



RC41-1

for managing
the release of
hazardous
materials
following a fire

Part 1: Asbestos



Fire Protection
Association

InFiReS

LOSS PREVENTION RECOMMENDATIONS

The aim of the FPA series of Recommendations is to provide loss prevention guidance for industrial and commercial premises and systems. The series continues a long tradition of providing authoritative guidance on loss prevention issues started by the Fire Offices' Committee (FOC) of the British insurance industry more than a hundred years ago and builds upon earlier publications from the Loss Prevention Council and the Association of British Insurers.

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SCOPE

This document is one of a series of documents concerned with hazardous materials which may be present in the workplace that require specific consideration for protection of property, life and the environment. In the event of a fire, however, these materials may be released, presenting a serious hazard to staff and other persons in the vicinity. In addition to the risk to life, the release of the materials may result in protracted clear-up operations which may have a very serious impact on the continuity of normal business operations. This is due to several factors, including the prohibition of staff from entering possibly contaminated areas while the decontamination process is carried out by specialist contractors. Decontamination has to be completed before any refurbishment or rebuilding can commence and significantly increases the costs associated with the fire loss.

This guidance provides information regarding the serious consequences of the release of asbestos fibres, a material that for many years had widespread application in building construction. It indicates where asbestos may occur, the circumstances which may lead to the fibres being exposed to the environment, and the immediate response that should be taken to protect life, property and the business operations.

Excluded from the scope of this document is the effect of heat or damage to asbestos-containing materials in weakening a structure, leading to its eventual collapse.

SYNOPSIS

These recommendations outline the impact that the release of asbestos fibres as a result of a fire can have on a business. Not only does this result in expensive and lengthy clean-up processes, but in many cases it leads to considerable business interruption due to severe contamination and staff being prohibited from entering the premises while the decontamination operations are carried out.

DEFINITIONS

Asbestos surveys (ref. 1)

There are three types of survey, as follows:

- Type 1: Location and assessment survey (presumptive survey);
- Type 2: Standard sampling, identification and assessment survey (sampling survey);
- Type 3: Full access sampling and identification survey (pre-demolition/major refurbishment surveys).

Further detailed advice and information on the suitability of various types of survey and the circumstances in which they should be employed is available from the Asbestos Removal Contractors Association (see 'Organisations' section at the end of this document).

INTRODUCTION

A fire, even of modest magnitude, may result in significant damage to a building or structure and its contents. The presence of asbestos – whether in the form of cement sheeting, sprayed coatings or incorporated in other construction products – may have a severe impact on the time and cost of the reinstatement of the premises following a fire before the normal business processes can be resumed.

During the fire, construction materials that would normally be covered may be exposed, delaminated or transported in particulate form over a wide area. Where the materials may be hazardous to health, this contamination may be time-consuming and costly to neutralise or physically remove. Until this process is complete, there is a risk to the lives of staff, those carrying out decontamination and members of the public in the neighbourhood, some of whom may have to be evacuated from their homes until the area can be declared safe. In these circumstances the impact on the local community and the available resources may be considerable.

In anticipation of any unplanned events, such as fire damage, it is important that an assessment of the risk of exposure to asbestos within a building is undertaken by means of a suitable survey (see definitions). If asbestos is found, an asbestos management plan should be

prepared and implemented. This process would include steps such as:

- identifying materials on site that may contain asbestos;
- arranging for samples to be taken to identify if (and what type of) asbestos is present, using a United Kingdom Accreditation Service (UKAS) accredited laboratory;
- deciding whether the asbestos-containing material should be removed or sealed, taking into consideration its location and condition;
- arranging for the asbestos-containing material to be removed or sealed by a licensed contractor;
- marking any asbestos-containing material that is to remain on site with the asbestos label and maintaining a register;
- informing employees and contractors of the location of the asbestos and ensuring they do not disturb it;
- regularly checking the condition of the asbestos by inspecting it.

Following a significant fire, a risk assessment should be carried out to identify and quantify the hazards present, including the presence of toxic materials such as asbestos, to allow the risk to relevant persons to be determined. As part of the risk assessment process, it should then be considered how the hazards identified may be eliminated, controlled or managed. Consideration must be given without delay to determining how best to minimise further release during any inspection or clearance activities that need to be undertaken to make the workplace and surrounding area safe again for staff to return. This is of particular importance where asbestos is present.

The involvement of asbestos in a fire can result in lengthy and costly disruptions to business due to:

- large areas of the site having to be placed out of bounds to all staff until decontamination operations are complete;
- delays due to the asbestos register prepared for the site not being accessible or complete;
- large areas of the site having to be identified as exclusion zones in the longer term, with entry prohibited to staff;
- the fact that at least 14 days have to pass before work on collecting asbestos fibres can commence;
- the fact that the collection of asbestos debris by contractors is largely a manual operation and thus slow.

Because of the nature of asbestos and the hazard to life safety, should asbestos fibres be released into the environment, all reasonable steps should be taken to protect people from the hazard.

Business continuity considerations also demand that health and safety legislation be observed meticulously, imposing a high standard on employers without imposing strict liability.

Legislation

The hazards associated with asbestos fibres in the environment are such that legislation has been passed to specifically address these. The Control of Asbestos Regulations 2006 (ref. 2) are aimed at preventing exposure of persons to asbestos by steps such as:

- undertaking risk assessments;
- preparing work plans;
- providing information and training to employees who might be exposed;
- the use and licensing of asbestos removal organisations; and
- notification of higher risk removal works to the Health and Safety Executive (HSE).

Of particular relevance is the requirement for duty holders (eg occupiers) to manage the asbestos risk in their premises by identifying asbestos, assessing the risk and preparing an asbestos management plan which includes the location of the asbestos, for example in the form of an asbestos register. The Regulations also require information identifying the location and condition of identified asbestos to be made available to any person likely to disturb it, such as contractors and, where necessary, the emergency services.

Background

Asbestos was used extensively as a building material from the 1950s through to the mid 1980s. Although some of this material has been removed over the years, many thousands of tons of asbestos are still present in existing buildings. It is estimated that over half a million non-domestic premises currently have some form of asbestos in them.

Asbestos, a silicate of magnesium, occurs naturally as a glassy rock which can be split into extremely thin fibres. These are flexible and strong in tension and have good resistance to alkalis, neutral salts and organic solvents; when incorporated into building material they also have good resistance to acids. The resistance of asbestos-containing products to fire is largely dependent on the proportion of asbestos fibre that they contain; small proportions of organic materials in some asbestos products make them combustible.

Asbestos had widespread use in building construction, notably as a lagging material, and its presence is often identified in buildings during refurbishment projects. When covered or encapsulated (preventing asbestos fibres reaching the atmosphere), the hazard is controlled. The risk to health arises as a result of asbestos fibres being disturbed (either mechanically or as a result of a fire), becoming airborne and then being inhaled.

Hazards of asbestos

There are three types of asbestos. Although they are known as white (chrysotile), brown (amosite) and blue (crocidolite) asbestos, they cannot be identified by their colour; laboratory analysis is required. The brown and blue forms are the most hazardous to health.

The importation and use of blue and brown asbestos was banned in 1985 and in 1999 the importation and use of white asbestos was also banned, apart from in some specialised fields where there was no suitable substitute available. Such circumstances ceased to be recognised some time ago.

It is estimated that some 3,500 people die each year from asbestos-related diseases, and this figure is increasing. The fibres are introduced into the body by inhalation through the nose and mouth; they are not absorbed through the skin. Inhalation of the fibres can result in four main diseases:

- *Mesothelioma*: a cancer of the lining of the lungs, which may take 15-60 years to develop after exposure;
- *Lung cancer*: typically developing 20 years after exposure. Where people smoke, the risk of lung cancer is increased due to the interaction of the inhaled smoke with the asbestos fibres in the lungs;
- *Asbestosis*: a chronic fibrosis of the lungs which develops 25-30 years following exposure;
- *Diffuse pleural thickening*: where the lining of the lungs (the pleura) become scarred, giving rise to a non-malignant but chronic and incurable condition about 10 years after exposure.

Products containing asbestos

Asbestos is non-combustible and able to withstand temperatures of up to 900°C without change. The lack of degradation of the material in fire conditions – while being a commendable property as far as fire resistance is concerned – creates a significant hazard during a fire and also following a fire, as a result of the remaining debris.

Because of their attractive properties, asbestos fibres have been used as a reinforcement material in the production of a number of building materials including:

Asbestos-cement products

These materials (formerly manufactured to various parts of BS 690, which have now been withdrawn) are still familiar as asbestos cement sheeting, often corrugated, and widely used for roof and wall covering. They were also used as tiles for roofs. They were manufactured from asbestos bonded with Portland cement and various other materials, sometimes with a pigment incorporated into the mixture. Asbestos normally comprised 12-15% by weight of the finished product. The strength and thermal conductivity of the material increases with its density, but the converse is true of its fire resistance, with asbestos cement sheeting making virtually no contribution to the fire resistance

Case history 1

Additional cost of rebuilding

In 2005, a metalworking property constructed of essentially non-combustible materials, although including some PUR insulation in parts, suffered a fire estimated to have cost £1.2 million. The fire and rescue service arrived and within 9 minutes only damping down procedures were required as the fire had almost burned itself out. The building had an asbestos roof that had to be replaced as a result of the fire. Specialist contractors were used to complete this work at an additional cost of £200,000. These additional costs amounted to 16% of the original claim, despite the short time the asbestos was exposed to fire.

of a building due to its tendency to crack and shatter when heated.

In a fire, the loud cracking noises made by asbestos cement sheeting as it shatters are often reported as explosions by members of the public. The heated sheeting will also shatter as a result of thermal shock if subjected to a stream of firefighting water.

Asbestos insulating boards and wall boards

Manufactured to the now withdrawn BS 3536, these boards contained at least 50% asbestos fibre and were used to protect steelwork and for improving the fire resistance of structures and doors.

Asbestos/inorganic agent bonded products

These materials also incorporated a larger proportion of asbestos fibres than asbestos-cement sheeting and one side was commonly smooth or decorated. They were used primarily for thermal insulation and fire protection because of the stability of the material in high temperature and fire conditions. The boards do not shatter under the effect of heat and during installation were sawn and nailed without pre-drilling.

Resin bonded asbestos products

These materials consisted of synthetic resin-impregnated asbestos paper, fabric or felt, bonded under heat and pressure. Temperatures of up to 220°C could be resisted, depending on the resin employed.

Sprayed asbestos

Sprayed asbestos fibres now present the most serious hazard from asbestos. BS 3590 (now withdrawn) required that sprayed asbestos contained at least 55% asbestos content. Asbestos in sprayed coatings has now been replaced by other fibres or coatings that contain lightweight aggregate such as exfoliated vermiculite.

Bitumen bonded asbestos

This material was formerly manufactured to the 1977 edition of BS 747 (subsequently withdrawn), which allowed the inclusion of asbestos. This material is still

Case history 2

Disruption to the business and neighbourhood



A relatively small fire in a premises suspected to contain asbestos can have a significant impact, not only on the business concerned but also on its neighbours. The potential need to evacuate both business and domestic premises in the neighbourhood, with costly disruption to business operations and the day-to-day lives of the residents, is illustrated by the following extract from the Accrington Observer:

‘Royds Street in Accrington was sealed off on Tuesday afternoon after firefighters discovered dangerous asbestos while tackling a garage blaze. Crews attending the fire, thought to have been sparked by arsonists, realised the roof of the burning garage was made from asbestos sheeting and cordoned off the area, ordering residents to stay indoors.

Council environmental health workers, dressed in full protective gear, were then called to the scene to clear up the potentially-deadly debris. Station officer Chris Hollis, of Hyndburn Fire Station, said as soon as they realised about the asbestos, they immediately dampened the roof down to stop any particles becoming airborne. He said: "The main danger is in the smoke and we took the necessary precautions but there was very low risk to residents".’

present as roofing felt and damp-proofing membranes in some older properties.

Ballast in safes

The material between the linings of some old safes contained asbestos which could be released in the event of the safe being damaged as a result of the fire.

Other materials

As well as being incorporated into the structure of the building, asbestos can also be found:

- in the internal linings of doors in service areas;
- in rewirable fuse boards;
- as the material for baseboards for switchboards and in the linings of switchroom doors;
- inside partitioning and around windows;
- in old storage heaters;
- in the thermal insulation of pipes, especially in boiler rooms;
- in flue pipes;
- in seals around boiler flues;
- in rainwater fittings, including guttering and down pipes;
- in cisterns;
- in soil, waste and ventilation pipes and ducts;
- in flexible cords;
- in jointing, binding, stopping and sealing materials;
- some early formulations of textured coatings on walls and ceilings.

Although once in widespread use in the motor industry, keeping or supplying asbestos-containing brake or clutch components is now illegal. Asbestos-containing gaskets, such as cylinder head and exhaust manifold gaskets, are also prohibited.

Asbestos can still be found in ships and legislation has been passed specifically to allow the importation of ships for the purposes of disposal and recycling.

Some specialist parts containing asbestos may still be encountered in railway rolling stock.

Artex is a water-based covering, usually used to decorate ceilings, and generally brought to a textured finish with the use of a brush or roller. Some older Artex may contain asbestos and it would be extremely unwise to sand down or scrape the surface without seeking specialist advice.

RECOMMENDATIONS

1. Managing asbestos

A fire can degrade and alter the properties of everyday materials, resulting in seemingly innocuous items presenting a significant, and sometimes unexpected, hazard to firefighters and any other persons in the vicinity. Such may be the case with asbestos which is not normally visible during day-to-day operations in the premises.

While economics may dictate that the presence – and thus potential hazard – of asbestos cannot be totally eliminated, it should be identified during the risk assessment carried out for the building in compliance with the Control of Asbestos Regulations 2006 (ref. 2).

There are seven key requirements in the management of asbestos. These are:

<i>Find</i>	A check must be made to establish if materials containing asbestos are present
<i>Condition</i>	A check must be made to establish the condition of any asbestos
<i>Presume</i>	An assumption must be made, unless there is evidence to the contrary, that materials contain asbestos
<i>Identify</i>	Materials should be sampled and identified by a specialist if they are in poor condition or maintenance or refurbishment work is planned
<i>Record</i>	The location and condition of the material should be recorded on site
<i>Assess</i>	An assessment must be made as to whether the material is likely to be disturbed
<i>Plan</i>	A plan must be prepared and implemented to manage the hazards

- 1.1 An asbestos risk assessment should be carried out by a competent person in all buildings where asbestos, in all forms, may be present on the premises.
- 1.2 Following the survey, an asbestos register should be drawn up in order that the hazards to staff and people living in the neighbourhood are eliminated, substituted or controlled. Where removal would be unduly disruptive to the business, or financially prohibitive, control would be the appropriate option, but a policy should also be devised for measures to mitigate the risk following the release of asbestos fibres in the event of a fire.
- 1.3 The asbestos register should be available for inspection by contractors and other relevant persons visiting the premises, including the fire and rescue service. If a fire occurs in a building where asbestos is known to be present, the fire and rescue service should be informed of the location and type of hazard on their arrival or as soon as possible thereafter.

Where asbestos is known to be present, firefighters should then avoid scattering the material by refraining from using high pressure water streams in critical areas. Firefighting water will also be retained on site as far as possible for later disposal.
- 1.4 A copy of the asbestos register should be kept off the premises so as to be available in case of a major incident on site.
- 1.5 The asbestos register should form a key part of the contingency and business resilience plans for the premises, copies of which should also be held securely off site.



Figure 1: Warning sign

- 1.6 Where materials are known or suspected to contain asbestos, they must be kept in good condition and be made known to firefighters and other relevant persons by the displaying of suitable signs or symbols (see Figure 1). Periodic checks and reassessments should be carried out.
- 1.7 Asbestos or asbestos-containing materials not already known to be present may be found following a fire; in these and other cases it is important that action is taken without delay to:
 - keep exposure to all personnel and others in the vicinity as low as reasonably practicable; exclusion areas should only be reduced in size in accordance with expert advice;
 - minimise the spread of contamination to nearby areas;
 - decide who is to undertake the clearance work;
 - clean up the contamination.
2. **Managing asbestos during and after a fire**
 - 2.1 When asbestos is known to be on the premises, in the event of a fire all staff should be evacuated to a place of safety upwind until a competent person has deemed that it is safe to return. Where asbestos has been released, it is likely to be days or weeks before any staff may be allowed onto the site.
 - 2.2 When the fire has been extinguished, an assessment should be undertaken and an exclusion zone should be identified and cordoned off to restrict entry. Where there is doubt regarding the size of the exclusion zone, a larger, rather than smaller area should be selected until specialist advice is obtained.
 - 2.3 Following a fire, asbestos fibres may be released from dry debris. To prevent any asbestos fibres that may be present from becoming airborne, firefighters may keep sprays of water playing on the debris as a precaution until any investigation

of the cause and origin of the fire is complete. Liaison should be established with the fire and rescue service to ensure that, if necessary, suitable protection measures are taken when they leave.

- 2.4 As soon as possible after a fire, a table-top exercise should be undertaken in a safe place away from the area of damage to identify the areas of the site affected by the fire, and, in particular, any areas noted in the asbestos register as containing asbestos in any form. The possibility of areas initially free of asbestos having been contaminated during or following the incident must be taken into account.
- 2.5 As soon as asbestos is believed to be involved, the area(s) should be prominently marked prohibiting entry by unauthorised persons, and a specialist company, such as a member of the Asbestos Removal Contractors Association, should be consulted without delay. (The only exception to this may be when small quantities of asbestos cement sheeting may be involved.)
- 2.6 The asbestos removal company will carry out a full survey and submit the appropriate notification forms to the HSE where necessary. Where the HSE must be notified, the normal process is that notification must be made at least 14 days prior to any work being carried out. In the case of there being a serious contamination risk during the intervening time, the HSE may make exceptions to their normal procedures.
- 2.7 During the 14-day period, no company staff will be allowed on site but the HSE may choose to visit, and the contractors will prepare their method statements for the recovery, removal, packaging and disposal of the asbestos.

Although, in the case of restricted areas or rooms, plastic sheeting may be erected to enclose an area to prevent the further distribution of particles by air movement, this will not be undertaken during the 14-day notification period without the agreement of the HSE.

During the decontamination work, the removal company may also enclose areas with plastic sheeting to reduce the spread of asbestos from any place where work is being carried out. In some instances, such as in the case of a dangerous structure, it may be impractical to totally enclose the area concerned, and in these instances a wider exclusion zone, cordoned off with tape, may be necessary. Staff must be made aware that access to these extended areas is strictly prohibited.

Any loose asbestos insulation or similar material found outside the exclusion zone should be reported to the removal contractor. It should be left in position and staff should leave the area concerned until the exclusion zone has been extended or the material has been collected by specialist contractors.

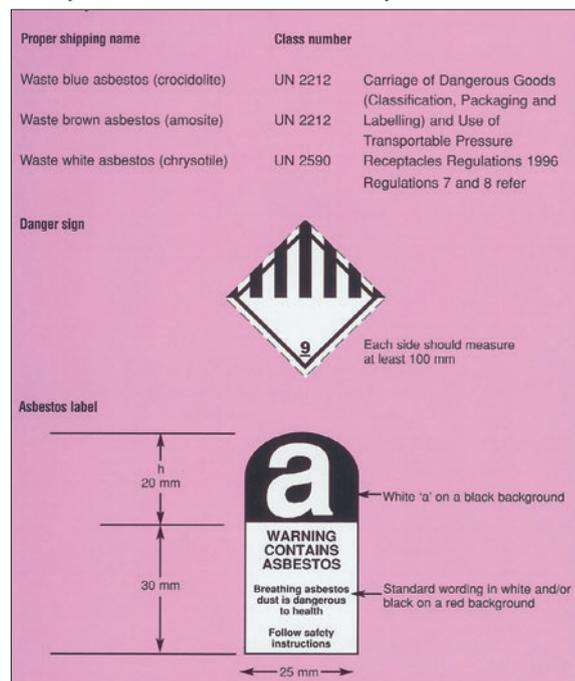
- 2.8 If an area referred to in the asbestos register as potentially containing friable or fibrous asbestos is involved, then the detailed survey undertaken by a specialist company may result in air sampling being required. This should be undertaken by a reputable organisation complying with BS EN ISO/IEC 17025 (ref. 3).
- 2.9 Until the assessment is complete, even if no asbestos is visible in the vicinity, only in exceptional cases will key members of staff be allowed to enter the damaged areas (for example, to make processes safe) – and then only if wearing suitable personal protective equipment for which they have been sufficiently trained.
- 2.10 A member of staff should be available to provide advice to the contractor on other dangerous substances, equipment or hazards in the area in which they are working. This member of staff should not, however, enter the exclusion zone.
- 2.11 Wherever possible a suitable water supply should be available to allow the contractors to keep the debris wet.
- 2.12 Asbestos material collected for removal from the site should be placed in suitable plastic bags/sacks and each bag should be appropriately labelled (see Figure 2).

3. Asbestos cement sheeting

- 3.1 The involvement of asbestos sheeting in a fire does not need to be notified to the HSE, but the collected material must be disposed of as hazardous waste at a specialist hazardous waste site

Figure 2: Labelling requirements for plastic bags/sacks containing asbestos

(Taken from 'Asbestos essentials task manual', ref. 4)



controlled by the Environment Agency. In view of this, it is advisable to engage a specialist contractor to collect, package and remove the broken asbestos cement sheeting following a fire.

- 3.2 Although the hazards associated with asbestos cement sheeting are not as great as those created when asbestos fibres are released, any area where there are broken sheets should be secured, with staff being prohibited from entry while awaiting the arrival of the contractor.
- 3.3 All pieces of asbestos cement sheeting should be left in position and care must be taken not to break any further asbestos while the area is secured.
- 3.4 Vehicles should not be allowed entry to the exclusion zone, and they should be parked outside the exclusion zone. If there is a danger that they would drive over and further crush asbestos cement sheeting, then the exclusion zone should be extended accordingly.
- 3.5 When removing asbestos cement sheeting, contractors will normally use hand tools, but if power tools have to be used then parts of the site may have to be evacuated while the work is undertaken and for a period afterwards. The contractor will provide advice as necessary.
- 3.6 Asbestos cement boarding is not a strong material and thus under no circumstances should asbestos cement roofs and the like be walked on, whether damaged by fire or not. All relevant staff should be instructed accordingly.

4. Business resilience

- 4.1 Business resilience is about safeguarding the business and its assets and should be a fundamental element of the management process. Adequate planning can help to mitigate the effects of a disaster such as a fire, and a well-designed and rehearsed contingency plan can help to identify problems inherent to the premises (such as the presence of asbestos) and develop a plan of action to take should disaster strike.

The guidance set out in BS 25999 (ref. 5) is recognised as best practice with regards to business continuity management and should be followed where practical.

- 4.2 If the asbestos assessment for the premises has identified asbestos to be present then the response should not just be to display signs to indicate the presence of any such material that cannot be removed or replaced. It should also consider the response that should be taken in the event of a fire, including locating specialist contractors who have the experience and facilities to decontaminate the site safely. The details of the

contractor should be included in the site emergency plan.

- 4.3 The presence of asbestos in a fire situation may pose threats to the continuity of the business in the form of:
 - prolonged exclusion from the site of all staff and perhaps also evacuation of the surrounding businesses and domestic properties;
 - severe contamination of raw materials, process equipment and products;
 - additional costs associated with the removal of the remains of the asbestos and the rebuilding processes;
 - a prolonged period of down time even after staff are allowed to return before normal business can resume.
- 4.4 The preparation of a suitable and sufficient contingency plan is a major part of the business resilience process and it is critical that a copy of this document, together with a copy of the asbestos register, is kept at a safe location off-site. If this is not done, there is a danger that the documents may not be accessible in the event of a fire at the premises.

Further information to assist in developing a strategy to prepare for such an event and minimise its impact is set out in *Business Resilience: A Guide to Protecting Your Business and Its People* (ref. 6).

SUPPLEMENTARY INFORMATION: DISPOSAL OF ASBESTOS FIRE BLANKETS

- Wear suitable personal protective equipment
- If the blanket and container are no longer required, unscrew the container from the wall and place it in an asbestos waste container
- For blankets with opening bases, open the container and allow the blanket to drop into an asbestos waste container
- If the blanket has to be pulled out of the container, spray a little water into the inside first to reduce the likelihood of creating airborne asbestos fibres
- Do not open or shake the blanket
- Use wet rags to wipe the inside of the container and dispose of the rags with the blanket
- Inspect the inside of the container and the floor to ensure no contamination remains
- Remove and dispose of protective clothing with the blanket

5. Checklist		Yes	No	N/A	Action required	Due date	Sign on completion
5.1	Managing asbestos (Section 1)						
5.1.1	Has an asbestos risk assessment been carried out by a competent person in all buildings where asbestos, in all forms, may be present on the premises?						
5.1.2	Following the survey, has an asbestos register been drawn up in order that the hazards to staff and people living in the neighbourhood are eliminated, substituted or controlled?						
5.1.3	Is the asbestos register available for inspection by contractors and other relevant persons visiting the premises, including the fire and rescue service?						
5.1.4	Is a copy of the asbestos register kept off the premises so as to be available in case of a major incident on site?						
5.1.5	Are materials that are known or suspected to contain asbestos kept in good condition and made known to firefighters and other relevant persons by the displaying of suitable signs or symbols?						
5.1.6	In the event of asbestos or asbestos-containing materials that are not already known to be present being found following a fire, is appropriate action taken without delay?						
5.2	Managing asbestos during and after a fire (Section 2)						
5.2.1	In the event of an incident where asbestos is known to be on the premises, are plans in place for all staff to be evacuated to a place of safety upwind until a competent person has deemed that it is safe to return?						
5.2.2	Have staff been made aware that, following a fire where asbestos may be involved, an assessment will be undertaken and an exclusion zone identified and cordoned off to restrict entry?						
5.2.3	Has a safe place been identified to enable a table-top exercise to be undertaken following a fire to identify the areas of the site affected by the fire, and, in particular, any areas noted in the asbestos register as containing asbestos?						
5.2.4	Has a specialist company, such as a member of the Asbestos Removal Contractors Association, been identified in the contingency plans to allow them to be consulted without delay?						

	Yes	No	N/A	Action required	Due date	Sign on completion
5.2.5	Has the contingency plan acknowledged that, until the assessment is complete, even if no asbestos is visible in the vicinity, only in exceptional cases will key members of staff be allowed to enter the damaged areas (for example to make processes safe) – and then only if wearing suitable personal protective equipment for which they have been sufficiently trained?					
5.2.6	Have relevant staff been trained in the use of the personal protective equipment referred to in section 5.2.5?					
5.2.7	Are plans in place for appropriate staff to be available to provide advice to the contractors regarding other dangerous substances, equipment or hazards in the area in which they are working?					
5.2.8	Is a suitable water supply available to allow the contractors to keep the debris wet?					
5.3	Asbestos cement sheeting (Section 3)					
5.3.1	Has a specialist contractor been identified in the contingency plan to collect, package and remove broken asbestos cement sheeting following a fire?					
5.3.2	Are plans in place to secure, and prevent staff from entering, any area where there are broken asbestos cement sheets, while awaiting the arrival of the contractor?					
5.3.3	Are plans in place to prohibit vehicles from gaining entry to the secured area, with a parking area identified outside the exclusion zone?					
5.3.4	Have all relevant staff been instructed that in no circumstances should they walk on asbestos cement boarding, such as that on roofs, whether damaged by fire or not?					
5.4	Business resilience (Section 4)					
5.4.1	Have the threats posed to the continuity of the business by the presence of asbestos been considered in the emergency action plans and contingency plans for the premises?					
5.4.2	Is a copy of the contingency plan, together with a copy of the asbestos register, kept at a safe location off-site?					

REFERENCES

1. MDHS 100: *Surveying, sampling and assessment of asbestos-containing materials*, HSE, 2001.
2. The Control of Asbestos Regulations 2006, SI 2006 No. 2739, Stationery Office.
3. BS EN ISO/IEC 17025: 2005: *General requirements for the competence of testing and calibration laboratories*, British Standards Institution.
4. HSG 210: *Asbestos essentials task manual: Non-licensed task guidance for building and maintenance trades*, HSE, 2007.
5. BS 25999-1: 2006: *Code of practice for business continuity management*. British Standards Institution.
6. *Business Resilience: A Guide to Protecting Your Business and Its People*, FPA for InFiReS, 2005.

FURTHER READING

1. L143: *Work with materials containing asbestos: Control of Asbestos Regulations 2006: Approved Code of Practice and Guidance*, HSE, 2006.
2. The Hazardous Waste (England and Wales) Regulations 2005, SI 2005 No 894, Stationery Office.
3. The List of Wastes (England) Regulations, SI 2005 No. 895, Stationery Office (as amended by SI 2005 No. 1673).
4. The List of Wastes (Wales) Regulations 2005, SI 2005 No. 1820, (W.148), Stationery Office.
5. The Special Waste Amendment (Scotland) Regulations 2004, No. 112, Stationery Office (as amended by SI 2004 No. 204).
6. Environment Protection Act 1990, 1990 c. 43, Stationery Office.
7. BS 5415-2.2: Supplement No. 1: 1986: *Safety of electrical motor-operated industrial and commercial cleaning appliances. Particular requirements. Specification for type H industrial vacuum cleaners for dusts hazardous to health*, British Standards Institution.
8. L127: *The management of asbestos in non-domestic premises, Regulation 4 of the Control of Asbestos Regulations 2006: Approved Code of Practice and guidance*, HSE, 2006.
9. NFPA Haz-Mat Quick Guide, 1997, National Fire Protection Association.

Useful websites

www.europa.eu.int/comm/environment/dansub/home_en.htm
www.hse.gov.uk/asbestos/issues.htm
www.hse.gov.uk/asbestos/licensingapplication.htm

Organisations

Asbestos Removal Contractors Association
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