ‘presumptions’ as to the presence or absence of ACMs relying on the visual appearance, age and the use of the material. Presumptions can either be ‘strong’ or ‘by default’.

The presumption is ‘strong’ where there is good reason to believe that a material contains asbestos, but this has not yet been confirmed by sampling. Examples are where samples of similar materials have been shown to contain asbestos, where asbestos is known to have been commonly used in certain materials and where materials have the characteristic appearance of asbestos (e.g. pipe insulation where fibres are visible).

The ‘default’ position is when there is insufficient evidence to be sure that a material does not contain asbestos. In particular, this applies to areas that have not been accessed or inspected. In such cases the materials or inaccessible areas must be presumed to contain asbestos unless there is strong evidence that they do not.

There are various valid reasons why it may not be appropriate or desirable for samples to be taken. In these cases, an asbestos surveyor can only make unsubstantiated presumptions, based on experience and the physical evidence to hand. There is therefore the risk that not all of the asbestos may be identified and that suspected materials, which may eventually be proven to be asbestos-free, will need to be managed as though they are asbestos, with all the costs and/or disruption this may entail.

Under Regulation 5 of CAR, unless there is reasonable evidence to the contrary, there is a requirement to presume that a material contains asbestos and to manage it accordingly. Another requirement is to presume that the asbestos present is not chrysotile (white asbestos) alone, i.e. that it is of a type, or a mixture of types, that is considered to present a greater risk to health than white asbestos alone.

8.3 Types of asbestos survey

The first HSE guidance note on asbestos, MDHS 100 Surveying, sampling and assessment of asbestos containing materials, refers to three types of survey:
• **Type 1:** location and assessment survey (‘presumptive survey’);
• **Type 2:** standard sampling, identification and assessment survey (‘sampling survey’); and
• **Type 3:** full access sampling and identification survey (‘pre-demolition/major refurbishment survey’). Surveys produced before 2010 will use this terminology.

On 29 January 2010 this guidance was superseded by HSG 264 Asbestos: The survey guide. This consolidated the surveys into two different types, defined by their purpose:

• management surveys; and
• refurbishment and demolition surveys.

See Appendix 7 for a table showing details and the advantages and disadvantages of both types of asbestos survey.

### 8.3.1 Management survey

In HSG 264 a management survey is also referred to as the ‘standard’ survey. It is required to ensure continued management of ACMs during the normal occupancy and use of the property. This scope is necessary to meet the requirements of ‘the duty to manage asbestos in non-domestic buildings’ imposed by Regulation 4 of CAR 2006.

Its purpose is to locate, as far as reasonably practicable:

- the presence and extent of any suspect ACMs in the building which could be damaged or disturbed during normal occupancy, including foreseeable maintenance and installation, and to assess their condition [...] and their ability to release fibres into the air (HSG 264, paragraphs 43 and 44).

In paragraph 45, the HSG 264 suggests that the survey ‘will usually involve sampling and analysis to confirm the presence or absence of ACMs. However a management survey can also involve presuming to confirm the presence or absence of asbestos’. Where asbestos is presumed, an assessment of its condition (‘material assessment’) is also required.

The survey can comprise a mixture of the sampling and presumption or can be based, in some cases, on the latter alone.

All areas should be accessed and surveyed as far as is reasonably practicable. HSG 264 suggests in paragraph 49 that this ‘may involve some minor intrusive work’ such as ‘behind fascia and panels and other surfaces or superficial materials’, depending on that which is foreseeable for maintenance or new services installations.

The survey needs to be appropriate to the management requirements of the buildings, and should examine all routinely accessed areas.

### 8.3.2 Refurbishment and demolition survey

A refurbishment and demolition survey is required before any such work is carried out. It can also be required in other circumstances, for example ‘when more intrusive maintenance and repair work will be carried out or for plant removal or dismantling’. Its purpose is to locate, as far as reasonably practicable ‘all ACMs in the area where the refurbishment work will take place or in the whole building if demolition is planned’. The survey is ‘fully intrusive and involves destructive inspection, as necessary, to gain access to all areas, including those that may be difficult to reach’ (HSG 264, paragraph 51).

Regulation 7 of CAR requires that all ACMS are removed as far as reasonably practicable before major refurbishment of final demolition.

Because of the likelihood of disturbing concealed asbestos and thus putting the public or employees on the premises at risk, during this type of survey the area should not be occupied. Ideally, the building should not be in service, and all furnishings should be removed. If this is not possible and the survey is carried out during holidays or shutdown periods, special care is needed, as is reassurance disturbed air sampling to prove the area is fit for reoccupation.

There is still the possibility that some asbestos may remain concealed, perhaps within chimneys or the structure, and will not be revealed until the works are under way. In such cases, the survey should be carried out in stages. In any event, emergency plans and arrangements should be in place to deal with any subsequent unexpected discovery of ACMs.

It is important to make clients aware that refurbishment and demolition surveys are disruptive, time-consuming and thus expensive.
if they are to be executed thoroughly. Asbestos surveyors should allow sufficient time to complete the survey fully, returning to inspect on a phased basis if necessary.

8.4 Briefing for an asbestos survey

It is important for anyone contemplating undertaking, or instructing another party to undertake, an asbestos survey to consider the questions and consideration outlined in Table 5. It is recommended that as part of the briefing, the asbestos surveyor should attend a preliminary meeting on site, where appropriate, to discuss the considerations given in Table 5 and should ‘walk through’ the premises with a person familiar with the parts to be inspected, so that the difficulties involved in accessing or sampling may be highlighted and resolved. This should be set out in the brief for which the asbestos surveyor has been asked to quote. All of this, together with any other

Table 5: Questions and considerations for an asbestos survey brief

<table>
<thead>
<tr>
<th>Question/topic</th>
<th>Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competence and quality assurance checks and procedures?</td>
<td>Accreditation, certification, appropriate experience and peer review, along with references and insurance certificates</td>
</tr>
<tr>
<td>Purpose of the survey (management, or refurbishment and demolition, or a combination of both)?</td>
<td>Is it for the general duty to manage asbestos, or a more specific purpose, such as prior to refurbishment or demolition? Will have an impact on the scope and content of the survey and the report</td>
</tr>
<tr>
<td>Scope (where demise forms part of development including various buildings etc.)?</td>
<td>Clear identification of outbuildings and/or external areas, underground or overhead service ducts to be included</td>
</tr>
<tr>
<td>Limitations?</td>
<td>Any inaccessible rooms/voids or other parts of the premises that are specifically excluded (which must be clearly identified in the report and/or management plan)</td>
</tr>
<tr>
<td>Timing/duration of survey?</td>
<td>Out of normal working hours? Dutyholder should ensure that adequate time and resources are made available to allow a thorough survey to be carried out.</td>
</tr>
<tr>
<td>What existing information is available?</td>
<td>Health and safety file, previous asbestos reports or registers, contracts for removal or treatment, drawings, specifications available for a ‘desk-top’ survey</td>
</tr>
<tr>
<td>Information to enable the assessment of the risks involved in conducting the survey?</td>
<td>Not only for asbestos, but also for other hazards (for example, those created by the use of the premises, including the movement of vehicles, processes, machinery and live services) First aid and welfare facilities, working arrangements (out of hours), access equipment, site rules and procedures</td>
</tr>
<tr>
<td>Access arrangements</td>
<td>Contacts for operational or health &amp; safety issues, permits to access specific areas (e.g. roofs and/or plant rooms), fire alarm testing</td>
</tr>
<tr>
<td>Need for other trades?</td>
<td>Attendance by builder, plumber or electrician to open up concealed areas or disconnect water or power to provide safe access</td>
</tr>
</tbody>
</table>
relevant details, should be recorded and sent to the client as confirmation of the instruction and used as, or incorporated within, a written inspection plan.

The survey report is only the first stage in the management of ACMs. The dutyholder is required to use the information obtained to prepare a written management plan, a key component of which is the asbestos register. HSG 264, paragraph 146, suggests that the ‘survey report itself will generally not be the asbestos register’ (HSE emphasis).

HSG 264, paragraph 14, suggests that dutyholders should identify an ‘appointed person’ and, in some cases, a deputy within their organisation who will be responsible for the management of ACMs. It states that this ‘will be essential where the dutyholder has a large or complex building portfolio’. It is essential that the dutyholder clearly understands the findings and recommendations of the survey report. Therefore, as part of the commission of the asbestos surveyor, a prudent client will require him or her to attend a de-briefing meeting to present and, where necessary, explain the content of the report and its potential implications to the appointed person. At such time, arrangements can be made for return visits to inspect any areas that were not previously accessible.

### 8.5 Survey strategy for multiple properties

The strategy that is appropriate for the survey of a portfolio of properties will depend upon the number

<table>
<thead>
<tr>
<th>Question/topic</th>
<th>Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Areas difficult to access</td>
<td>Agreement on how these are to be accessed – equipment required (mobile access platform, scaffold tower), clearance or advance preparation?</td>
</tr>
<tr>
<td>Sampling strategy?</td>
<td>Is sampling required? If so, the sampling strategy (see section 9)</td>
</tr>
<tr>
<td>Making good?</td>
<td>Whether survey damage is to be made good and if so, how</td>
</tr>
<tr>
<td>Labelling of ACMs?</td>
<td>If required, form and durability of labels (return to site to remove or add labels following results of sampling?)</td>
</tr>
<tr>
<td>Format and content for recording and presenting the data?</td>
<td>House style, specific requirements, drawings, photographs, with results presented so that they can be directly lifted or easily used to enable the dutyholder to prepare an asbestos register as part of the management plan</td>
</tr>
<tr>
<td>Assessment and prioritisation of risks of ACMs?</td>
<td>Categorisation to be used in documents, e.g. ‘intact’; ‘damaged but not releasing fibres’; ‘damaged and likely to release fibres’ or ‘visible debris’ (quantifying the extent and likely source where possible)</td>
</tr>
<tr>
<td>Summary?</td>
<td>Given at the front of the report, after the limitations, detailing those areas that were not accessed, and should succinctly and concisely summarise the findings by order of priority and, where appropriate, include recommendations for managing the risks arising</td>
</tr>
<tr>
<td>Management plan?</td>
<td>An asbestos survey on its own does not constitute a management plan for the purposes of CAR 2006. If the purpose of the survey is to produce a management plan, who will prepare a plan for managing any risks arising, and review and update it? (It is important that the dutyholder is involved)</td>
</tr>
<tr>
<td>Debriefing session</td>
<td>Meeting with appointed person to present and explain the contents of the completed survey report</td>
</tr>
<tr>
<td>Commercial matters?</td>
<td>Fees, expenses, costs of samples, additional unforeseen works/visits, programme for delivery of information</td>
</tr>
</tbody>
</table>
and type of buildings involved. Paragraphs 59 to 69 of HSG 264 give guidance on the survey strategy for non-domestic and domestic properties. The key points are detailed in subsections 8.5.1 and 8.5.2.

8.5.1 Non-domestic portfolio

There is an expectation that every building will be individually surveyed. In premises, such as offices or hotels, with a large number of similar or near-identical rooms, all rooms should be inspected. Similar rooms should be placed in groups, which give greater uniformity so that sampling can be from a representative number of rooms. Where ACMs are identified in the sample, they can be strongly presumed in other rooms in the group.

8.5.2 Domestic portfolio

Local authorities and housing associations often have very large numbers of properties requiring a wide range of maintenance, repair work and upgrading, including renewal of services, kitchens, bathrooms and window replacement. On the presumption that it is not reasonably practicable to survey every property, the asbestos status of the properties needs to be established by separating them into archetypal groups (e.g. by age, form of construction, phase of construction). Then they are further separated by reference to drawings, specifications and work records feedback, categorising these into ‘asbestos free’, ‘contain ACM’ and ‘possibly contain ACM’. Because of the different levels of risk involved, a different approach is required, depending on whether the purpose of the survey information is for ‘management’ or for ‘refurbishment and demolition’.

Management survey:

- A management survey should be carried out on all properties that are not ‘asbestos free’.
- A proportion in each of the ‘contains’ and ‘possibly contain’ asbestos groups should be surveyed until the results demonstrate consistency in the range of ACMs by property type (the greater the variability, the higher the ratio to be included).
- ACMs should be managed on the basis of the range of ACMs identified.
- The information should be enhanced with data from more intrusive surveys when properties become vacant, and feedback from building works and/or from refurbishment and demolition surveys.

Refurbishment and demolition survey:

- According to paragraph 67 of HSG 264, ‘A proportion should be surveyed until the results demonstrate as far as reasonably practicable that there is consistency in the range of ACMs in the property type and there is an accurate picture of asbestos presence’. The survey is only needed for the part of the property affected by the proposed works (e.g. kitchen or bathroom).
- The specific purpose is to identify ACMs for removal, control or avoidance during the proposed works.

Notwithstanding these precautions, as not every property is thoroughly surveyed, there is always the potential for unforeseen ACMs to be discovered. According to paragraph 69 of HSG 264, the following management arrangements must be included for works in these properties:

- adequate asbestos training of tradespeople, not only of asbestos awareness and identification, but also of the work procedures;
- arrangements for checking asbestos registers before any work commences; and
- adequate supervision to ensure that procedures are implemented.

8.6 Survey data

Table 6 details the information that is required for each suspected ACM.

The inspection report should be clear and unambiguous and should be in a form in which the whole, or abstracts from it, can be used as the basis of a management plan (see section 10) or an asbestos register or log (see subsection 10.4). This will need to be kept readily available for on-site day-to-day use, in a form that can be updated and revised as necessary.

The management procedures of the premises should require that the contents of the register, log or management plan are always referred to prior to the authorisation of any maintenance or building works. Ideally, this should form part of a formal ‘permit to work’ system. The person in control of the building and/or management plan should be familiar with the documentation and not just act as a ‘post box’.
8.7 Checking the asbestos report

The client should ensure that the asbestos report is fit for purpose.

HSG 264, paragraph 145, lists the following matters to be checked to ensure that it is suitable and accurate:

- comparison has been made with original tender or quotation;
- there is compliance with the brief (management or refurbishment and demolition, or a combination of the two);
- unagreed caveats or disclaimers are not included;
- diagrams and plans are clear and accurate;
- all areas/rooms have been accessed;
- sufficient samples have been taken as agreed, and these reflect the range of suspected ACMs

<table>
<thead>
<tr>
<th>Topic</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location in building</td>
<td>Room, floor level, position</td>
</tr>
<tr>
<td>Building component containing the ACM</td>
<td>For example, column, beam, window surround, etc. (it is important to use correct terminology, the simpler the better); be aware of possible confusion when using generic terms such as ‘steelwork’ or ‘roofing’</td>
</tr>
<tr>
<td>Use of the room/area</td>
<td>Purpose, occupancy and frequency of use</td>
</tr>
<tr>
<td>Asbestos type</td>
<td>White, blue or brown or a mixture of types</td>
</tr>
<tr>
<td>Level of identification</td>
<td>Presumed (by default), strongly presumed, very strongly presumed, or proven by analysis of sample(s) or record documents</td>
</tr>
<tr>
<td>Extent</td>
<td>Area, length, volume, number, diameter (where terms such as ‘dust’, ‘remnants’, ‘pieces’ or ‘debris’ are used, these should be quantified in some easily understood form e.g. ‘an egg-cup full’ or ‘teacup full’)</td>
</tr>
<tr>
<td>Asbestos content*</td>
<td>Approximate percentage content (often given as low, medium, high)</td>
</tr>
<tr>
<td>Product type</td>
<td>Wall panel, ceiling tile, pipe coating, etc.</td>
</tr>
<tr>
<td>Density*</td>
<td>If necessary, distinguish between asbestos cement and asbestos insulating board</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Concealed, exposed, internal, external</td>
</tr>
<tr>
<td>Surface treatment</td>
<td>Painted, sealed, unsealed, protected</td>
</tr>
<tr>
<td>Condition</td>
<td>Extent of damage or deterioration, using agreed categorisation</td>
</tr>
<tr>
<td>Sample reference numbers</td>
<td>If sampled</td>
</tr>
<tr>
<td>Source of debris</td>
<td>Opinion as to the origin of the debris and the likelihood of similar hidden occurrences (e.g. disturbance of fire breaks under floors or above ceilings by the subsequent installation of new services)</td>
</tr>
<tr>
<td>Other relevant factors</td>
<td>Possible contamination of other parts, e.g. part of a common duct or shaft; and ventilation, dispersal/dilution of airborne fibres, e.g. via mechanical ventilation or externally in the open air</td>
</tr>
</tbody>
</table>

* This is often outside of the analyst’s United Kingdom Accreditation Service (UKAS) accreditation, however, it may be necessary to give the asbestos content and density in order to make a judgment on the ‘product type’ and the risk applicable.
and any known variations (e.g. different types of ceiling tiles in the same room); and
• any obvious discrepancies and inconsistencies (ensure that it does not use ambiguous descriptions or terms).

It is recommended that these checks are completed before or during the de-briefing meeting with the asbestos surveyor referred to in subsection 8.4.

8.8 Lessons learned

Asbestos cement sheeting generally contains chrysotile (white asbestos), however, in times of short supply, amosite (brown asbestos) or crocidolite (blue asbestos) was sometimes used.

The presence of (reflective) mica flakes is not necessarily an indication of recent asbestos-free man-made mineral fibre boards or tiles, as these flakes were also used in some earlier compositions that do contain asbestos.

Asbestos-stripping techniques and monitoring procedures have improved with time. Sometimes, though, an area may appear to have been stripped in the past, but poor workmanship may have resulted in asbestos debris being left behind on pipes, structural steelwork and plant, in voids or concealed beneath asbestos-free insulation that has subsequently been installed.

Wherever sprayed coatings have been used, particular care is required to locate any over-spray that may have been built over by successive building operations (e.g. laying floors or applying wall or ceiling linings).

Where there are significant quantities of asbestos board, it is likely that the off-cuts may have been used for ad hoc packing pieces or as shuttering in place of timber.

Where a building is progressively inspected (e.g. individual shop units within a shopping centre or large store) and a number of separate reports are prepared, it is important to take care to ensure that any gaps or overlaps are clearly identified. Ideally, subsequent reports should refer to the existence of earlier documents and the latter should be updated as necessary.

Obtaining quotations require details of the number of samples that have been allowed to enable comparison of competitive bids.
9 Sampling asbestos

9.1 General

Sampling is an essential and integral part of the refurbishment and demolition survey, and usually also of the management survey for ACMs.

There are commonly two types of sampling used in asbestos:

a) bulk sampling, which involves taking physical samples of materials that are suspected of containing asbestos (e.g. ceiling tiles, wall panels and pipe lagging); and

b) air sampling, which involves the use of specialist pumps to filter a known volume of air and thus determine the number of airborne respirable fibres.

In both cases, the samples require analysis by skilled laboratories using optical microscopy. In special circumstances, for example, to distinguish conclusively between different types of fibre, electron microscopy may be needed.

There is also another less common type of sampling, swab tests, which is discussed in subsection 9.4.

9.2 Bulk sampling

In bulk sampling, the skilled laboratory technician determines the type and an approximation of the percentage content of asbestos by microscopic examination of the unique physical characteristics of the sample.

The United Kingdom Accreditation Service (UKAS) accredits laboratories for bulk sampling, fibre identification and fibre counting, but not for determining the approximate proportion of asbestos content. In addition, there is currently no uniform terminology used among laboratories for reporting their results.

There is no mandatory statutory qualification for, or restrictions on, the competence of personnel taking physical samples. However, Regulation 21 of CAR states that only persons accredited as complying with ISO 17025 (2005), or its equivalent, may be employed to analyse a sample of material to determine whether it contains asbestos. This includes stringent requirements in respect of the following: organisation, quality systems, control of records, personnel, accommodation and environmental conditions, test and calibration methods, method validation, equipment, handling of test and calibration items, and reporting of results.

The physical operation of taking bulk samples is legislated by CAR 2006. The operation is subject to stringent precautions in view of the potential health risks that can arise for both the person taking the sample and the occupants of a building or the general public, who otherwise may be affected by contamination during the process.

9.2.1 Bulk sampling strategy

It is strongly recommended that the sampling strategy is discussed and agreed with the client before sampling occurs (see Table 7).

It is important that there is confidence in the integrity of the sampling service provider and its systems, which can only be achieved by the use of an appropriately accredited laboratory.

9.2.2 How many samples

The principle is to obtain representative samples of each ACM in sufficient number to take into account any apparent variations in the suspect material, including changes in its depth.

Homogenous manufactured products or components may be reasonably assumed to be similar, with the asbestos content uniformly distributed. Examples of such products are boards, sheets, cement, pipes, textiles, ropes, plastics and vinyls, bitumen roofing felt and gaskets, and one or two samples of these may suffice. Insulation and spray coatings that were applied on-site, however, are not always consistent. The type and percentage of asbestos present in these often depends upon what material was available at the time.

Other factors to be taken into account include the likelihood of previous repairs or replacements; the possibility of different ages of components
Table 7: Questions and considerations for bulk sampling strategy

<table>
<thead>
<tr>
<th>Question/topic</th>
<th>Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose of samples</td>
<td>As part of an asbestos survey; for a management plan; or limited to a particular area or material</td>
</tr>
<tr>
<td>Limitations/restrictions</td>
<td>Areas that are not to be disturbed, such as dealer rooms or the board room</td>
</tr>
<tr>
<td>Competence</td>
<td>Accreditation and relevant experience</td>
</tr>
<tr>
<td>Working arrangements</td>
<td>Out of normal working hours?</td>
</tr>
<tr>
<td>Known hazards</td>
<td>For example, fragile roofs or other hazardous substances or processes</td>
</tr>
<tr>
<td>Number of samples</td>
<td>Representative of range of suspected ACMs</td>
</tr>
<tr>
<td>Type of materials to be sampled</td>
<td>Coating, board, loose</td>
</tr>
<tr>
<td>Information required from samples</td>
<td>Type and approximate percentage or proportion of asbestos. Density of board material? (If so it may be necessary to determine the density of the material and whether it is ‘asbestos cement’ or ‘asbestos insulating board’, as risks associated with each vary)</td>
</tr>
<tr>
<td>Method of taking samples</td>
<td>Size of samples</td>
</tr>
<tr>
<td>Access arrangements/facilities</td>
<td>Stepladder/use of hydraulic platforms</td>
</tr>
<tr>
<td>Possible impact on business</td>
<td>Parts may need to be temporarily closed down/vacated</td>
</tr>
<tr>
<td>Protective measures</td>
<td>Enclosure, shadow vacuuming, dust sheets, cleaning up of debris</td>
</tr>
<tr>
<td>Exclusion of unprotected personnel</td>
<td>Warning notices, ropes or barrier tape</td>
</tr>
<tr>
<td>Emergency measures</td>
<td>In case of an incident causing extensive contamination</td>
</tr>
<tr>
<td>Repairs</td>
<td>Both temporary and permanent</td>
</tr>
<tr>
<td>Labelling of areas sampled</td>
<td>Labels may be impracticable, undesirable or cause unnecessary alarm, unobtrusive colour coding may be an alternative</td>
</tr>
<tr>
<td>Contingency</td>
<td>Possible need for return visit if results are not conclusive</td>
</tr>
<tr>
<td>Reporting</td>
<td>Programme for and presentation of results</td>
</tr>
</tbody>
</table>

* Care is required to ensure that there is no cross-contamination of the samples. Where a number of samples have been taken, there should be a comprehensive referencing system. This is to ensure that the results refer to the correct locations and that the samples are properly stored for a suitable period, so that they can be double-checked by others at a later date, if necessary.

(e.g. ceiling tiles, some of which may have come from old stock-piles); and the amount of the suspect materials or the number of components (insulating boards or tiles, for instance, may require one sample to be taken per room or every 25 sq.m).

The client’s planned and subsequent activities may also be relevant. For instance, where the whole or part of a building is due for refurbishment or demolition, it may be necessary to take samples to ‘prove’ conclusively that materials or components do not contain asbestos as well as to establish those that do. The selection of samples is subjective, but should be made on the basis of
a close visual inspection, looking for changes in colour, thickness, surface finish, repair and tell-tale identification marks or trade names (see Appendix 8 for further details).

9.2.3 Records

It is important that each sample is double-bagged before being passed to the laboratory for analysis. The sample should be labelled with a unique identification, which is also recorded in the inspection documentation, in order for its origin to be traceable. It is good practice to record as much information as possible, to ensure that there is no confusion as to the source location (in case labels fall off or are removed).

9.2.4 Risk assessment

Prior to sampling, a risk assessment should be conducted, taking into account the agreed sampling strategy and any significant hazards identified during the briefing with the client. From this, a safe system of working should be developed and recorded, via a written method statement or plan of work.

The following issues need to be addressed:

a) Protection of the sampler
   - PPE: an assessment should be made of the PPE required, e.g. disposable overalls, overshoes and a suitable mask or respirator (dictated by the type of material and the extent of disturbance, or the area from which the sample is taken, such as shafts or ducts); and
   - dust suppression: the PPE is a last resort. Airborne emissions should be controlled and minimised by pre-wetting the sample with water or a suitable wetting agent. Boards or sheets may be surface-sprayed, but lagging may need injecting. If this is not likely to be totally effective, or if it is not safe to use liquid (perhaps because of proximity to electricity), then ‘shadow vacuuming’, using a type H (BS 5415 vacuum cleaner), should be carried out.

b) Protection of the occupants
   - vacation of occupants from areas to be sampled;
   - protection of surfaces and equipment with impervious, easy-to-clean cover sheets;
   - removal and disposal of contaminated debris;
   - sealing or making good sampling points to prevent further fibre release (with PVA spray, tapes and/or plaster) – this can either be temporary or permanent; and
   - prevention of inadvertent disturbance of suspected ACMs until proven to be safe (via warnings, management procedure, physical protection or barriers).

9.2.5 Delivering samples of asbestos for laboratory analysis

Regulation 24 of CAR requires employers to ensure that raw asbestos or asbestos waste is stored, received into, dispatched and distributed in suitable sealed containers clearly marked in compliance with Schedule 2 to CAR, or where applicable, other more general Regulations, including the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004.

The Royal Mail lists asbestos as a ‘restricted good’, and it is only accepted for delivery if it is fixed in resin, plastic or glass matrix. Some other carriers will not knowingly carry asbestos at all (see Appendix 1, subsection 2.7).

9.3 Air sampling

Regulation 20 of CAR states that air testing can be conducted only by those persons or organisations accredited to ISO 17025 or equivalent criteria, in respect of organisation, quality systems, control of records, personnel, accommodation and environmental conditions, test and calibration methods, method validation and reporting results. The process involves the collection of fibres using a filter, which is then microscopically examined to count the number of fibres within a specified number of fields (with subdivisions marked on a slide), to assess the likely number of respirable asbestos fibres.

9.3.1 Why air sample?

There are a number of reasons why air sampling may be carried out. Personal sampling is used to assess compliance with the control limits (0.1 f/mL over 4 hours, or 0.6 f/mL over 10 minutes) and the adequacy of respiratory protection when work with asbestos is being carried out. Static sampling is
used to collect higher volumes of air to assess if air concentrations outside the work area/enclosure remain low (e.g. background, leak and reassurance sampling). Static sampling is also used, along with aggressive disturbance of the surfaces with a broom, inside the enclosure after the work has finished and the area has been cleaned as part of the site assessment for reoccupation. This clearance air sampling is part of a four-stage procedure designed to assess that all asbestos debris and dust have been effectively removed and the area has been left clean before the enclosure is taken down.

The clearance air sampling must show that air concentrations inside the enclosure are less than 0.01 fibres per millilitre of air, or if further cleaning will be required. This is a pragmatic test of the effectiveness of the removal based on the use of aggressive disturbance of surfaces and areas from which the asbestos has been removed and is not a control limit or safe level.

The procedures described in the HSE guidance note, HSG 248 Asbestos: The analysts’ guide for sampling, analysis and clearance procedures (2005), should be followed to ensure that the results are accurate and realistic. For example, the air pumps should be warmed up and running efficiently prior to sampling; filter holders should ideally be fixed face-downwards 1–2m above the floor for static sampling; and the number of samples and length of the disturbance for the clearance sampling is based on the size of the enclosure.

The method set out in Annex 1 of HSG 248 is based on counting fibres greater than 5µm long, visible under ×500 phase contrast light microscopy illumination and cannot identify and separate the asbestos from non-asbestos fibres. For monitoring workers and clearance sampling this usually does not matter as all fibres should be controlled. However, when sampling outside an enclosure for leak testing it is usually best to establish a background level before the work begins.

The sampling and analysis of air samples for asbestos is conducted following a rigid and uniform regime, and laboratories must be accredited or performing to the ISO 17025 standard to comply with CAR 2006. In the UK this means they are accredited for the test by UKAS. The laboratories that can carry out the test are listed on its website (www.ukas.org/testing). The final air concentration figure is derived by a statistical calculation of a representative selection of fields on the slide on which the sample is mounted.

### 9.3.2 Other purposes

There may be situations, such as where there is doubt or where litigation is anticipated, for which it is necessary to distinguish between asbestos and non-asbestos fibres. In these cases procedure described in Annex 1 of HSG 248 should be seen as an upper estimate, and other methods that can identify and discriminate fibres should be used. The strategy for this is set out in MDHS 87 Fibres in air. Guidance on the discrimination between fibre types in samples of airborne (HSE, 1998), and involves a range a techniques with analytical transmission electron microscopy (TEM) being the gold standard for the unambiguous identification of asbestos fibres. Again, laboratories must be UKAS accredited for this analysis.

### 9.4 Swab sampling

Swab tests, also sometimes known as ‘wipe tests’, are sometimes used to obtain samples of dust or debris that are too small for conventional bulk sampling, or in areas where air testing is not appropriate.

Swab testing has severe limitations. Unlike air testing, which is based on the measurement of an even distribution of fibres across the filter, swab testing is limited to very specific areas and thus may not be representative of the general area under consideration. The fibre counting method is based on size and does not discriminate between different types of fibre, many of which are likely to be non-asbestos.

This form of testing is not recommended by the HSE and it is not accredited by UKAS. If such tests are required, then samples of the dust should be taken on adhesive tape and analysed by scanning electron microscopy (SEM).

Asbestos Removal Contractors Association (ARCA) suggests that these tests are only likely to be of benefit in determining the physical spread of asbestos contamination, but warns of extreme care, including taking account of the environmental background levels of asbestos likely to be found almost anywhere.
9.5 UKAS guidance

HSE has issued detailed guidance for analysts in HSG 248 and this is used by UKAS for its own internal document, UKAS Lab 30, 2nd edition (2008). Some useful elements of the UKAS guidance are the following:

- Air sampling for ‘clearance indicator’ testing should only be undertaken in dry conditions and should not be carried out where stripped surfaces have been sealed.
- A visual inspection of the area to be sampled, to check for remaining asbestos debris, is necessary before air sampling.
- Cross-contamination must be avoided by ensuring that there is sufficient equipment, or a means of cleaning equipment between uses.
- Samples taken by a laboratory should usually be analysed by the latter. In any case, they should always be analysed by a laboratory holding UKAS accreditation for that particular test.
- There is no UK standard test specification for identification. HSG 248, Annex 2, describes the characteristics of asbestos and may be used as the basis of an accredited method.
- Laboratories should have documented in-house procedures and training to enable identification of the six regulated types of asbestos. The six types are: crocidolite, amosite, chrysotile, fibrous actinolite, fibrous anthophyllite and fibrous tremolite. Identification can be achieved by holding known reference samples of each for comparison. The latter three types are only rarely found in buildings.
- The use of photographic records is strongly recommended, in order to demonstrate the condition and location of suspected ACMs at the time of sampling or surveying.
- The counting of fibre samples and identifying of asbestos components is subjective and liable to human error, as it relies on operator experience, training and procedures. In order to minimise uncertainty, comprehensive records must be retained, and regular checking and auditing procedures undertaken to maintain quality control.

HSG 248 requires laboratories that carry out fibre-counting to participate in the Regular Interlaboratory Counting Exchanges (RICE) scheme, which is run under the auspices of the Committee on Fibre Measurement (CFM). In this scheme, sample slides are periodically re-examined by other laboratories.

Although there is not yet a similar compulsion for the identification of asbestos in bulk materials, UKAS states that laboratories should participate in appropriate inter-laboratory comparison or proficiency testing programmes, such as the Asbestos in Materials Scheme (AIMS), which is also run under the auspices of the CFM.

9.6 Qualifications

The British Occupational Hygiene Society (BOHS), in conjunction with the HSE and industry representatives, has developed modules that have relevance for asbestos sampling. For details of these, see Appendix 2. Other organisations, such as the Royal Society for Public Health, also offer alternatives to the BOHS proficiency modules.


10 Management plan

10.1 General

Regulation 4 of CAR requires every dutyholder of non-domestic premises to assess whether asbestos is, or is liable to be, present; to prepare and implement a plan for managing any risks arising; and to review and revise the plan as necessary. (See Appendix 1 for a summary of the requirements and an explanation of the terms used.)

The purpose of the plan is to create a written record of the dutyholder’s agreed method of dealing with the risks arising from ACMs that are known, or are presumed, to be present within the demised premises. It is to be consulted for assessing and managing the risks arising from the everyday occupation of the building and, in particular, when contemplating any change of use, alterations or carrying out of works, which might otherwise result in the uncontrolled release of respirable asbestos fibres. It is limited by the completeness, accuracy and currency of the survey information on which it is based. It is thus unlikely to be a definitive statement as to the full extent, type and condition of ACMs, and will identify the circumstances in which further investigations are necessary.

The HSE has published HSG 227 A comprehensive guide to managing asbestos in premises (2002), which lists the following ‘Key Facts’ in respect of the plan:

- ‘Managing asbestos means maintaining your (ACMs) in good condition to protect two groups of people:
  - those who work on the fabric of the building (electricians, plumbers etc.); and
  - those who work in the building (e.g. plant and office workers, cleaners etc.) who may come into contact or work near damaged or deteriorated ACMs.

- ‘Your Asbestos Management Plan:
  - is your way of ensuring that your employees or others do not disturb your ACMs;
  - can take many forms and need not be complex, but it does need to be effective’.

The management plan is an important legal document. In addition to its health and safety significance, it is required to be made available to, and to be inspected by, a variety of interested parties. This includes:

- those who intend to inspect or carry out works to the premises, who will need to know the location and condition of asbestos in order to safeguard their own health and safety;
- those who survey or prepare schedules of condition and dilapidations – depending on the scope of the commissions, they will need to review the contents of the plan to be able to advise their clients on the presence of ACMs and their likely financial and other implications;
- solicitors acting for potential purchasers or tenants – the plan should be on the list of essential documents that they will wish to obtain as part of their routine legal searches (see subsection 5.16, Legal enquiries);
- occupants and employees’ representatives, so they can be aware of any risks to their health;
- contractors, caretakers, facilities managers and managing agents carrying out or organising building alterations or maintenance;
- the emergency services (fire brigade);
- landlords and head lessees, to ensure that their tenants are adhering to lease covenants requiring compliance with statutory requirements; and
- HSE inspectors checking on compliance with Regulation 4 of CAR.

The absence of a suitable plan may thus have significant financial implications or affect the liquidity of the premises as an asset.

A plan is not required when the assessment confirms that asbestos is not, or is unlikely to be, present in the premises – for example, in a building constructed after 2000, or where there is confirmation from the project team that asbestos has not been used in the building’s construction.

Nevertheless, a written record should be kept of the assessment carried out and its conclusion, to show to an HSE inspector, a prospective purchaser or occupant.
10.2 Content

This guidance note is not intended to dictate or specify precisely how a management plan should be prepared, or its format and content. For advice on this, readers should refer to HSG 227. It is, however, important that surveyors and their clients understand the basic components of the plan and the factors to be considered in its preparation, so as to be able to advise, comment on or brief others as necessary. The principal matters are set out in Table 8, which indicates questions to be asked and considerations to be taken into account when preparing or reviewing a plan.

The dutyholder needs to be involved and take responsibility for the preparation of the plan, as only the dutyholder will be aware of future intentions and the anticipated programme for redecoration, refurbishment or major alterations. Such proposals, which could disturb ACMs, will need to be recorded and taken into account in the plan.

The dutyholder owns and is responsible for the safekeeping of the plan, but is also obliged to make the information available to anyone who is likely to disturb asbestos. In addition to the dutyholder’s own maintenance team and employees visiting contractors and surveyors, this also includes new owners or occupants. It is important that the plan is kept available for the life of the premises.

An asbestos survey report in itself is not a management plan, unless it contains the additional details on how the risks arising are to be managed. When contractors or surveyors visit the premises to carry out inspections or works that might reasonably access areas containing asbestos, it is not sufficient to provide only the asbestos survey report(s) for them to review and make their own judgments. Apart from the impracticality of this, particularly with large documents, the management plan should have prioritzed any ACMs on the basis of the assessment of their risks. In addition, the appointed person with the responsibility for co-ordinating the asbestos management should be aware of these risks and communicate those that are significant. This person will need to be familiar with the contents of the management plan, including any associated surveys and the arrangements in place.

Where the management plan attaches separate asbestos survey report(s) it should be kept up to date and record subsequent works, such as the encapsulation or removal of ACMs. It is a living document.

The duty to manage is primarily about putting in place the practical steps necessary to protect maintenance workers and others from the risk of exposure to asbestos fibres. It is not about removing all asbestos.

The HSE publication, The duty to manage, is available on the HSE website (www.hse.gov.uk). Also available there is the General Enforcement Guidance and Advice, Operational Circular (OC) 265/50 version 5, which includes examples of good practice and case studies demonstrating the different approaches that various public and commercial organisations have taken to tackle their responsibilities to manage asbestos.

The OC 265/50 sets out the key indicators for compliance. It looks for evidence of the following three considerations: (a) the adoption of a precautionary approach to working with asbestos; (b) the inspection and assessment of ACMs; and (c) the preparation of the management plan.

The key features that the HSE requires in the management plan are:

- a written plan identifying those parts of the building or structure with ACMs, or presumed to contain ACMs, and the assessment of the risks arising from each;
- identification of a responsible person appointed to co-ordinate ACM management;
- specific remedial action required and the management of asbestos in place (including any areas not yet accessed);
- a timetable for implementation of the plan;
- the establishment of monitoring arrangements;
- an emergency action plan for use in the event that ACMs are damaged or disturbed;
- a mechanism for informing employees and visiting contractors of location of ACMs and risks arising; and
- a system for checking arrangements and review of the plan (typically every 12 months, or where there is significant change to the organisation or personnel responsible for its implementation).

The HSE have produced a web-based tool that is suitable for the productions of some types of asbestos management plans.
<table>
<thead>
<tr>
<th>Question/topic</th>
<th>Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Competence of author</strong></td>
<td>Should be accredited or certified, or otherwise suitably experienced and equipped</td>
</tr>
<tr>
<td><strong>Dates of plan</strong></td>
<td>When first prepared, updated and last reviewed</td>
</tr>
<tr>
<td><strong>Working limitations</strong></td>
<td>Access restrictions caused by operations of occupants, plant and machinery, or because the materials are concealed by shopfitting, linings or within ducts, etc.</td>
</tr>
<tr>
<td><strong>Extent of premises inspected and included</strong></td>
<td>All parts reasonably accessible, including outbuildings, fixed and mobile plant, external pipes and bridges, service risers and ducts, above ceilings and below floors</td>
</tr>
<tr>
<td><strong>Is presence or absence of asbestos ‘proven’ or ‘presumed’ (or ‘strongly presumed’)?</strong></td>
<td>If ‘proven’, then by what means (for example, shown on as-built drawings, in the health and safety file, or proven through sampling); or if ‘presumed’, then what factors were considered (for example, physical appearance, typical use and age)?</td>
</tr>
<tr>
<td><strong>Sampling</strong></td>
<td>Competence of sampler, sampling regime and scope (from 21 November 2004 samples may only be analysed by an accredited person or organisation)</td>
</tr>
<tr>
<td><strong>Dutyholders’ intentions for premises</strong></td>
<td>Dutyholders’ short-, medium- and long-term plans, such as redecoration, refurbishment or demolition</td>
</tr>
<tr>
<td><strong>Significant changes</strong></td>
<td>All significant changes to the premises since the initial preparation or last review of the plan</td>
</tr>
<tr>
<td><strong>Appointed person</strong></td>
<td>Person (and where appropriate, deputy) identified by the dutyholder as responsible for management of ACMs</td>
</tr>
<tr>
<td><strong>Measures for managing risk</strong></td>
<td>Measures to protect, maintain or, where necessary, remove asbestos, should be specified, including information on the location and condition of ACMs</td>
</tr>
<tr>
<td><strong>Means of providing information on location and condition to persons likely to disturb asbestos</strong></td>
<td>Labelling of ACMs, or ‘permit to work’ for maintenance team or visiting contractors, requiring inspection of the plan prior to any works that could disturb asbestos (such as maintenance, alteration or demolition)</td>
</tr>
<tr>
<td><strong>Distribution of significant information</strong></td>
<td>To occupants and safety representatives of employees</td>
</tr>
<tr>
<td><strong>Emergency provisions and liaison with emergency services</strong></td>
<td>Emergency arrangements and information to be made available to the fire brigade</td>
</tr>
<tr>
<td><strong>Availability of the plan</strong></td>
<td>Details of location and the person responsible for its safekeeping, which may vary from ‘appointed person’ (plan should be kept on site, unless premises are vacant, then the plan should be kept nearby)</td>
</tr>
<tr>
<td><strong>Monitoring (condition of ACMs)</strong></td>
<td>Arrangements for monitoring ACMs – by whom and how often? (frequency depends on individual circumstances and the likelihood of damage, but should be checked, as a minimum, every 6 to 12 months)</td>
</tr>
<tr>
<td><strong>Reviewing (implementation of plan)</strong></td>
<td>Arrangements for reviewing management measures – periodic checks ensuring that arrangements are working, for example, when new staff are appointed and, as a minimum, every six months; the extent of the review will vary according to the type, size and complexity of the premises</td>
</tr>
<tr>
<td><strong>Records</strong></td>
<td>Conclusions of each monitoring and review</td>
</tr>
</tbody>
</table>
10.3 Ways of managing ACMs

The risks arising from ACMs can be controlled or removed, either indirectly by management systems or ‘management actions’ (see Table 9), or directly by physical activities or ‘physical control actions’ (see Table 10), or by a combination of both.

10.4 Asbestos registers

10.4.1 Non-domestic premises

Prior to CAWR 2002, there was no specific legal requirement to produce a register or record of asbestos materials in buildings, however, there is general health and safety legislation, notably the Health and Safety at Work etc. Act 1974 and, more specifically, the Management of Health and Safety at Work Regulations 1999. They require employers (including persons in control of premises) to assess all significant risks, including asbestos, to the health and safety of their employees and anyone else who may be affected by their undertakings, and to remove or control these risks and record significant findings.

Regulation 4 of CAR requires every dutyholder for non-domestic premises to assess whether asbestos is, or is liable to be, present. Where appropriate, the dutyholder is obligated to prepare and implement a plan for managing any risks arising, and to review and revise the plan as necessary. The Regulation itself does not specifically refer to a ‘register’, but the guidance, in paragraph 30 in the context of example 3, states that ‘a record of the asbestos present, such as a register, must be compiled and kept up to date’.

HSG 264, paragraph 146, gives guidance on the register, stating that it is ‘a key component of the management plan’. The information is derived from the survey report but ‘the survey report itself will generally not be the asbestos register’; instead, it ‘will be simpler document’ (HSE emphasis). Paragraph 147 continues by stating that the register will be ‘a living document which must always contain current information on the presence and condition of asbestos’, including any deletions, additions or changes as necessary.

The register should be readily available in a manner and format that can be given to other dutyholders (including visiting contractors and/or tradespeople) or in response to legal enquiries from solicitors or surveyors in connection with dilapidations, or termination or change of occupation of the property.

Table 1 of HSG 264 includes an example of a suggested format for the register containing the following column headings:

- location;
- product type;
- extent;
- accessibility;
- condition;
- surface treatment;
- asbestos type;
- sample number;
- sampled/presumed/strongly presumed;
- material assessment score and action; and
- priority score and action.

The material assessment is an algorithm based on the main factors influencing the likelihood of the release of airborne asbestos fibres (product type, condition, surface treatment and asbestos type). The guide suggests a scoring range based on the potential for fibre release of 1 (low), 2 (medium) and 3 (high). A combined score of 10 or more is rated as high, 7–9 medium, 5–6 low and 4 or less very low.

Priority score and action is based on a risk assessment considering:

- location;
- extent;
- use of the location;
- occupancy of the area;
- activities carried on in the area; and
- likelihood/frequency of maintenance activities.

The combined material and priority assessments for each ACM can be used to determine the priority of each and identify those requiring remedial action and the type of action required.

While the surveyor can assist by providing or advising on the information necessary to carry out the assessment, CAR 2006 requires the dutyholder to make the actual risk assessment based on detailed understanding of the use of the premises.
Table 9: Indirect – management actions

<table>
<thead>
<tr>
<th>Method</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolate and restrict or exclude access</td>
<td>Restricted zones should have controlled entry and be behind locked doors with keys available only to authorised persons</td>
</tr>
<tr>
<td>Warn of dangers</td>
<td>Keep the Management Plan readily accessible and available, containing a clear easy-to-follow record of the locations of known or presumed asbestos containing materials</td>
</tr>
<tr>
<td>Signs or labels</td>
<td>Signs or labels need to be clear and durable (and should be a last resort, if no other appropriate preventative or protective measures can be taken). Labelling should conform with the Health and Safety (Safety Signs and Signals) Regulations 1996</td>
</tr>
<tr>
<td>Training of staff</td>
<td>Training of staff could form part of inductions, reinforced by periodic ‘toolbox talks’</td>
</tr>
<tr>
<td>Monitor condition</td>
<td>Periodic inspection should be performed, as a minimum, every 6–12 months, with condition recorded</td>
</tr>
<tr>
<td>Permit to work</td>
<td>A formal procedure should be in place to ensure that prior to any activity that might disturb asbestos, reference is made to the management plan. This should be included within the ‘site rules’ issued to contractors. In addition, a formal procedure should be in place to ensure that any alterations are recorded and that the management plan is updated</td>
</tr>
<tr>
<td>Maintain and update record of ACMs</td>
<td>Any removal or treatment works and condition should be recorded</td>
</tr>
</tbody>
</table>

Table 10: Direct – physical control actions

<table>
<thead>
<tr>
<th>Method</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decontaminate</td>
<td>Only by competent persons, using appropriate control measures and suitable equipment</td>
</tr>
<tr>
<td>Repair damaged ACMs</td>
<td>Use appropriate fillers and coatings</td>
</tr>
<tr>
<td>Enclose/protect</td>
<td>Use physical barriers or cover panels (take care when fixing to ACMs)</td>
</tr>
<tr>
<td>Encapsulate</td>
<td>To prevent release of airborne fibres:</td>
</tr>
</tbody>
</table>
| • paint                    | • Asbestos cement – use alkali-resistant paint  
• Insulation board – use PVA emulsion paint                                                                                                                                       |
| • proprietary              | • Bituminous or flexible/semi-flexible polymeric coating                                                                                                                           |
| Remove                     | Only by competent contractors (who must be licensed by HSE, unless only undertaking low-risk activities subject to CAR Regulation 3 exception), using appropriate control measures and equipment |

10.4.2 Domestic premises

Regulation 4 of CAR does not apply to domestic premises. Notwithstanding this, if contractors carry out any works in a domestic property, then the remainder of the Regulations apply to those activities. All premises, including domestic premises, are subject to the Occupiers Liability Acts 1957 and 1984. These require property
owners and occupiers to be aware of potential significant hazards to health and safety. They must take reasonable care in all circumstances to ensure that all persons, including visitors and trespassers, do not suffer injury on the premises. The location and condition of any asbestos need to be taken into consideration in deciding what protective measures, if any, are required.

10.5 Emergency plan and procedures

Where asbestos is present, employers and ‘persons in control’ of premises are obliged to have an emergency plan prepared in advance (see Table 11). This obligation also applies to vacant premises.

Table 11: Emergency planning requirements

<table>
<thead>
<tr>
<th>Scope/subject</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety procedures</td>
<td>Ensure that safety procedures, including safety drills, have been prepared</td>
</tr>
<tr>
<td>Information</td>
<td>Ensure that details of the emergency arrangements, including hazard identification and a note of relevant work hazards and specific hazards likely to arise at the time, are available</td>
</tr>
<tr>
<td>Warning and communication systems</td>
<td>Establish warning and communication systems to facilitate an appropriate response in the event of an emergency</td>
</tr>
<tr>
<td>Inform</td>
<td>Ensure that details of the emergency arrangements and the warning and communication systems are made available to the relevant accident and emergency services (internal or external) and displayed at the workplace, if appropriate</td>
</tr>
<tr>
<td>Immediate response</td>
<td>Note the immediate steps to be taken to mitigate the effects, restore the situation to normal and inform any person(s) who may be affected</td>
</tr>
<tr>
<td>Limit access</td>
<td>Restrict access to affected areas to those persons needed to carry out remedial measures and who are properly trained, equipped and protected</td>
</tr>
</tbody>
</table>
11 Types of property

11.1 General

Asbestos can be found in almost all types of building constructed prior to 2000, including commercial, industrial, residential, educational, recreational and agricultural premises.

The age of a building may be an initial guide as to the likelihood of asbestos content, but it is not conclusive and cannot be relied upon. For example, asbestos would not usually have formed part of the original construction of historic buildings, but it may have been used in subsequent alterations, especially to services.

Asbestos was particularly popular in the 1960s. In the UK the import, supply and use of blue and brown asbestos, together with asbestos insulating board (AIB), were banned in 1985. Except for a few specialist uses, such as high efficiency filters, white asbestos was similarly banned in 1999. It is thus generally accepted, including by the HSE in various publications, that if a building was built after 2000, then asbestos is unlikely to be present and no action is necessary. Unless there is reasonable proof to the contrary, then it should be assumed that buildings constructed prior to 2000 do contain asbestos.

The type of construction of buildings can also be an indicator. Steel-framed buildings, for instance, often used asbestos, either sprayed or in board form, as fire protection, whereas this was generally not necessary in those with concrete frames. In lightweight timber-framed buildings, particularly those that were system-built, asbestos boarding was often used for external cladding, as internal linings and sometimes as a fire-resisting core.

11.2 Residential

The majority of the legislation concerning asbestos arises from the parent enabling act, the Health and Safety at Work etc. Act 1974, and is thus confined to workplaces (i.e. non-domestic premises).

The Act and the Regulations that flow from it do not apply to the fabric, structure and services of domestic premises, namely ‘a private dwelling in which a person lives’. They do, however, apply to any work activity that takes place there, for example, work undertaken by a builder, plumber or electrician. There is more general legislation that applies to non-domestic premises, such as the Defective Premises Act 1972 in England and Wales, the Civic Government (Scotland) Act 1982 in Scotland and the Occupiers Liability Acts 1957 and 1984.

In addition, legal precedents have established that the common parts of flats (in housing developments, blocks of flats and some residential conversions) are not part of a private dwelling, and are therefore classified as non-domestic. Thus, Regulation 4 of CAR, which imposes a ‘duty to manage asbestos’ in all non-domestic premises, does not apply to houses or private dwellings, but does apply to any common parts of those premises.

Because of the wide variety of internal layouts, tenures, mixed uses and degrees of permanence of these arrangements, there are bound to be grey areas. The final arbiter as to whether any particular premises, or a part thereof, are domestic or not will be the courts. In the meantime, surveyors will have to use their own judgment, or in specific situations seek guidance from their local HSE office.

In order to give some assistance, a list of typical residential configurations and an indication of whether these are probably domestic or non-domestic is shown in chart form in Appendix 6. It is based on information contained in the L127 ACOP The management of asbestos in non-domestic buildings and the HSE’s response to questions put by RICS. The list is non-exhaustive, but should give an indication of the principles to be considered in most cases.

The legal duties in respect of asbestos will vary according to the particular configuration or use of the premises, and this needs to be taken into account. In many cases, the legal situation will be obvious, but in others it may not and an assumption will need to be made.

The surveyor may not be aware of the client or
occupant’s intended short- or long-term use of the premises. It is therefore important that not only are any assumptions and stated intentions recorded in any report, but also a warning, where appropriate, is included that any subsequent change of use may alter the legal responsibility in respect of asbestos. Further professional advice should be sought at this time.

### 11.3 Vacant premises

If the premises are vacant, the dutyholder – whether this is the landlord or tenant, or a combination of the two – still has a duty to manage asbestos to the same extent as if the premises were occupied.

People likely to be at risk in vacant premises include security staff, cleaners, agents and potential purchasers or lessees visiting, surveyors inspecting on behalf of others, trespassers and the emergency services.

There is no requirement to ensure that asbestos management plans are kept on-site, but they do need to be kept within a reasonable proximity and be readily available.

### 11.4 Schools

The issue of asbestos and schools is of particular concern.

The extra care and protection that is required to be afforded to children and young persons is a highly emotive matter, irrespective of the type of hazard. Notwithstanding this, the combination of the long period that asbestos-related diseases take to develop from first exposure, and the cumulative effect of repeated exposure over time, means that the risk to health from exposure to asbestos is often significantly greater for this demographic of the community.

There have been a number of well publicised cases in which surveyors have been successfully prosecuted for failing to properly investigate or consider the likelihood of disturbing ACMs concealed within the fabric of school buildings while administering routine construction projects, including the replacement of windows and alterations. For these reasons, particular care is required when the building is a school or creche, etc. Some forms of system-built construction peculiar to this sector are known to contain considerable quantities of asbestos in their original design.

The Consortium of Local Authorities Special Programme (CLASP) was created to develop system buildings that could be provided quickly and efficiently. This entailed lightweight construction, often using timber and steel frames, which required fire protection (e.g. to columns and blind boxes to windows), and AIB was commonly used for this purpose. In addition, asbestos was also extensively used in the services (boilers and pipework), and as wall panels (internal and external) and ceiling tiles. System buildings were also used for various other public sector use, such as Ministry of Defence, local authority, fire, police, health and railways. However, this was less common compared with schools, for which it is estimated that there are 1,400 sites affected.

CLASP buildings erected between 1945 and 1980 included ACMs. There were many different types of building, but those that are known to contain asbestos include Marks 2, 3, early 5 and especially 4 and 4b. When working on a CLASP building, care should be taken as the specification of system buildings has evolved and materials changed, including the types and uses of ACMs.

The HSE publication Sector Information Minutes (SIM) 7/2007/04 Asbestos in CLASP and other system buildings (produced by the HSE Asbestos in Schools CLASP Working Group – March 2007) provides further details, including advice on sealing gaps around column casings concealing ACMs to prevent fibre release.

There are many other system build designs including:

- local authority systems – Scape System Build Ltd; the method system; Second Consortium of Local Authorities (SCOLA); Metropolitan Architectural Consortium for Education (MACE); ONWARD; and Schools Education Advisory Committee (SEAC);
- contractor systems – Hills; Laingspan; and Vic Hallam.

### 11.5 Historic and listed buildings

See subsection 5.4 for information.
12 Asbestos removal

12.1 Basic principles

The basic principles with regard to the safe removal of asbestos are:

- use of trained personnel;
- strictly controlled conditions – to safeguard occupants and the general public, as well as workers;
- protection of personnel (monitors as well as asbestos strippers);
- safe disposal of contaminated waste;
- maintenance of comprehensive records;
- time implications; and
- other sundry factors.

These are discussed in more detail in the following subsections. For guidance on whether ACMs should be removed, repaired or treated, see Appendix 9.

12.1.1 Trained personnel

Only competent, adequately resourced personnel, licensed contractors and accredited laboratories should be used (see Appendix 2).

CAR 2006 requires that unless the works are subject to Regulation 3(2) exceptions, then they must be carried out by a licensed asbestos contractor. See Appendix 1 for a detailed explanation of asbestos licensing requirements, and Appendix 10 for a flowchart to determine whether a Regulation 3(2) exception of CAR applies.

Even when there is no requirement for the use of a licensed asbestos contractor, the persons carrying out the work must be competent and properly equipped for such activities.

Licensed contractors are governed by strict training and insurance requirements, and their performance is monitored by the HSE. Even when the work is such that there is no mandatory requirement to use a licensed contractor, great care must be taken to ensure that the appointee has the appropriate skills, experience, equipment and other resources, as well as insurance, where necessary.

12.1.2 Strictly controlled conditions

Asbestos removal works should only be carried out under strictly controlled conditions, including the following:

- The working area should be enclosed, using dust-tight, suitable impervious sheeting supported by a framework fixed or adhered to the wall, ceiling or joinery, with all openings and air vents sealed and three-stage airlocks for entry and exit.
- This should incorporate clear vision panels and/or CCTV for monitoring purposes.
- Enclosures may not be practical for use in some external situations, or alternatively special weather protection may be required.
- Plant, equipment, fittings, floor coverings, etc., should be removed or protected to prevent contamination.
- Where reasonably practicable, extraction should be carried out to generate negative air pressure, reduce dust levels and prevent dust escaping through any imperfections in the enclosure or airlocks. High-efficiency filters, with the exhaust vented to the external air, should be used. In addition, extraction should be calculated according to the air volume of the enclosure, and overrun fans should be used for as long as possible, to remove airborne fibres.
- The following monitoring regime should be conducted:
  - background air monitoring – to provide base datum;
  - visual inspection/smoke test of enclosure for leaks, prior to the start of stripping;
  - leakage air monitoring during stripping (one to two hours after start of stripping);
  - on completion, visual inspections for any remaining dust or debris (paying particular attention to ledges, recesses and voids);
  - clearance air monitoring within the enclosure, to see if safe to remove;
  - possibly reassurance air monitoring outside of the enclosure, to see if it is safe to reoccupy; and
  - thorough cleaning of surfaces after removal.
• The enclosure should be cleaned, taking note of the following:
  – surfaces should be wire-brushed, where appropriate;
  – vacuum cleaners with high-efficiency filters should be used;
  – tack rags should be used to wipe down all surfaces, ledges, etc.;
  – all surfaces (including the enclosure) should be sealed with polyvinyl alcohol (PVA), or similar; and
  – all tools, dirty overalls, respiratory equipment, etc., should be cleaned before removal, and then sealed in impervious bags, prior to exit via airlocks.

12.1.3 Protection of personnel

Personnel should wear impervious protective clothing, close-fitting at cuffs and ankles, with no pockets, as well as head covering and easy-to-clean footwear or overshoes. If there is a need to wear wellington boots, overalls should be dressed over them, rather than tucked into them.

Differently coloured sets of overalls should be used for the various stages of decontamination and transit to remote decontamination facilities. This will readily demonstrate to others that the proper procedures are being followed. Respirators should be used with appropriate filters, or breathing apparatus (personalised to suit the wearer’s physical characteristics – size and shape of face, facial hair, etc. – in order to ensure an airtight seal).

Hygiene facilities need to be provided, including accommodation for decontamination and showers (mobile, or purpose-built on-site). Power, water and filtered drainage should be available.

12.1.4 Safe disposal of contaminated waste

To safely dispose of contaminated waste, the following should be performed:
• consult with the disposal authority – in England, the county council, and in Scotland or Wales, the district council – or the local environment agency office;
• remove material intact, where possible, or cut fixings;
• double-seal material in two suitable plastic bags, or double-wrap it in polythene, with each bag clearly and permanently marked with a suitable warning of contents, together with the name and address of the removal operator;
• remove waste immediately from the site, or store it in special sealed skips that are kept locked; and
• maintain a strict system of records, with a ‘consignment note’ system for tracking removal from site and disposal at a licensed site.

The usual method of disposal is burying or earth cover. Other patent systems include ‘vitrification’, where asbestos is ‘melted’ into glass, but this is very expensive and not widely available.

12.1.5 Comprehensive records

The following records should be kept:
• air-monitoring results;
• maintenance records of plant, change of filters, etc.;
• a note of any defects, leaks, etc., and action taken;
• copy of insurance policies (PII and employer’s liability);
• copy of the training records of operatives; and
• copies of the medical certificates of operatives.

Sample slides should be retained for cross-checking if required.

12.1.6 Time implications

The following factors should be considered:
• Out-of-hours working is common.
• It is often necessary to stay longer than anticipated to deal with unforeseen problems, so flexibility is important.
• Preparation time is required for:
  – background air sample (taken while enclosure is erected); and
  – erection/sealing/testing of enclosures and airlocks.
• For stripping of ACMs, the following time-dependent factors should be considered:
  – wet-stripping (injection process);
  – cleaning of all surfaces (structure, fabric, finishes and enclosure);
  – limits on working hours, due to the high temperatures generated within protective
suits and the lack of ventilation, and frequently due to the heat generated by the working plant and equipment;
– limits to the number of sample readings per analyst; and
– putting on of PPE and time spent in the decontamination process.

• For clearance and dismantling, the following should be considered:
– allowance for percentage failure of air tests and retesting for clearance and reassurance air sampling;
– re-cleaning of interior of enclosure after each failed test; and
– time for clearing away and making good where surfaces have been disturbed.

12.1.7 Other sundry factors

The following must be taken into account:
• provision of temporary facilities/protection;
• informing the statutory authorities – fire brigade, police, etc.;
• erection of warning notices – the users of the building must be informed (using multilingual notices if appropriate);
• means of escape in case of fire;
• fire precautions – have portable fire extinguishers on hand;
• the importance of close liaison and good, quick communications between the analyst and strippers, to avoid delay in obtaining test results;
• provision of an on-site laboratory for the rapid analysis of air samples;
• use of a patent demountable framework for the enclosure, airlocks, etc.;
• the re-use of enclosures – these will need thorough cleaning;
• use of patent enclosures, e.g. incorporating gloves for the removal of small panels or limited sections of lagged pipework; and
• emergency procedures. These must be thought out and catered for in advance, with consideration given to the level of contamination at which emergency action must be taken (including the vacation of occupants, provision of temporary accommodation).

12.2 Methods of removal

12.2.1 Fibre concentrations released during removal

The HSE publication, Introduction to asbestos essentials (2001), contains a table that shows typical exposures to asbestos fibres in cases where poor control measures and work practices have been employed. The exposures, measured in fibres per millilitre of air, range from ‘up to 1,000’ for dry removal of sprayed (limpet) coating to just ‘1’ for hand-sawing or drilling of asbestos cement.

Hand-sawing of asbestos insulating board is likely to generate 10 times more fibres than similar works carried out to asbestos cement. The use of a powered saw increases the fibre release by a factor of between 2 and 20, depending on the type of saw. Meanwhile, just sweeping up debris from asbestos insulating board could generate up to 100 f/mL of air.

12.2.2 Guidance

Dry stripping alone is no longer generally permitted, while wet stripping (dampening) or the use of wetting agents/surfactants is normally essential to reduce fibre emission. This often entails the use of high pressure water jets. It is important that electrical equipment is protected, any drain-off is collected and filtered, and the area is allowed to dry out prior to conducting any reassurance testing.

Board material should be removed intact where possible, causing minimal disturbance (i.e. unscrewing or cropping fixing bolts), and the use of power tools should be avoided.

The L143 ACOP has useful guidance on suitable removal techniques for particular forms of ACMs and working environments.

Removal of insulation and coating

• This usually requires controlled wet stripping and avoiding use of abrasive power tools.
• Sometimes techniques such as ‘wrap and cut’ may be more appropriate, e.g. for the removal of redundant pipework.
• Wet injection techniques should uniformly wet the asbestos prior to its removal. This needs to be carefully controlled and monitored to avoid
over saturation, which forms pools of liquid or reduces the material into unmanageable slurry. Ideally, the material should achieve a ‘dough-like’ consistency before removal.

• Where the asbestos material is being removed from its substrate, dry stripping methods should only be used when there is no reasonably practicable alternative.

**Non-licensable asbestos removal work**

This includes:

• removing sheets whole or using ‘wrap and cut’ method;
• avoiding the use of power tools;
• keeping materials thoroughly wet; and
• utilising local exhaust ventilation systems, such as cowls on drills and shadow vacuuming.

**Removal of asbestos-containing decorative coatings**

• Work area is to be segregated and enclosed using the existing room or a purpose-built enclosure.
• Access to the enclosure is to be regulated via use of a two-stage airlock, with workers decontaminating in the airlock system prior to leaving the work area. To do this, they should vacuum down using an H-type vacuum cleaner, wash footwear, wipe respiratory protective equipment (RPE) in the inner stage and remove PPE in the outer stage of the airlock.
• Portable items that might be contaminated by dust and debris should be removed prior to any works starting, and remaining items protected with plastic sheeting.
• RPE should be suitable and adequate. Disposable FFP3 or half mask, respirators (with P3 filters) should be adequate as worker exposure is unlikely to exceed the control limit.
• Once work is completed, the area should be thoroughly cleaned, with all visible traces of dust and debris removed. A thorough visual inspection should then be carried out. Air sampling will not be expected as part of the clearance procedures.

In addition to these measures, which cover mainly containment and prevention of spread, the control regime should include good work practices that minimise dust generation and spread, such as:

• removal of the whole underlying plasterboard with coating intact, if possible;
• steam to loosen and then scrape;
• apply a hydrating gel to loosen and then scrape;
• apply solvent-free chemical and then scrape; and
• wet blasting, which may be necessary for residual sections or very difficult material, but should not be employed in other circumstances.

Where ceilings are damaged by fire or other accidental or deliberate action, there are certain practical difficulties in removing the coating. The ceiling boards or lathe and plaster should be thoroughly dampened down (using an effective wetting system, e.g. airless spray) before and during their pulling down. Debris and dust on the floor should also be dampened down.

**Removal of asbestos insulating board**

Certain work with AIB that is short, non-continuous maintenance activity and conforms to the principles of good practice will be non-licensable.

Work methods that reduce the levels of fibres released at source should be used for any work, preferably by removing the boards whole (i.e. without breaking them) and, whenever practicable, by controlled stripping techniques using H-type vacuum cleaners and water sprays.

Further guidance on methods of reducing fibre release for licensable work can be found in HSG 247 *Asbestos: The licensed contractors’ guide* (HSE, 2006) and, for non-licensable work, in *Introduction to asbestos essentials*.

### 12.3 Substitute/replacement materials

Because of the extensive and various qualities of asbestos, it may be difficult to choose a suitable replacement material, and a combination of materials may be needed following its removal.

Many new substitutes may lack the strength of the original, for example some asbestos-free roof cladding is up to 15 per cent weaker. The supporting structure may need to be redesigned to suit. In addition, many substitutes have similar size microscopic fibres, but which are not as durable.
Most are only of comparatively recent development, and there is conflicting opinion as to the risk to health of inhalation or ingestion of man-made mineral fibres. The debate continues, but the World Health Organization currently considers that the health risks due to exposure of man-made mineral fibres during use are generally low or very low compared to similar exposure to asbestos.
Removal of ACMs is the last resort and should be justified, either by virtue of their poor condition to carry out alterations or other works that will disturb them, or where the risks of subsequent damage or disturbance are unacceptable.

Encapsulation, the physical protection of the ACM or the sealing of their friable surfaces to prevent the release of fibres, should be considered as an alternative.

See Appendix 9 for a table giving guidance on whether ACMs should be removed, repaired or treated.

### 13.1 Types of physical protection

The encapsulation of ACMs can be done in a variety of forms, such as:

- sheets of suitable material – metal, wood, etc.;
- cement/mortar/impervious coatings;
- specialist proprietary flexible/semi-flexible products (e.g. high build elastomeric coating, penetrating encapsulants, water based epoxy resins); and
- painting insulating board or asbestos cement (PVA emulsion for the former, and alkali-resistant paint for the latter, or bituminous coating for either.

### 13.2 Qualities to be considered

When deciding the form of encapsulation, the following matters should be considered:

- length of life of component or substrate;
- adhesion to substrate;
- resistance to a range of temperatures;
- impact resistance;
- fire resistance or non-combustibility;
- non-toxic;
- decorative finish;
- weatherproof; and
- vermin and bird resistance.

### 13.3 Precautions during encapsulations

Works that involve physically touching the ACM, as opposed to boxing around it, are subject to CAR 2006.

Depending on circumstances, the area may need to be enclosed if containing blue asbestos, or if the material is friable and liable to give off fibres. For minor works, a physical barrier should be set up a minimum of 10m from the work area.

### 13.4 Advantages

The advantages of using encapsulation are that it:

- is a cheaper alternative to removal – no cost of replacement material;
- allows shorter period of disturbance;
- retains inherent qualities of asbestos, e.g. fire resistance, sound/thermal insulation;
- is appropriate for inaccessible locations where removal difficult;
- can be used as a temporary measure to gather resources, or in an emergency; and
- avoids decanting, shutting down premises, plant, etc.

### 13.5 Disadvantage

The ACM remains in place and will need to be managed thereafter, and eventually removed, at the end of the useful life of the structure, plant or component in which it is located.

### 13.6 Management considerations

These include:

- records for maintenance;
- regular checking – to see if still sealed or intact;
- warning notices; and
- possibility of damage or disturbance in future.
13.7 Guidance

The HSE Asbestos Essentials webpage (www.hse.gov.uk/asbestos/essentials) includes useful links to resources, such as A7 Painting undamaged asbestos insulating board and A16 Painting asbestos cement sheets. The ARCA publication No 10, Recommended Guidelines for the Encapsulation of Asbestos Containing Materials (2008) is also a useful source for further information.
The term ‘environmental clean’ is not used in any HSE publications, thus it has no officially accepted definition. Consequently, it is used arbitrarily within the asbestos industry.

In order to avoid this ambiguity, the Technical Committee of the Asbestos Removal Contractors Association has defined it as follows:

- the removal of asbestos contamination consisting of loose, non-adhered dust, or friable debris which can be removed using an H class vacuum, damp rags or tak rags.
- If any physical force is required to remove the material, such as scraping or brushing of pipes with insulation residue on them, this does not constitute an environmental clean (ARCA & ATAC News, Issue 7, 2001).

It does not matter that the material may comprise dust or small particles, as any such work is subject to the CAWR 2006.
15 Demolition and land clearance

15.1 Demolition

Like any works liable to expose employees or others to asbestos, it is important that demolition does not take place until the employer has carried out an assessment to determine the presence of any ACMs, and their type and condition.

Demolition justifies the most thorough of surveys – the refurbishment and demolition survey (see subsection 8.3.2) – as it will not be limited by the need to retain any part of the building or structure. In addition, any ACM that is not identified is likely to be widely dispersed during the demolition process, potentially resulting in widespread contamination.

It is accepted that it may not be possible to discover all ACMs during the initial survey if they are hidden deep in the structure, and they may only be revealed during the actual dismantling process. Where there is uncertainty, the demolition should proceed with caution, ever alert to the possibility that additional ACMs may be found, and with arrangements in place to stop work and remove the risk.

The general principle is that ACMs should be removed prior to demolition, and this will apply in the majority of situations. All licensed ACMs should be removed, but there may be circumstances where this is not the case for lower risk materials. The L143 ACOP accompanying CAR 2006 stipulates:

where removal of ACMs is time-consuming and resource-intensive and only involves a lower risk material such as decorative textured coatings containing asbestos, then removal prior to demolition or major refurbishment may not be reasonably practicable (paragraph 78).

This is only intended to apply to those materials which are ‘firmly linked in the matrix’ such as textured decorative coatings attached to the concrete substrate.

Each situation will be subject to a suitable and sufficient risk assessment, but examples of low risk ACMs that should normally be removed include:

- textured decorative coatings on non-asbestos board;
- asbestos cement sheeting, cladding and guttering; and
- small areas (less than 20 sq.m) of bitumen floor tiles.

Notwithstanding this general principle, sometimes remote demolition may be the safest option, leaving the low risk ACMs in place, avoiding the risks of working at height or where the access for working platforms is poor.

Where the low risk ACMs remain in place during demolition, control measures need to be applied to minimise the potential for contamination of personnel or the locale. These can include: controlled demolition techniques involving minimal disturbance (use of plant with impact hammers not pulverisers); dust suppression; remote operation of plant, such as rubble crushers; and trained personnel using suitable PPE. As a precaution, to prove that there has been no measurable contamination, airborne sampling is required.

15.2 Contaminated waste/rubble

The criteria for determining the category of waste material are given in the Hazardous Waste (England and Wales) Regulations 2005 (which came into operation on 16 July 2005, replacing the Special Waste Regulations 1996).

The Regulations stipulate a threshold of 0.1 per cent for concentration of carcinogens in waste, and any waste material at or above this level is deemed to be ‘hazardous waste’. Asbestos is one such carcinogen with a risk factor R49, which according to the EC Directive 67/548/EEC ‘may cause cancer by inhalation’ (1967).

In such case, special environmental controls apply for the handling of the material, including the requirement for the waste only to be disposed of at licensed sites. This can cost many times the cost of conventional disposal, even assuming that there is such a facility in reasonable proximity, and thus is a significant factor.
There have been a number of cases where large amounts of rubble and hardcore have been contaminated by the inadvertent inclusion of demolition material containing asbestos.

In order to avoid the unnecessary designation of the material as hazardous waste, the approximate amount of asbestos content should first be calculated. This is of particular relevance when the contamination is caused by the presence of ACMs that are inherently thin and have only a low asbestos content, such as textured decorative coatings.

For example, assuming that the average thickness of a coating applied to a ceiling is 3mm and the asbestos content is 5 per cent (3–5 per cent is suggested in the table within Appendix 2 of HSG 264), it would take a total area of 6,666 sq.m of ceilings to produce 1 cubic metre of asbestos.

Notwithstanding the unnecessary waste and expense, if materials are incorrectly disposed of as hazardous waste they are taking up valuable space required for the disposal of far more dangerous materials. Due to tightening of environmental controls, the number of suitable landfill sites is rapidly diminishing.

The reuse of ACMs is prohibited, however, the HSE takes the view that rubble containing firmly bonded asbestos, which it has not been reasonably practicable to remove prior to demolition and where the waste is below the 0.1 per cent threshold, will not contravene the Regulation 29 of CAR. The Environment Agency and the Scottish Environment Protection Agency have agreed that, subject to the conditions of any waste management licence or mobile plant operator's licence issued by the local authority, such waste rubble materials can be recycled. The buyer and/or haulier of the rubble must be provided with information about the content of any ACMs.

Whether the rubble is considered to be hazardous waste or not, where there is more than a ‘trace element’ of asbestos, CAR will apply. All reasonably practicable measures must be taken to prevent exposure and spread of the asbestos. This will entail conventional dust suppression techniques during the handling and/or crushing of the rubble.

For the disposal of residual rubble, measures should be taken to ensure that each consignment does not exceed the 0.1 per cent threshold, removing by hand, as necessary, any hot spots of concentrated asbestos debris. The process of removal will be covered as described in section 12, i.e. licensed or non-licensed asbestos workers should be used.

15.3 Disposal of rubble

Any surplus rubble, debris or waste (including from agricultural buildings) that contains more than 0.1 per cent asbestos must be disposed of as hazardous (special) waste at an Environment Agency or Scottish Environment Agency licensed landfill site.

15.4 Asbestos in the ground

Asbestos materials are sometimes found in the ground when excavating for foundations for new buildings, extensions or roads on brownfield sites during site investigations or groundworks, particularly on agricultural holdings. Except where it has been deliberately buried, this is usually in the form of small remnants of debris arising from the demolition of the original buildings or structures.

The risks arising must be assessed and will vary in each case depending on the extent and type of material, the asbestos content and its condition. However, generally on open sites the natural ventilation will mean that these are negligible and only basic hygiene measures will be required.

Before digging on a brownfield site, any prior desktop study or site investigation should have considered whether asbestos was likely to have been found or proven, and should be checked prior to excavations. Any suspicious material requires analysis for asbestos. Even if no asbestos is found in the sample, the subsequent excavation may still reveal suspicious material.

If suspicious material is found the contractor should stop work, keep the spoil and excavation damp, wash down the excavation equipment and collect all run-off water. The contractor should not backfill with asbestos material. The client should employ a suitable asbestos surveyor or testing laboratory to take samples, assess the risk arising and recommend any remedial treatment required.
Appendices
Appendix 1: Regulations

1 General

In view of the potential risks to health, all work that may disturb materials or components containing asbestos, particularly their removal or treatment, is strictly controlled.

The relevant Regulations are made under the enabling Act, the Health and Safety at Work, etc. Act 1974. The principal Regulations that apply to works that could expose persons to the risk of respirable asbestos fibres are the Control of Asbestos Regulations 2006 (CAR), which generally came into force on 13 November 2006. These supersede the Control of Asbestos at Work Regulations 2002 (CAWR), the Asbestos (Licensing) Regulations 1983 (as amended) and the Asbestos (Prohibition) Regulations 1992.

2 Control of Asbestos Regulations 2006

The following HSE publications provide information on these Regulations:

- L143 ACOP Work with materials containing asbestos – Control of Asbestos Regulations 2006; and

Notwithstanding the requirement for a licence, CAR 2006 apply to any work that may involve the exposure of persons to any form of asbestos – irrespective of the type, form or amount – and include activities undertaken in both sampling and laboratory analysis.

CAR identifies specific parties and imposes various statutory duties on them. The following lists the Regulations of CAR 2006 that apply to each of these various parties and summarises their legal responsibilities.

The ‘dutyholder’:

- Regulation 4 – manage asbestos in non-domestic premises.

‘Every person’:

- Regulation 4.2 – co-operate with the dutyholder so far as is necessary to enable the latter to comply with his or her duties to manage asbestos in non-domestic premises.

The ‘employer’:

- Regulation 5 – identify the type of asbestos;
- Regulation 6 – assess, prior to the works, the likely level of risk, determine the nature and degree of exposure and set out steps to prevent or control this by:
  - producing a suitable written plan of work;
  - subject to Regulation 3(2), not undertaking any work with asbestos unless holding an appropriate licence, which is issued by the HSE following assessment of the competence of the applicant, subject to terms and conditions, and can be withdrawn if there is a serious transgression;
  - subject to Regulation 3(2), notifying the enforcing authority of any work with asbestos (at least 14 days before the works);
- Regulation 10 – inform, instruct and train personnel (see also the following subsection);
  - to prevent exposure of employees to asbestos so far as is reasonably practicable, or where not, reduce to the lowest level reasonably practicable for both the exposure (without relying on the use of respirators) and the number of employees exposed;
  - to take reasonable steps to ensure that any control measures are properly used or applied (see Regulation 21);
  - to maintain control measures and equipment (keeping records of them);
  - to provide suitable personal protective clothing and ensure that it is properly used and maintained;
- Regulation 15 – establish arrangements to deal with accidents, incidents and emergencies;
- Regulation 16 – prevent the spread of asbestos from the workplace, or where not possible, reduce to the lowest level reasonably practicable;
• Regulation 17 – keep asbestos working areas and plant clean, and clean thoroughly on completion (see also the following subsection);
• Regulation 18 – designate ‘asbestos areas’ and ‘respirator zones’, and monitor and record exposure where appropriate;
• Regulation 19 – monitor exposure of employees to asbestos by air monitoring (if this is not deemed necessary, record the reasoning for this; see also Regulation 21);
• Regulation 20 – ensure that air testing is only carried out by a person with ISO 17025 accreditation or equivalent criteria;
• Regulation 21 – ensure that the analysis of samples of material to determine whether they contain asbestos is only carried out by a person with ISO 17025 accreditation or its equivalent;
• Regulation 22 – maintain health records and medical surveillance of employees (see also the following subsection);
• Regulation 23 – provide suitable washing and changing facilities (in addition to general welfare provisions); and
• Regulation 24 – ensure that all raw materials and asbestos waste are stored, received into, dispatched from and distributed within suitable sealed and clearly labelled containers.

2.1 Duties to non-employees

Where the Regulations impose a duty on an employer in respect of his or her employees, the employer is under a similar duty to all other persons who may be affected by the work activity, except for the following exemptions:

• Regulation 10, ‘Information, instruction and training’, applies only to those persons on the premises at which the work is being carried out; and
• Regulation 22, ‘Health records and medical surveillance’, is not applicable.

2.2 Cleanliness of premises and plant

Regulation 17, ‘Cleanliness of premises and plant’, does not apply to premises attended in an emergency by fire and rescue authorities in England and Wales or their equivalent in Scotland.

2.3 Self-employed persons

The Regulations apply to a self-employed person as if he or she were both an employer and an employee. The applicability of specific Regulations and methods of control are based on a risk assessment, using the hierarchy of risk assessments of Control of Substances Hazardous to Health Regulations 2002 (COSHH).

In principle, all of the Regulations apply to any type of asbestos work, unless the work falls within very specific and limited circumstances as set out in Regulation 3(2), referred to as the ‘Regulation 3(2) exceptions’ (see the following subsection). As part of these exceptions, certain specific requirements are only triggered if the level of exposure to respirable fibres exceeds a stated limit – the ‘control limit’. This may change in future, but currently it is 0.1 fibres per cubic metre of air averaged over a continuous period of 4 hours.

2.4 Regulation 3(2) exceptions

All of the regulatory requirements (relating to Regulation 8 ‘Licensing’; Regulation 9 ‘Notification’; Regulation 15(1) ‘Arrangements to deal with accidents, incidents and emergencies’; Regulation 18(1) ‘Designated areas’; and Regulation 22 ‘Health records and medical surveillance’) do not apply where:

• the exposure […] to asbestos fibres is only “sporadic and of low intensity”;
• it is clear from the risk assessment that the exposure […] will not exceed the control limit; and
• the work involves:
  – short, non-continuous activities;
  – removal of materials in which the asbestos fibres are firmly linked in a matrix;
  – encapsulation or sealing of asbestos-containing materials which are in good condition; or
  – air monitoring and control, and the collection of samples to ascertain whether a specific material contains asbestos’ (Regulation 3(2)).

The L143 ACOP gives guidance on the interpretation of the terminology as follows.

‘sporadic and of low intensity’ exposure

Provided that the risk assessment indicates that the control limit will not be exceeded, it is likely that work with certain materials will be considered to produce only sporadic and low density worker exposure to asbestos. These include: asbestos cement; textured decorative coatings; any article
of bitumen, plastic, resin or rubber which contains asbestos and the thermal and acoustic properties of which are incidental to its main purpose; and sundry products such as paper linings, cardboards, felt, textiles, gaskets, washers and rope which have no insulation purposes.

In addition, provided the work conforms to the principles of good practice laid out in the L143 ACOP, short duration work, such as picking up debris or removal of very small amounts of residual asbestos material left from previous asbestos removal work, may also fall into this category.

‘short, non-continuous maintenance activities’

The following asbestos removal tasks, where a licence is not required, fall into this category:

- removal of paper linings using dust suppression techniques;
- removal of friction linings using dust suppression techniques;
- removal of fire blankets using dust suppression techniques;
- removal of bituminous products using either enclosure or dust suppression techniques;
- removal of metal cladding lined with bitumen by systematic removal and wrapping; and
- removal of floor tiles.

Certain types of work with asbestos insulating board can also be considered to fall within this category, provided the work conforms to the principles of good practice laid out in the L143 ACOP.

As a general rule, to be ‘non-continuous’ the work should not be carried out by any one person for longer than 1 hour in any 7-day period, and to be ‘short’, the total time spent by all workers should not exceed 2 hours. This includes ancillary work such as setting up enclosures and clearing any potentially affected area.

‘asbestos fibres firmly linked in a matrix’

This category includes asbestos cement and textured decorative coatings. Only in ‘exceptional circumstances’ will this work, including supervisory and ancillary activities, with any other types of asbestos materials being considered to fall within the Regulation 3(2) exceptions. (See Appendix 10 for flowchart to determine whether Regulation 3(2) exception of CAR applies.)

At the time of writing, the HSE was consulting on proposals to introduce revised CAR 2006 to implement the changes required to comply with the European Commission’s reasoned opinion on the UK Government’s transposition of Directive 83/477/EEC, as amended by 2003/18/EC, on the protection of workers from the risks of exposure to asbestos at work.

The reasoned opinion confirmed the European Commission’s view that the UK has not fully implemented Article 3(3) of the Directive which provides for the exemption of some types of lower risk work with asbestos from three requirements of the Directive: notification of work, medical examinations and record keeping.

The required changes mean in future fewer types of lower risk work will be exempt from the three requirements.

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

The responsibility for the management of asbestos in non-domestic premises, as set out in Regulation 4(1) of CAR 2006, belongs to the ‘dutyholder’. This is every person who by virtue of a contract or tenancy has an obligation for the repair or maintenance of the premises or, in the absence of such contract or tenancy, control of those premises or access to or egress from them. This includes those persons with any extent of responsibility for the maintenance, or control of the whole or part of the premises. (See subsection 4.3 for further details.)

When there is more than one dutyholder, the relative contribution required from each party in order to comply with the statutory duty will be shared according to the nature and extent of the repair obligation owed by each.

This Regulation does not apply to domestic premises, namely a private dwelling in which a person lives. However, legal precedents have established that common parts of flats (in housing developments, blocks of flats and some conversions) are not part of a private dwelling. They are classified as non-domestic, so Regulation 4 therefore applies to them, but not to the individual flats or houses in which they are provided.

Typical examples of common parts are: entrance foyers; corridors; lifts and their enclosures and lobbies; staircases; common toilets; boiler rooms;
roof spaces; plant rooms; communal services, risers and ducts; and external outhouses, canopies, gardens and yards. The Regulation does not apply to kitchens, bathrooms or other rooms within a private residence that are shared by more than one household, or to communal rooms within sheltered accommodation. For further information, see subsection 4.3 of the guidance note. The duties of the dutyholder are given in Table 12.

2.6 Regulation 10: Information, instruction and training

In addition to the general training requirements for any employee set out in the Management of Health and Safety at Work Regulations 1999, Regulation 10 of CAR requires every employer to ensure that adequate information, instruction and training is given to employees who:

- are liable to be exposed to asbestos, and to their supervisors; and
- carry out work in connection with the employer’s duties under these Regulations so that they can carry out that work effectively.

The L143 ACOP that accompanies CAR provides a full and detailed list of these training requirements.

There are three main types of information, instruction and training, namely the following:

a) awareness training for those who are liable to be exposed to asbestos while carrying out their normal everyday work, e.g. maintenance staff, electricians, demolition and construction workers, installers of computers, fire or burglar alarms, and ‘construction professionals’ (including chartered surveyors);

<table>
<thead>
<tr>
<th>Scope/subject</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-operate</td>
<td>Co-operate with other dutyholders so far as is necessary to enable them to comply with their Regulation 4 duties (see subsection 4.7)</td>
</tr>
<tr>
<td>Find and assess</td>
<td>Ensure that a suitable and sufficient assessment is made as to the condition of ACMs, whether asbestos is or is liable to be present in the premises, and as to its condition, taking full account of building plans and other relevant information, including the age of the building, and inspecting those parts of the premises that are reasonably accessible (the dutyholder must presume that materials contain asbestos unless there is strong evidence to the contrary)</td>
</tr>
<tr>
<td>Review</td>
<td>Review the assessment in the event of significant change to the premises, or if it is suspected that it is no longer valid, and record conclusions of each review</td>
</tr>
<tr>
<td>Record</td>
<td>Keep an up-to-date written record of the location, type (where known), form and condition of ACMs</td>
</tr>
<tr>
<td>Conduct risk assessment</td>
<td>Where asbestos is, or is liable to be, present, assess the risk of exposure from known and presumed ACMs</td>
</tr>
<tr>
<td>Prepare and implement a management plan</td>
<td>Prepare and implement a written plan, identifying those parts of the premises concerned and specifying measures for managing the risk, including adequate measures for properly maintaining asbestos or, where necessary, for its safe removal (see section 10)</td>
</tr>
<tr>
<td>Provide information to others</td>
<td>Make certain that the plan includes adequate measures to ensure that information about the location and condition of any asbestos is provided to every person likely to disturb it and is made available to the emergency services</td>
</tr>
<tr>
<td>Review and monitor</td>
<td>Regularly review and monitor the plan to ensure that it is valid and that the measures specified are implemented and recorded</td>
</tr>
</tbody>
</table>
b) for non-licensable asbestos work, e.g. a roofer removing a whole asbestos cement sheet in good condition; and
c) for licensable asbestos work, e.g. removing asbestos lagging or asbestos insulating board.

The topics that the training should cover are listed in the Regulation 10 and should be given in appropriate detail by both written and oral presentation and by demonstration (as necessary). In addition to explaining the properties of asbestos and its general effects on health, there is a particular requirement to include its interaction with smoking.

In particular, it is to be in a manner appropriate to the nature and degree of exposure identified by the employer’s risk assessment. In addition, it should give the significant findings of the assessment and the results of any air monitoring carried out, together with an explanation of the findings.

The training should be given by a competent person, and the procedures for providing the information, instruction and training should be clearly defined, documented and reviewed regularly, particularly when work methods change.

Records should be kept of the training undertaken by each individual. For licensable work, copies should be given to each individual. Refresher training should be given at least every year and more frequently if there is a change in the work methods, equipment used or type of work.

Where non-employees are on the employer’s premises, they should also be given adequate information, instruction and training as far as is reasonably practicable.

2.7 Regulation 24: Storage, distribution and disposal of asbestos waste

Employers must ensure that raw asbestos or asbestos waste is stored, received, dispatched and distributed in suitable sealed containers, clearly marked, in compliance with Schedule 2 to CAR 2006. Otherwise, where applicable, it should be in compliance with other more general regulations, including the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009.

Waste containing more than 0.1 per cent asbestos (weight for weight) is subject to the waste management provisions of the Hazardous Waste (England and Wales) Regulations 2005 (which came into operation on 16 July 2005, replacing the Special Waste Regulations 1996) and the Special Waste Regulations 1996 in Scotland. These are enforced by the Environment Agency in England and Wales, and the Scottish Environment Protection Agency in Scotland.

Disposal arrangements should be discussed and agreed with the appropriate disposal authority, which will be able to provide details of suitable licensed tips. The collection, delivery and disposal of the waste must be recorded using a ‘consignment note’. The note must be signed for at each stage of the process, to ensure safe removal from the site and delivery to the approved final destination, and to prevent fly-tipping. (See subsection 15.2, Contaminated waste/rubble, and subsection 15.3, Disposal of rubble, and Construction (Design and Management) Regulations 2007.)

3 CDM Regulations

Asbestos is specifically mentioned in the Construction Design and Management Regulations 2007 (CDM Regulations). The presence, location and condition of hazardous materials (such as asbestos) are included as examples of relevant information to be provided by the client to the CDM co-ordinator (CDMC) for inclusion in the pre-construction information.

Asbestos removal is, however, not one of the numerous activities that fall within the definition of ‘construction work’. Such activity is therefore only included if it forms part of a project which is applicable by virtue of the scope of other works, for example, the refurbishment, alteration, dismantling or demolition of buildings or other structures.

3.1 Information

Regulation 11 of CDM requires the client to ensure that, prior to the commencement of work, the CDMC is provided with any relevant information about the state or condition of the premises. This is extended to include that which could be ascertained ‘by making enquiries which it is reasonable for a person in his [or her] position to make’. The L144 ACOP of the CDM Regulations (2007) clarifies this by noting that ‘this may include surveys and other investigations’. Furthermore, asbestos is specifically mentioned as an example of a hazardous material, and the
need for an early asbestos survey is reinforced in the working example of good practice given in the guidance. These not so subtle indications of how the Regulations may be interpreted mean that clients who do not have a suitable asbestos survey undertaken at the earliest opportunity will need to be able to justify their decision if challenged.

Regulation 13(4)(b) requires all contractors to provide all workers carrying out construction work under their control with any information and training that the workers need for the particular work to be carried out safely and without risk to health. This will include the details of asbestos surveys and reports and reinforcing asbestos awareness where required.

3.2 Health and safety files

Regulation 14(d–f) of the CDM requires that at the completion of construction work the CMCD prepares or, if already existing, reviews and updates a health and safety file for each structure. This must be passed to the client, who under Regulation 12 must retain and make the information available to anyone who might need to refer to it for future CDM-applicable activities. The purpose of this is to highlight any significant health and safety issues arising that may not be obvious.

The presence of asbestos, its treatment and any records of where asbestos has been previously removed are important information that should be incorporated within the file and updated as necessary.

Prior to inspecting or arranging for any works to be done to a building or structure that might reasonably contain asbestos, the asbestos inspector or surveyor should enquire whether a health and safety file exists, and review any relevant information available, unless this is already incorporated within the management plan.

3.3 Competence

Regulation 9 requires that only competent and properly resourced contractors and designers are appointed.

4 Other general health and safety regulations

Like any work operation, work with asbestos is subject to a whole raft of workplace health and safety legislation. Legislation with relevance to asbestos includes the following.

4.1 The Health and Safety at Work, etc. Act 1974

This Act imposes a general duty on employers to conduct their works so that their employees or others are not exposed to health and safety risks. They must also provide information to other people about their workplace that might affect their health and safety.

Similar general duties apply to the self-employed and to anyone who has control, to any extent, over a workplace or its entrance or egress.

4.2 The Management of Health and Safety at Work Regulations 1999

These require employers and the self-employed to carry out risk assessments and to make appropriate arrangements for safeguarding themselves, their employees and others. They also require employers sharing workplace premises to co-operate in order to comply with health and safety legislation.

4.3 The Control of Substances Hazardous to Health Regulations 2002

These do not apply directly to asbestos, but do apply to other substances used in conjunction with asbestos working, such as sealants, adhesives and wetting agents.

4.4 The Defective Premises Act 1972 (in England and Wales) and the Civic Government (Scotland) Act 1982

Both of these Acts require landlords to see that tenants and others are not injured or infected by disease caused by a defect in their premises.

5 Enforcement

The organisation responsible for enforcing legislation in respect of working activities involving asbestos is determined by the Health and Safety (Enforcing Authority) Regulations 1998.

The enforcing authority is either the local authority or the HSE. The distinction is made according to the activity occurring in the premises in which the work is being carried out, as well as the nature and duration of the working activity itself.
However, the Regulations have certain provisos. The HSE is the enforcing authority if the work is not entirely internal; will take longer than 30 working days or 500 person days; involves the installation, maintenance or repair of electricity or gas systems or fittings; or needs to be physically segregated (as would be the case with major asbestos removal or treatment works necessitating the erection of sealed working enclosures). In addition, the HSE is the stated authority for all activities in factories and railways, as well as for construction and demolition generally.

The HSE is also the enforcing authority for work to which the CDM Regulations apply (see section 3 of this appendix), and it issues and polices asbestos licences.

6 Penalties

The maximum penalty for offences under asbestos legislation depends on the breach of the Act under which the prosecution is made, and on whether the hearing is in the magistrates court or the crown court.


The Act raises the maximum penalties that can be imposed in the magistrates and lower courts from £5,000 to £20,000 and broadens the range of offences for which an individual can be imprisoned. The maximum penalty per offence in the crown court is an unlimited fine and/or imprisonment for up to two years.

In addition, employees may be liable for substantial damages claims under civil law, and managers may be permanently disqualified from being directors of any company.

Under the Defective Premises Act 1972 (in England and Wales) and the Civic Government (Scotland) Act 1982, any premises in such a state as to be prejudicial to health are a statutory nuisance (section 79 of the Environmental Protection Act 1990). In such case, the local authority can serve an abatement notice on the owner or occupier.
Appendix 2: Competence of those involved in surveys for, and the sampling, assessment and removal of, asbestos

1 Asbestos surveyors

HSG 264 contains a complete section (2) on ‘competence and quality assurance procedures’. Paragraph 17 informs that asbestos surveys can be carried out by in-house personnel or a third party, but the surveyor must be competent for the work required. It states:

To be competent, the “surveyor” must:

• have sufficient training, qualifications, knowledge, experience and ability to carry out their duties in relation to the survey and to recognise their limitations;
• have sufficient knowledge of the specific tasks to be undertaken and the risks which the work will entail;
• be able to demonstrate independence, impartiality and integrity;
• have an adequate quality management system; and
• carry out the survey in accordance with recommended guidance (in this publication).

In addition the surveyor should also have knowledge of:

• the nature, uses, hazards and sampling techniques of asbestos products;
• methods and forms of construction of buildings, their uses and of typical asbestos use;
• use of ACMs as fire protection and in building services in voids, ducts and risers;
• unrecorded and ad hoc uses of ACMs as shuttering, off-cuts packers and spacers; and
• contamination and debris arising from earlier poor working practices during installation or subsequent disturbance of ACMs.

HSG 264 states that the ‘HSE strongly recommends the use of accredited or certified surveyors for asbestos surveys’.

Currently, neither accreditation nor certification is compulsory, but both provide an industry-recognised benchmark and give clients guidance and reassurance in the selection of their asbestos surveyors.

1.1 Accredited organisations

Paragraph 23 of the guide confirms that organisations can demonstrate that they are technically competent to undertake surveys for ACMs through accreditation to ISO/IEC 17020:2004 General criteria for the operation of various types of bodies performing inspection (British Standards Institute (BSI), 2004).

In the UK the sole national accreditation body is the United Kingdom Accreditation Service (UKAS).

1.2 Personal certification

Paragraph 24 of HSG 264 confirms that individual surveyors can demonstrate their competence through holding personnel certification from a certification body accredited by UKAS for this activity under ISO/IEC 17024:2003 Conformity assessment – General requirements for bodies operating certification of persons (BSI, 2003).

At the time HSG 264 was issued, there was only one accredited scheme, the Asbestos Building Inspectors Certification Scheme (ABICS), operated by the British Occupational Hygiene Society (BOHS).

In paragraph 24 it also notes that ‘a number of people have also been certified under a previous scheme “NIACS” (National Individual Asbestos certification scheme)’, which was set up by RICS together with ARCA.

Although it is a legal requirement that certain asbestos-related services (including air monitoring and analysing samples) can only be carried out by appropriately accredited persons, this does not apply to an asbestos inspection. As neither accreditation nor certification of asbestos surveyors is mandatory, there has been little incentive to incur
the expense involved in attaining and maintaining these qualifications. Because of this, the number of persons joining either the ABICS or NIACS scheme has been small. Consequently, both schemes have become financially unviable and have had to close, together with the ring-fenced insurance provision, and UKAS no longer monitors the performance of those individuals who have attained personal certification.

1.3 Other asbestos qualifications

The BOHS and the Royal Society for Public Health (RSPH) both operate and administer various schemes for training personnel in various aspects of asbestos services. HSG 264 refers to a number of their specific modules, courses and certificates. While it acknowledges the value of these qualifications it makes the point that a period of field experience (six months minimum) under the supervision of experienced and suitably qualified personnel is also required in order to ensure competence.

1.4 Checking competency

HSG 264 gives advice on the competency checks that should be made by the client/dutyholder, indicating that this should be a two-stage process:

- Stage 1: expertise and health and safety knowledge (written declaration and a copy of insurance certificates – employers liability, public liability and PII); and
- Stage 2: experience, track record and recognition of limitations (past experience proposals and capability for specific survey).

2 Analysts

2.1 Air monitoring

Every employer who carries out analysis of the concentration of asbestos fibres in the air, or who requests another person to do so, must ensure that he or she is accredited to ISO 17025, or meet equivalent criteria (Regulation 20 of CAR 2006).

2.2 Analysis of bulk samples

Every employer who carries out analysis on a sample of material to determine whether it contains asbestos, or who requests a person to do so, must ensure that he or she is accredited to ISO 17025, or meet equivalent criteria (Regulation 21 of CAR 2006).

2.3 Accreditation

Currently, there is only one recognised accreditation body in the UK, which is UKAS. A full list of organisations accredited for undertaking various asbestos-related services, including surveying, sampling, air monitoring and analysis of bulk samples of ACMs, organised by region, is available from UKAS (www.ukas.com).

2.4 Asbestos removal contractors

Regulation 8 of CAR 2006, which supersedes the Asbestos (Licensing) Regulations 1983, effectively bars anyone from carrying out major works that may disturb asbestos unless the person holds, or works in close association with someone who holds, a licence issued by the HSE. Even where a licence is not necessary, there will still be a requirement to comply with the other Regulations of CAR 2006.

Except for the simplest and most minor of works, it is unlikely that unlicensed contractors will have the necessary resources, specialised equipment or the training and experience needed for work with this extremely hazardous material.

There are two trade organisations within the asbestos removal industry: ARCA, with the affiliated Asbestos Testing and Consultancy (ATAC) wing; and the Asbestos Control and Abatement Division (ACAD) of the Thermal Insulation Contractors Association (TICA). A list of all licensed contractors, organised by region, is available from the HSE Asbestos Licensing Unit in Edinburgh.
1 General background

All types of asbestos are classified as a category 1 carcinogen by the European Union and the World Health Organization. It has a risk phrase 49, i.e. it may cause cancer by inhalation. The physical characteristic of asbestos that renders it hazardous to health is its crystalline fibrous nature, splitting into a family of fine fibres that are extremely durable. The fibres are microscopic, often less than 1 micron in diameter and 2 microns long, thus they are readily carried by air currents and can remain airborne for a considerable time.

Inhalation or ingestion 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 body fluids, for many years and sometimes permanently.

The damage and the continuous reaction of the body’s defence mechanism against such foreign intruders can cause three main fatal diseases:

- asbestosis – fibrosis of the lung (which is a divisible disease, i.e. its development and course is affected by the cumulative impact of the frequency and severity of exposures to asbestos);
- cancer of the larynx, ovary or other internal organs; and
- mesothelioma – a cancer of the abdominal lining of the lung (which is an indivisible disease, i.e. it is believed that it can develop after a single exposure to asbestos).

Asbestos-related diseases are virtually untreatable. There is no known safe level of exposure, and even low levels can cause cancers to develop. The cancer is often very painful and most people who contract mesothelioma die within one year of diagnosis.

The effects are not immediate and may not become apparent for at least 15 years, but it can take up to 60 years or more after the first exposure before the effects become evident. The risks increase progressively with continued exposure. If one is already at risk of cancer due to asbestos exposure, then smoking will increase the risk tenfold.

According to the HSE website, asbestos currently causes approximately 4,000 deaths per year in the UK. The incidence is increasing, and if it continues at the same rate, there are fears that it could rise to 10,000 per year by 2020.

2 Persons at risk

The highest risk is to those persons who have worked in the asbestos industry, producing, processing, installing or removing the material. There is also concern for people indirectly associated with such occupational exposure, such as those who have lived in close proximity to the factory or process plant, or family members of asbestos workers.

In the UK, the importation and use of virtually all forms of asbestos is now banned, and the activities in which workers have regular contact with asbestos have been either prohibited or strictly controlled for many years. The greatest current risk now is to those workers who disturb asbestos, often inadvertently, in the course of their work when inspecting, repairing, altering, extending or demolishing buildings with ACMs.

Research carried out by HSE epidemiologists and published in *The Lancet* indicated that at least 25 per cent of those people currently dying from asbestos have worked in construction and maintenance operations. Those ‘at risk’ groups include carpenters, plumbers, electricians, engineers installing air-conditioning or telecommunications, shop-fitters and surveyors – in fact, anyone involved in the construction industry.

Building occupants are similarly at risk from any contamination arising from the disturbance or deterioration of materials or components containing asbestos, particularly where the airborne fibres are likely to be circulated or distributed widely, for example by ventilation fans.
3 Assessing the risk

News media are fond of using headlines such as ‘one fibre kills’, but as with many hazardous products, some individuals are more susceptible to asbestos than others.

Notwithstanding these extremely isolated instances, it is widely accepted that generally the risk to health depends upon the type and number of asbestos fibres inhaled.

The factors to be considered are listed in Table 13. The use of the building, the type of occupants and the likelihood of future damage (e.g. vandalism, children, animals) or disturbance, including accessibility (e.g. concealed, protected, exposed) and the life expectancy of the material or component, are also relevant.

Table 13: Risk factors to consider

<table>
<thead>
<tr>
<th>Factors</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Blue, brown or white fibres – blue and brown fibres present greater risk than those of white because of their physical characteristics, e.g. diameter, shape</td>
</tr>
<tr>
<td>Condition</td>
<td>Intact or damaged</td>
</tr>
<tr>
<td>Friability</td>
<td>Density – firm or loose</td>
</tr>
<tr>
<td>Asbestos content</td>
<td>Proportion of asbestos in the material</td>
</tr>
<tr>
<td>Surface treatment</td>
<td>Sealed or unsealed</td>
</tr>
<tr>
<td>Dilution</td>
<td>Ventilated or unventilated air space</td>
</tr>
<tr>
<td>Location</td>
<td>Internal or external</td>
</tr>
<tr>
<td>Extent</td>
<td>Amount of material</td>
</tr>
</tbody>
</table>

4 Relative risks of different asbestos containing materials

Because of their different physical characteristics, the fibres of blue and brown asbestos are considered to be more harmful than those of white. Even so, as a precaution, CAR 2006 and the parent EC Directive do not make any distinctions for different types of asbestos in their regulatory controls. As part of the compulsory Regulatory Impact Assessment produced for the justification of CAR 2006, the HSE carried out a Health and Safety Laboratory Risk Assessment of the types of asbestos, the works for which at that time required an asbestos licence.

This took into account information about the amount and types of asbestos in the various different materials that have been commonly used in buildings, the frequency and duration of work for which an asbestos licence is required, the average exposure levels and the risk posed by the different types of asbestos. The results are summarised in Table 14.

5 Attitudes to asbestos

Not all asbestos, in all circumstances, necessarily constitutes a risk to health.

The conclusions of the 1987 central and local government working party, which was set up to consider whether the implications of asbestos were still relevant and appropriate, are as follows:

- Asbestos materials which are in good condition and not releasing dust should not be disturbed, and materials which are damaged, deteriorating, releasing dust or which are

Table 14: Results of Health and Safety Laboratory Risk Assessment

<table>
<thead>
<tr>
<th>Licensed ACM</th>
<th>Relative risk of death (%)</th>
<th>Proportion for 1,000 deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixture of asbestos insulation, coating and/or insulation board</td>
<td>51</td>
<td>510</td>
</tr>
<tr>
<td>Asbestos insulation</td>
<td>30</td>
<td>300</td>
</tr>
<tr>
<td>Asbestos coating</td>
<td>16</td>
<td>160</td>
</tr>
<tr>
<td>Asbestos insulation board</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Textured decorative coating</td>
<td>0.001</td>
<td>0.01</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>1,000</td>
</tr>
</tbody>
</table>
likely to do so, should be sealed, enclosed or removed as appropriate following the guidance set out in the Department of Environment publication, *Asbestos Materials in Buildings*.

- Materials which are left in place should be managed and their condition periodically reassessed.
- An order of priority in which remedial works should be undertaken should be established and substitute materials should be used where possible, provided they perform adequately.
- The risk to the health of the public from asbestos materials which are in sound condition and which are undisturbed is very low.

At about the same time, the Association of Metropolitan Authorities (which merged in 1997 with the Association of District Councils to form the Local Government Association) produced its own publication, *Asbestos Policy and Practice in Local Authorities* (1985). This stated:

> The presence of any type of asbestos as free fibres in the atmosphere may constitute a health hazard. [...] Where incorporated into any material, that material is a potential health hazard.

Member authorities are urged to promote policies that will ultimately remove any risk from exposure to asbestos fibres in the respirable atmosphere.

Its policy statement was as follows:

- Advocate surveys/investigations should be done to label and register any asbestos.
- Progressive removal should occur based on priority assessment/availability of resources.
- History has shown that personal protection measures and equipment that were once thought to have been completely safe have not been proven to be so.
- Despite stringent controls, including the use of respirators, etc., the health risks arising from the removal of asbestos are greater than leaving it alone, provided it is not releasing or liable to release fibres.
- The removal of asbestos creates its own risks and thus should be the last resort, not the first option.
- Notwithstanding this, wherever asbestos remains, there is a risk that it will be disturbed in the future. The life of the material or component containing the asbestos is often long, but it is not infinite and at some stage in the future it will inevitably need to be removed or replaced.
- The fear of asbestos is sometimes exaggerated and may not reflect the actual risk. Consequently, asbestos materials that did not present any immediate or significant risk are often removed without justification.
- Workers should be protected but this should be based on the assessment of the risks arising.

## 6 Ingestion of asbestos

It is generally accepted that the health risks arising from the ingestion of asbestos fibres are very low, compared with their inhalation.

In buildings, the main source of fibres that could be ingested is the lining of water tanks and pipes, which may deteriorate due to the acidic content of the water.

Where cold water cisterns and pipes contain asbestos, this is usually in the form of asbestos cement. This form contains a relatively low proportion of asbestos and is usually of the low-risk white type. The risks presented by such pre-formed plumbing components, due to natural deterioration, are generally very low.

The greatest hazard arises if they are broken up for removal or are drilled, for example, for the installation of a new ball valve in a cistern. Even then, only rudimentary hygiene and protective measures are required to prevent the escape of any airborne fibres.

## 7 Health surveillance

The effects of diseases arising from asbestos may not appear for many years after exposure, and in many types, the effect is progressive with the risks increasing proportionally according to the number of exposures.

Consequently, it is important to detect the signs of respiratory difficulties, often the first indication of asbestos diseases, as soon as possible. There is no known cure for the diseases, but action can be taken to prevent further exposure, which might worsen the effect.
Regulation 6 of CAR 2006 requires that the employer must first carry out an assessment of all work which is liable to expose employees to asbestos.

Regulation 22(1) requires every employer to maintain a health record for every employee who is exposed to asbestos and ensure that this is kept available for at least 40 years from the date of the last entry. This is without qualification. It also requires that each of these employees is kept under medical surveillance, including periodic medical examinations, every two years as a minimum.

Both of these requirements apply in all circumstances, except in those situations that, by virtue of the degree of exposure and/or the nature of the works, fall within the exceptions set out in Regulation 3(2).

In practice the need for health surveillance is only likely to apply to specialist asbestos workers, and only those who are required to enter enclosures or areas where asbestos removal or treatment works are being undertaken where the levels of fibre release are likely to exceed the control limit. This requirement applies irrespective of the wearing of appropriate personal protective equipment.

It would be prudent for employers to require any of their employees who will be undertaking asbestos inspections, or whom are likely to be exposed to levels of asbestos fibres in excess of the control limit, to have a medical examination to check for any pre-existing conditions that could manifest themselves during their period of employment. This will help identify existing or prospective employees who may be at a greater than average risk of contracting asbestos-related diseases and enable that risk to be managed.
Appendix 4: Legal issues arising and cases

1 Is white asbestos safe?

There have been a number of articles in the national press that have suggested that the health risks arising from white asbestos (chrysotile) have been exaggerated, and that the material should not be regulated in the same way as brown (amosite) or blue (crocidolite) types. Understandably, readers of such articles may be swayed by the arguments being promoted, including those relating to the financial cost of compliance.

In February 2002 the HSE responded to the issues raised by producing a position statement on the risks from white asbestos, available on its website (www.hse.gov.uk/press/2002/e02010.htm). In summary, this concluded that there is evidence that the health risk from white asbestos is less than that for blue or brown asbestos, but that this type still carries a risk and remains a Class 1 carcinogen.

HSE guidance (such as HSG 264) allows risk assessments to take account of the type of asbestos found in a material. However, the control limit in CAR 2006 is the same for any type of asbestos.

The issue was again raised in 2010, and in response to strong lobbying, Chief Scientific Advisor to HM Government Sir John Beddington was requested to reconsider whether there is any evidence that would justify an imminent change to the international scientific consensus on the classification of asbestos and thus allow ministers to re-consider the UK legislation. On 11 May 2011 in his open letter to Iain Duncan Smith MP, he concluded this opinion that on the evidence available there was no justification for an imminent change to the international scientific consensus on the classification as a Class 1 carcinogen.

Many building products contain a mixture of white and other forms of asbestos, giving them a greater overall risk than chrysotile on its own. For this reason, it is common practice for those engaged in asbestos work to assume that the asbestos found in a product is brown or blue and to take precautions accordingly. The CAR requires this where the type of asbestos is not known.

Surveyors are not expected to have to decide between different and opposite expert scientific opinions. They should always follow the official guidance, i.e. that of the HSE, until directed otherwise.

The government has spent a lot of time and effort trying to educate property owners, occupiers, their advisers, building operatives and the general public about the hazards of disturbing asbestos. Attempting to differentiate between types without conclusive expert and official advice is a recipe for confusion and disaster. Surveyors therefore must not get drawn into a debate on an issue on which they have no expertise, nor should they anticipate or try to guess what may happen in the future.

2 Which employer is responsible?

2.1 Fairchild v Glenhaven Funeral Services Ltd

This legal case involved a claim for damages by an employee whose health was injured by exposure to asbestos in the course of his working life. The claimant had worked for two employers during the time his exposure to asbestos dust may have occurred. The employee had contracted mesothelioma, which, according to some medical opinion, is believed to be caused by a single exposure to asbestos (unlike asbestosis, in which the development and course of the disease is affected by the cumulative impact of the frequency and severity of exposures to asbestos).

The Court of Appeal initially ruled that the claim could not be made against either of the employers, unless it could be proven which employer was responsible for the injuring exposure. It was not fair to apportion blame on the grounds that at least one of them was guilty.

On 16 May 2002 a judicial committee of the House of Lords overturned this decision, on the basis that the breach of the employer’s duty had materially contributed to a greater risk of the disease developing. It decided in this case that both employers were each ‘jointly and severally liable’.
Each claim will be judged on the specific circumstances, but as a matter of public policy, courts are likely to follow the aforementioned principle, irrespective of the length of period of employment. As in the Fairchild case, where there has been more than one employer who has materially contributed to the risk, each will be deemed liable for the full damages and costs. Where only one employer can be sued, because the others are insolvent and uninsured, then the solvent employer must pay the whole value of the claim.

This is a ground-breaking change from the previous legal approach to causation and dramatically lowers the burden of proof required of claimants in future similar cases. The concern raised by many is that it may enable claimants to ‘cherry-pick’ the defendant who is most likely to settle or be able to afford the claim.

3 Registration of exposure to asbestos

There is usually a considerable delay (15–60 years) between actual exposure to asbestos fibres and the discernable symptoms of diseases appearing. Therefore, the incidence and/or extent of the injury, if any, cannot be proven at the time of exposure.

A successful criminal prosecution by the enforcing authorities enables a benchmark to be established that proves that a person has been exposed to an unacceptably high level of asbestos.

In English law, for a claim of negligence to be successful, damage or loss must be proven. However, depending on the circumstances a claimant may be able to prove negligence and have this officially recorded by the court, leaving damages to be assessed and successfully claimed at a later date, when the full extent of injury is known. For the guilty party, the judgment remains hanging over it, which should be recorded as a possible financial matter in company accounts and disclosed to insurers.

In certain states in the US, it is not necessary to prove actual harm. Judgments are made and damages (often punitive) are awarded based only on the degree of the claimant’s exposure to asbestos.

Under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR) there is a requirement to report to the HSE defined dangerous occurrences. One such case is the accidental release of any substance which may damage health, including respirable asbestos fibres. In the absence of any other definition, it is accepted that the incident should be reported if it is reasonable to believe that the control limit stated in CAR 2006 is exceeded.
Appendix 5: Identifying the Regulation 4 dutyholder(s)

This flowchart shows the process in which the dutyholder(s) under Regulation 4 of CAR 2006 are identified.
### Appendix 6: Domestic or non-domestic classification for Regulation 4 of CAR 2006

The information in Table 15 is taken from a combination of information in the L127 ACOP on Regulation 4 of CAR and from the HSE’s response to questions put by RICS for the preparation of the table. Any premises that are not ‘domestic’ is ‘non-domestic’ and therefore subject to Regulation 4 of CAR 2006, with the duty to manage ACMs that it may contain.

Table 15: Whether residential premises are likely to be classified as domestic or non-domestic for Regulation 4 of CAR 2006

<table>
<thead>
<tr>
<th>Type of residence</th>
<th>Mode of occupation</th>
<th>Rooms/parts</th>
<th>Domestic</th>
<th>Non-domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private house</td>
<td>Owner/occupier</td>
<td>All</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leased to tenant as part of a business</td>
<td>All</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Single dwelling including bed-sits</td>
<td>Private house single dwelling, including bedsits, owner/occupier, let to single family</td>
<td>All</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occupied by more than one family</td>
<td>Private rooms (e.g. bedrooms, living rooms)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occupied by more than one family</td>
<td>Shared rooms (e.g. kitchens, bathrooms, toilets)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rooms let to lodgers</td>
<td>Common parts used for access and circulation (e.g. entrance lobby and staircase)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Houses converted into flats</td>
<td>Occupied by more than one family</td>
<td>Private rooms</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occupied by more than one family</td>
<td>Common parts – for access, circulation and storage (e.g. entrance lobby, staircase, roof space)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Garages</td>
<td>Integral/linked with residence</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Separate from residence</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Block of flats</td>
<td>Multiple occupancy</td>
<td>Individual dwellings</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multiple occupancy</td>
<td>Common parts (e.g. foyers, lifts, stairs, lobbies, boiler and plant rooms, roof spaces, communal yards, gardens, store rooms, external outbuildings, bike shelters)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Type of residence</td>
<td>Mode of occupation</td>
<td>Rooms/parts</td>
<td>Domestic</td>
<td>Non-domestic</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>----------</td>
<td>--------------</td>
</tr>
<tr>
<td>Flats over shop or office without separate entrance</td>
<td>Occupied by owner of shop or office</td>
<td>Private rooms</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leased separately</td>
<td>Private rooms</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Common parts (e.g. access/egress and circulation areas)</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Residential home, sheltered accommodation, halls of residence and hostels owned</td>
<td>Accommodation owned by residents</td>
<td>Private rooms</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>privately or by local authority</td>
<td></td>
<td>Communal rooms (dining/lounge)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work areas (e.g. central kitchen, staff rooms and laundries, lifts,</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>staircases and circulation areas, boiler room, stores and roof spaces</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rooms rented, or rent-free to, occupants</td>
<td>Private and common areas</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Hotel or guest house including bed and breakfast accommodation when prime</td>
<td>Part occupied by owner</td>
<td>Part occupied by owner</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>purpose</td>
<td></td>
<td>Guest accommodation and common parts</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Holiday homes</td>
<td>Used substantially/exclusively as a business</td>
<td>All</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Tied cottage/accommodation</td>
<td>Leased or rent-free</td>
<td>All</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Farm house</td>
<td>Leased or rent-free</td>
<td>All</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 7: Is an asbestos survey required and if so, what type?

The questions in Table 16 will help to determine whether an asbestos survey is required. The detail of the survey required must be based on a risk assessment, comparing the cost and disruption with the likelihood and potential consequences of inadvertent discovery and disturbance of ACMs. The assessment should be recorded for future reference and be reviewed should the circumstances change. See Table 17 for more details.

Table 16: Is an asbestos survey required?

<table>
<thead>
<tr>
<th>Question</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>What age is the property?</td>
<td>If built after 2000, then ACMs should not have been used, as use of any asbestos was effectively banned in 1999</td>
</tr>
<tr>
<td>Is there an existing asbestos register/report?</td>
<td>Any limitations and areas not accessed should be checked</td>
</tr>
<tr>
<td>Are there comprehensive, reliable as-built records (health and safety files if post-2004)?</td>
<td>Record of inclusion or omission of ACMs in drawings and/or contract documents should be checked</td>
</tr>
<tr>
<td>Is whole or part of the building redundant and unoccupied?</td>
<td>Risk may be managed by preventing uncontrolled access, but emergency arrangements need to be considered and this is not a permanent solution</td>
</tr>
<tr>
<td>Have ACMs been removed previously?</td>
<td>Care must be taken to be sure that this was carried out properly. Where sprayed asbestos, e.g. limpet fire protection of steelwork, has been used, there is the risk that overspray may remain in crevices, voids or even within the linings or fabric of the building subsequently applied</td>
</tr>
</tbody>
</table>
## Table 17: Different types of asbestos survey

<table>
<thead>
<tr>
<th>Type</th>
<th>Detail</th>
<th>Pros</th>
<th>Cons</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Management</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For normal occupation</td>
<td>Property built after 2000 (no survey required)</td>
<td>• Certainty</td>
<td>• Not applicable, but if on-site of demolished buildings, land may still have asbestos contamination</td>
<td>• Written record of explanation needed</td>
</tr>
<tr>
<td>and to meet Regulation 4 –</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>duty to manage ACMs in non-</td>
<td>Confirmed by reference to accurate as-built records</td>
<td>• Very useful first point of reference, but presumption and/or sampling still required</td>
<td>• Risk of inaccuracy – unlikely to be able to rely entirely on records</td>
<td>• Written record of explanation needed</td>
</tr>
<tr>
<td>domestic premises</td>
<td></td>
<td></td>
<td>• Chance of unrecorded alterations/additions</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• If ACMs were used, possibility of unrecorded overspray and/or ad hoc use of off-cuts, etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Written record of explanation needed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Presumption</td>
<td>• Quick, cheap and easy</td>
<td>• Inconclusive – visual inspection only</td>
<td>• Must include assessment of condition of all suspected ACMs</td>
</tr>
<tr>
<td></td>
<td>• ‘Very strong’ – identical to sampled materials</td>
<td>• No disturbance from sampling or opening up</td>
<td>• Very unlikely to find all ACMS</td>
<td>• Record in asbestos register and management plan</td>
</tr>
<tr>
<td></td>
<td>• ‘Strong’ – similar in appearance to common or known ACMs</td>
<td>• Can defer need for sampling and analysis before any works are carried out</td>
<td>• Errs on side of caution – management restrictions may not be necessary</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ‘By default’ – insufficient evidence to confirm asbestos-free</td>
<td>• Involvement of sampling for the management survey (as suggested in HSG 264), so presumption alone is not usual and will need to be justified</td>
<td>• Potentially exaggerates extent and risk of ACMs, creating unnecessary alarm and may put off potential purchasers or lessees</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Can obstruct and delay any works, as results of sampling will be necessary to confirm or refute presumptions made</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Emergency access arrangements – e.g. for repairing burst pipes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Only a short term measure – eventually will need sampling for works or alterations that might disturb presumed ACMs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Possible implications regarding dilapidations (see subsection 5.10)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Limited damage</td>
<td>• Unlikely to find all ACMS in property</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Non-invasive – no disturbance and damage from opening up</td>
<td>• Disturbance from taking samples</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Confirms/disproves whether a material contains asbestos</td>
<td>• Emergency arrangements necessary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Limited to accessible parts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Will need refurbishment and demolition survey for alterations proposed that might disturb concealed parts</td>
</tr>
</tbody>
</table>
### Table 17 (continued)

| Management (continued) | Mixture of presumption and sampling | • Focused and cost-effective  
  • Flexibility  
  • Realistic – not all areas may be accessible or able to be sampled, e.g. historic or expensive linings | • Limitations as above and dependent upon form of assessment | • Must include assessment of condition of all suspected ACMs  
  • Record in asbestos register and management plan |
|---|---|---|---|---|
| Refurbishment and demolition | Of the relevant part or the whole building | • High degree of certainty | • Not completely certain - unless the property is only of simple construction or it is completely demolished  
  • Work areas must be vacated & unoccupied  
  • Ideally, building should not be in service all furnishings removed  
  • Fully intrusive and destructive inspection with considerable disruption and damage (but surfaces will eventually be disturbed or demolished by proposed works) | • May not find all ACMs, therefore long stop warnings and procedures still necessary |
| Refurbishment and demolition | Of the relevant part or the whole building | • Structured, methodical approach, limited to specific areas to be disturbed and therefore limiting extent of unnecessary damage to finishes and fittings | • Building works contract and programme must incorporate staged inspection by asbestos surveyor and for any removal or treatment works that might be required  
  • Prolongs inspection process by need for repeat visits, thus more expensive  
  • Uncertainty of extent of ACMs that might be discovered as the works progress |
**Appendix 8: Extent of asbestos-containing materials**

**1 Extent**

Asbestos has many and various 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 and to bind with other materials; and its relative cheapness and availability.

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

Its useful properties have been appreciated and utilised for centuries, although the first asbestos-related deaths were not recorded until 100 years ago. The dangers to health have been known since the beginning of the 20th century, but were not seriously accepted by the industry until the late 1960s and early 1970s.

Blue and brown asbestos continued to be used until they were banned in 1985, while asbestos insulating board (AIB) was banned in the mid-1980s. White asbestos was not banned until November 1999. It is thought that as recently as 1998, £19m of asbestos-based roofing products alone were sold.

In 2003 it was estimated that there was around 6 million tonnes of asbestos remaining in buildings throughout the UK, and that a large majority of all commercial and industrial buildings contained asbestos in one form or another. A survey by the Association of Metropolitan Authorities (AMA) in 1985 estimated that 4 million council homes in England, 8,000 of the 10,000 schools and 77 per cent of the social services buildings surveyed (in AMA areas) contained some asbestos.

At approximately the same time, it was thought that there were over 40 sq.m of asbestos roof or wall cladding that were over 30 years old and nearing the end of their useful life.

**2 Forms and products**

Asbestos is an incredibly versatile material and has been used in a variety of materials and components.

Table 18 shows asbestos products commonly found in buildings, the details of which are taken from HSG 264 (HSE, 2010). The ACMs are generally listed in approximate order of the ease in which fibres are released and thus the risk to health that they present, all other factors being equal.

### 2.1 Textured coatings

CAR 2006 makes a distinction between a coating containing asbestos, which is applied primarily for decorative purposes, and that used for fire protection or as insulation.

Both are spray-applied but the former is usually only a thin textured layer, often less than 3mm in thickness, whereas the latter is applied thickly and often loosely with the outer surface sealed by a thin, hard coating.

The HSE has reviewed its assessment of risk arising from the former and concluded that it is 1,000 times less than that for other licensable materials. Consequently, the L143 ACOP that accompanies CAR 2006 distinguishes between the two types as follows:

- An ‘asbestos-containing decorative coating’ refers to thin decorative and textured finishes, such as paints and ceiling plasters, used to produce visual effects. These coatings are designed to be decorative and any thermal or acoustic properties are incidental to their purpose. The proportion of asbestosis is ‘normally less than 4%’. CAR 2006 reflects this distinction in the requirements and controls of works to the two different forms of composition.

- An ‘asbestos coating’ is a surface coating which contains asbestos for fire protection purposes, or as both heat and sound insulation. It does not include the base material to which the coating has been applied.
# Table 18: Is an asbestos survey required?

<table>
<thead>
<tr>
<th>Product</th>
<th>Use</th>
<th>Approximate % of asbestos</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Loose</strong></td>
<td>loose egg mattresses/quilts for fire stopping or sound insulation</td>
<td>100</td>
</tr>
<tr>
<td><strong>Sprayed coating</strong></td>
<td>dry or wet applied anti-condensation or acoustic insulation, structural fire protection</td>
<td>55–85</td>
</tr>
<tr>
<td><strong>Thermal insulation Lagging, pre-formed sections</strong></td>
<td>Of pipes, boilers, pressure vessels, calorifiers</td>
<td>6–85</td>
</tr>
<tr>
<td><strong>Tapes, ropes, paper, felting, blankets</strong></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td><strong>Asbestos boards</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Millboard</td>
<td>Fire protection, heat and electrical insulation</td>
<td>37–97</td>
</tr>
<tr>
<td>Insulating board</td>
<td>Fire breaks, infill, panels, partitions, ceilings, ceiling tiles, linings to roofs and walls, external canopies and porch linings</td>
<td>16–40</td>
</tr>
<tr>
<td>Paper, felt, cardboard, electrical and heat insulation</td>
<td>Reinforcement and linings of other products</td>
<td>100</td>
</tr>
<tr>
<td><strong>Textiles</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ropes and yarns</td>
<td>Jointing and packing, boiler, over and flue sealing – plaited tubing in electric cable</td>
<td>100</td>
</tr>
<tr>
<td>Cloth</td>
<td>Fire blankets, mattresses, curtains, gloves</td>
<td>100</td>
</tr>
<tr>
<td>Gaskets and washers</td>
<td>Hot water boilers to industrial power and chemical plant</td>
<td>90</td>
</tr>
<tr>
<td>Strings</td>
<td>Seals to hot water radiators</td>
<td>100</td>
</tr>
<tr>
<td><strong>Friction products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resin-based materials</td>
<td>Brakes and clutch plates in machinery and lifts</td>
<td>30–70</td>
</tr>
<tr>
<td>Drive and conveyor belts</td>
<td>Engines and conveyors</td>
<td>30–70</td>
</tr>
<tr>
<td><strong>Cement products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profiled sheets</td>
<td>Roofs, wall cladding, permanent shuttering</td>
<td>10–15</td>
</tr>
<tr>
<td>Semi-compressed flat sheet and partition board</td>
<td>Bath panels, soffits, walls, ceiling linings, weather boarding, composite panels for fire protection or as base for decorative facings</td>
<td>10–25</td>
</tr>
<tr>
<td>Fully compressed flat sheet for slates, tiles, board</td>
<td>Worktops, imitation roof slates</td>
<td>10–15</td>
</tr>
<tr>
<td>Pre-formed moulded and extruded products</td>
<td>Troughs and conduits, cisterns and tanks, drain pipes, flues, rainwater goods, windowsills and reveals, fascias, soffits, ducts, copings, promenade tiles and early imitation slates</td>
<td>10–15</td>
</tr>
</tbody>
</table>
The L143 ACOP states that work with textured decorative coatings ‘will not normally’ have to be carried out by a person licensed to work with asbestos, however, a risk assessment is required and the same criteria checked to see whether it still falls within the Regulation 3(2) exceptions. (See subsection 12.2, Methods of removal, and section 15, Demolition and land clearance, for advice on the removal of asbestos-containing decorative coatings.)

‘Artex’, although a brand name, is often used as the generic name to describe a textured decorative coating spray applied to walls and ceilings. Early forms frequently contained asbestos fibres used as a binder to add strength and substance to the coating. Manufacturers stopped using asbestos circa 1985 and man-made mineral fibres were used as an alternative. The fibres are bound into the matrix of the material and sealed by the decorative coating which is frequently overpainted. In addition, the material is usually applied as a fairly uniform thin coating 2–3mm thick, thus the number of fibres per square metre of coating is small.

As it is a decorative coating, when used it is usually applied in large quantities to the exposed surfaces of walls, ceilings and soffits. As the decorative coating was often hand-mixed on-site, it is seldom uniform and thus several representative samples may be required to establish whether asbestos is actually present. In addition, the material is difficult to disperse, so it can be difficult to microscopically analyse its contents.

Sometimes fillers or sealers were used to prepare the concrete substrate, and these may also contain asbestos.

### 2.2 Asbestos boards

Both asbestos cement and AIB are used in sheet or board form. Because of the higher potential risks to health arising, working with AIB is subject to different and more stringent controls than working with asbestos cement.

The L143 ACOP includes asbestos cement as an example of ‘a material in which the fibres are firmly linked in a matrix’ (paragraph 34). This is one of the accumulative criteria for being one of the Regulation 3(2) exceptions, but that alone is not sufficient.

In comparison, the ACOP notes that due to the relative ease with which asbestos fibres can be released when working with AIB, ‘in most circumstances work with these materials should only be carried out by those holding a licence’ (paragraph 41), unless the work will only produce sporadic and low intensity exposure and will not exceed the control limit.
The two board materials are very similar in physical appearance. The distinction between them is one of density, the general rule being that the greater the proportion of cement matrix to asbestos, the greater the density. Conversely, the more friable the material, the greater the asbestos content.

The L143 ACOP defines asbestos cement as 'a material which is predominantly a mixture of cement and chrysotile and which in a dry state absorbs less than 30% water by weight' (paragraph 12). The guidance in the document includes a comprehensive description of the testing procedure.

AIB is defined as a flat sheet, tile or building board consisting of a mixture of asbestos and other material except asbestos cement or any article of bitumen, plastic, resin or rubber which contains asbestos, where its thermal or acoustic properties are incidental to its main purpose.

It may be relatively easy to identify asbestos cement when it is used in preformed components such as corrugated sheeting, tanks or toilet cisterns. However, when it is used in flat board form the only sure way of distinguishing the material from AIB is by laboratory analysis.

Where there is doubt, it is necessary to err on the side of caution, assume that the material is an AIB and take precautions accordingly.

2.3 Trade names

The Asbestos Information Centre Ltd has gathered together a useful (but not exhaustive) list of the trade names of ACMs. This is available for viewing on its website (www.aic.org.uk).
Appendix 9: Should ACM be removed, repaired or treated?

Table 19 provides a list of considerations on whether an ACM should be removed, repaired or treated. Removal is the last resort. The decision must be based on risk assessment comparing the benefits of removal with the risks of exposing workers to asbestos fibres during the removal. The assessment should be recorded in the asbestos register for future reference and reviewed should the circumstances change.

Table 19: Considerations on whether an ACM should be removed, repaired or treated

<table>
<thead>
<tr>
<th>Considerations</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Is there an immediate, significant health risk to occupants or others?</strong></td>
<td>Based on likelihood of inhalation of respirable fibres</td>
</tr>
<tr>
<td><strong>Can material or components be readily repaired or treated?</strong></td>
<td>Commercial decision – extent of ACM and damage</td>
</tr>
<tr>
<td><strong>After any necessary decontamination, can ACM be successfully protected from further disturbance?</strong></td>
<td>By physical protection and/or sealing of friable surfaces</td>
</tr>
<tr>
<td><strong>Is ACM likely to prevent access to essential parts or services?</strong></td>
<td>Take account of frequency of access and importance of concealed parts or services</td>
</tr>
<tr>
<td><strong>Is ACM likely to be disturbed by redecoration, refurbishment or alterations which are contemplated?</strong></td>
<td>Consider if ACM conceal vital services – if so, what is risk of their failure?</td>
</tr>
<tr>
<td><strong>Has material or component containing ACM reached, or nearing, end of useful life?</strong></td>
<td>Including associated or concealed, non-asbestos materials or components that will require the disturbance or removal of the asbestos in order to replace them</td>
</tr>
<tr>
<td><strong>Is removal a requirement of other parties?</strong></td>
<td>Consider whether the presence of ACMs may be affecting the value or attractiveness of the premises to potential purchasers or occupants (this should be resisted as far as reasonably practicable and decisions made dependent on assessed risk)</td>
</tr>
</tbody>
</table>
Appendix 10: Determining whether Regulation 3(2) exception of CAR 2006 applies

This flowchart shows the process in which the dutyholder(s) under Regulation 4 of CAR 2006 are identified.

Key:

a) e.g. maintenance of vacuum cleaners, negative pressure units or other equipment; erecting/dismantling scaffolding where likely to disturb the asbestos

b) asbestos cement; textured decorative coating and paints; articles of bitumen, plastic, resin or rubber where thermal or acoustic properties incidental to main purpose; other materials such as paper linings, cardboards, felt textiles, gaskets, washers or rope in which asbestos fibres are firmly linked in a matrix

c) not where asbestos fibre concentration in the air exceeds, or is likely to exceed, 0.6 fibres per cubic centimetres of air measured over a 10-minute period

d) where duration of the work by any one person is likely to be is less than 1 hour in a 7-day period, or the total for all workers is unlikely to exceed 2 hours in total

e) where asbestos fibre concentration in the air exceeds, or is likely to exceed, 0.1 fibres per cubic centimetres of air averaged over a continuous period of 4 hours

Encapsulation

Sampling

Analysis

Supervision

Ancillary work (a)

Removal or other works

(see asbestos essentials task sheets for a current list of minor work that will not need a licence, if carried out as described. If not included then follow the flow chart for the appropriate material)

Asbestos cement and other materials linked in a matrix (b)

Asbestos coating

Asbestos insulation

Asbestos insulation board

Will exposure of employees be only 'sporadic and of low intensity'? (c)

Is the work only 'short, non-continuous maintenance activities' (d)

Will control limit be exceeded? (e)

All of the regulations apply

Regulation 3(2) Exception applies

All of the Regulations apply
At the time of writing, the HSE was consulting on proposals to introduce revised CAR to implement the changes required to comply with the European Commission’s reasoned opinion on the UK government’s transposition of Directive 83/477/EEC, as amended by 2003/18/EC, on the protection of workers from the risks of exposure to asbestos at work.

The reasoned opinion confirmed the European Commission’s view that the UK has not fully implemented Article 3(3) of the Directive, which provides for the exemption of some types of lower risk work with asbestos from three requirements of the Directive: notification of work, medical examinations and record keeping.

The required changes mean in future fewer types of lower risk work will be exempt from the three requirements.
Appendix 11: Asbestos management during the life cycle of a building

This flowchart shows the process in which the dutyholder(s) under Regulation 4 of CAR 2006 are identified.
References

Statutes and Statutory Instruments

Asbestos (Licensing) Regulations 1983 (as amended)
Asbestos (Prohibition) Regulations 1992
Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004
Civic Government (Scotland) Act 1982
Construction (Design and Management) Regulations 2007 (CDM)
Control of Asbestos Regulations (CAR) 2006
Control of Asbestos at Work Regulations 2002 (CAWR)
Control of Substances Hazardous to Health Regulations 2002 (COSHH)
Defective Premises Act 1972
Environmental Protection Act 1990
Finance Act 2001
Hazardous Waste (England and Wales) Regulations 2005
Health and Safety at Work, etc. Act 1974
Health and Safety (Enforcing Authority) Regulations 1998
Health and Safety (Offences) Act 2008
Health and Safety (Safety Signs and Signals) Regulations 1996
Management of Health and Safety at Work Regulations 1999
Occupiers Liability Acts 1957 and 1984
Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR)
Special Waste Regulations 1996
Special Waste (Scotland) Regulations 1997
Unfair Contract Terms Act 1977 (UCTA)

Publications

Asbestos in CLASP and other system buildings, Sector Information Minutes (SIM) 7/2007/04, Health and Safety Executive (HSE), Sudbury, 2007.
Contamination, the environment and sustainability, 3rd edition, RICS guidance note, RICS, Coventry, 2010.
General Enforcement Guidance and Advice, Operational Circular (OC) 265/50 version 5, HSE, Sudbury, 2011.


Recommended Guidelines for the Encapsulatio... (ARCA), Staffordshire, 2008.


*Working Together for Health and Safety in Construction*, An agreement for the cooperation between the Health and Safety Executive (HSE) and the Building Control Alliance (BCA) in England and Wales, 2010.
Asbestos and its implications for surveyors and their clients

3rd edition, guidance note

Failure to understand or communicate the risks arising from exposure to asbestos can have potentially life-threatening consequences. As such, asbestos-related matters are of major significance to surveyors and their clients. In addition, for those who are likely to encounter, or supervise others who might encounter, asbestos in their work activities, training in ‘asbestos awareness’ is a mandatory legal requirement.

With this in mind, the 3rd edition of this guidance note is intended to give its readers a balanced and pragmatic appreciation of the general issues surrounding asbestos, with particular regard to its use in buildings and structures.

Designed primarily as a starting point in the subject, this guidance note addresses the latest legislation and includes details of how this affects the role and responsibilities of surveyors in the many and varied services that they provide. The status of asbestos as anathema in the insurance industry is also considered.

The guidance has a strongly practical focus, including fully revised and expanded appendices, in order to help readers understand the dangers to health and business, comply with and advise clients on the regulations, protect their PI insurance and carry out the preparation and implementation of an effective asbestos management plan. It also explains the process of appointing asbestos surveyors to conduct asbestos surveys, asbestos contractors to carry out asbestos removal or management works and consultants to monitor such works.