Department of Health

Firecode – fire safety in the NHS
Health Technical Memorandum 05-03: Operational provisions

Part F: The prevention and control of arson in NHS healthcare premises

Firecode – Fire safety in the NHS
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Part F: Arson prevention in NHS premises

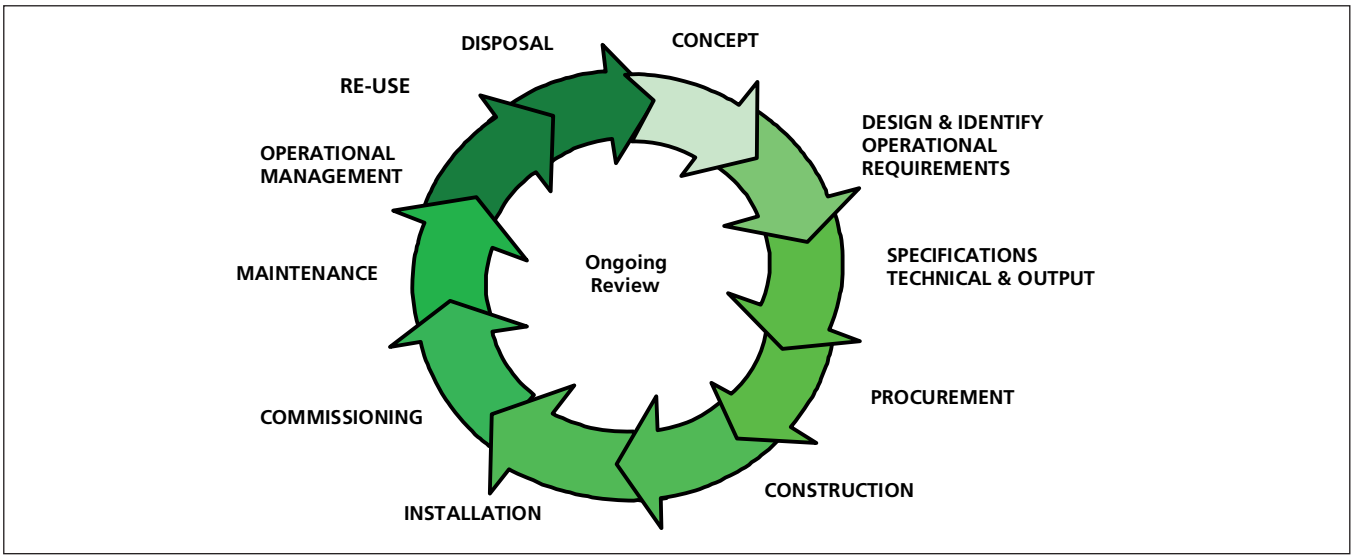
Preface

About Health Technical Memoranda

Health Technical Memoranda (HTMs) give comprehensive advice and guidance on the design, installation and operation of specialised building and engineering technology used in the delivery of healthcare.

The focus of Health Technical Memorandum guidance remains on healthcare-specific elements of standards, policies and up-to-date established best practice. They are applicable to new and existing sites, and are for use at various stages during the whole building lifecycle.

Figure 1 Healthcare building life-cycle



Healthcare providers have a duty of care to ensure that appropriate governance arrangements are in place and are managed effectively. The Health Technical Memorandum series provides best practice engineering standards and policy to enable management of this duty of care.

It is not the intention within this suite of documents to unnecessarily repeat international or European standards, industry standards or UK Government legislation. Where appropriate, these will be referenced.

Healthcare-specific technical engineering guidance is a vital tool in the safe and efficient operation of healthcare facilities. Health Technical Memorandum guidance is the main source of specific healthcare-related guidance for estates and facilities professionals.

The core suite of nine subject areas provides access to guidance which:

- is more streamlined and accessible;
- encapsulates the latest standards and best practice in healthcare engineering, technology and sustainability;
- provides a structured reference for healthcare engineering.

Structure of the Health Technical Memorandum suite

The series contains a suite of nine core subjects:

Health Technical Memorandum 00
: Policies and principles (applicable to all Health Technical Memoranda in this series)

Health Technical Memorandum 01
: Decontamination

Health Technical Memorandum 02
: Medical gases

Health Technical Memorandum 03
Heating and ventilation systems

Health Technical Memorandum 04
Water systems

Health Technical Memorandum 05
Fire safety

Health Technical Memorandum 06
Electrical services

Health Technical Memorandum 07
Environment and sustainability

Health Technical Memorandum 08
Specialist services

Some subject areas may be further developed into topics shown as -01, -02 etc and further referenced into Parts A, B etc.

Example: Health Technical Memorandum 06-02 represents:

Electrical Services – Electrical safety guidance for low voltage systems

In a similar way Health Technical Memorandum 07-02 represents:

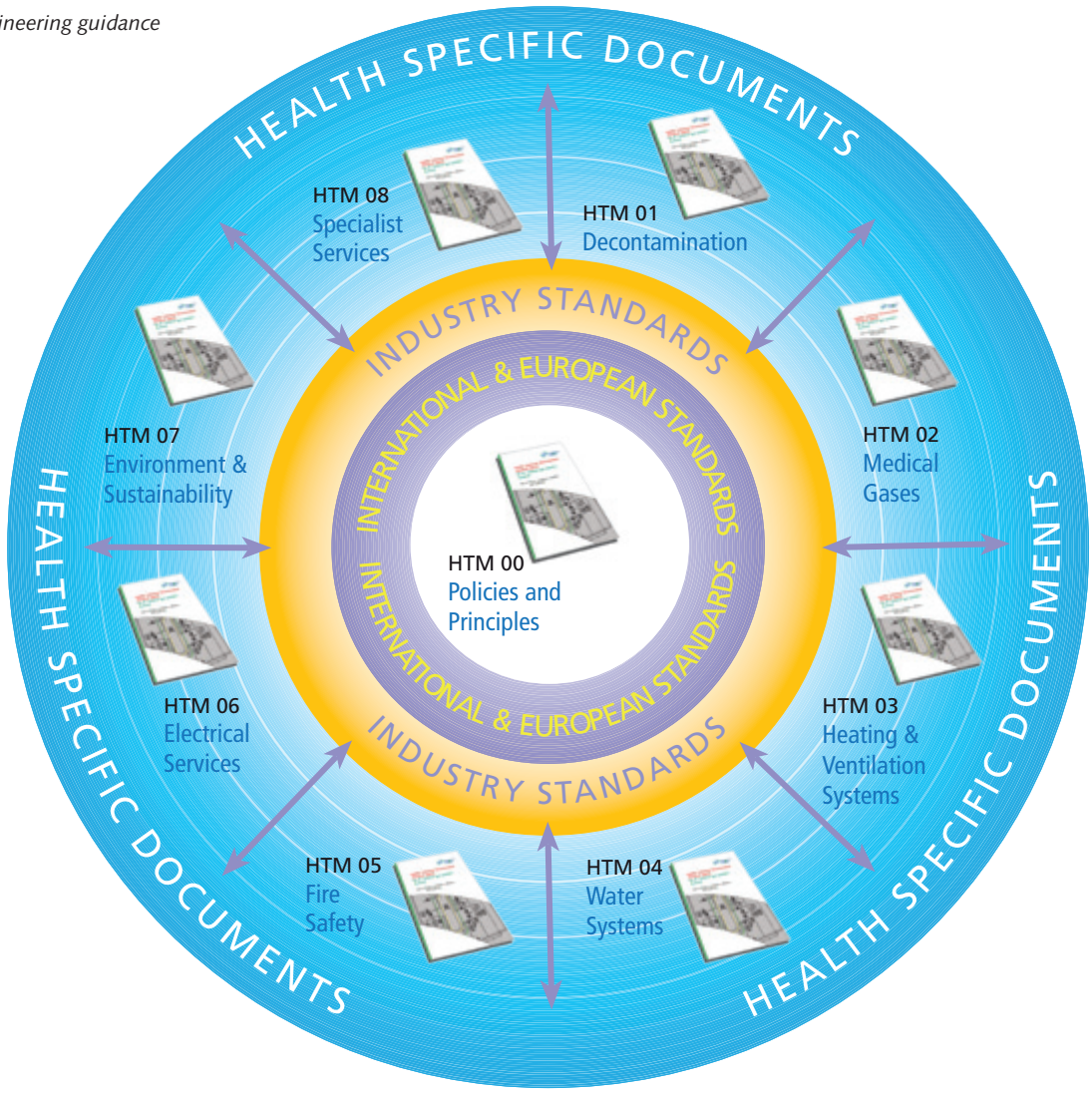
Environment and Sustainability – EnCO_2de.

All Health Technical Memoranda are supported by the initial document Health Technical Memorandum 00 which embraces the management and operational policies from previous documents and explores risk management issues.

Some variation in style and structure is reflected by the topic and approach of the different review working groups.

DH Estates and Facilities Division wishes to acknowledge the contribution made by professional bodies, engineering consultants, healthcare specialists and NHS staff who have contributed to the production of this guidance.

Figure 2 Engineering guidance



Executive summary

The effects of fire in any premises can be serious. However, in the case of hospitals and other healthcare premises, fires have a greater significance due to the presence of large numbers of patients. The primary remit of healthcare organisations with regard to fire safety in all premises for which they are responsible, whether owned or occupied by them, is the safety of the patients, visitors and all staff (including PFI providers, contracted staff etc) on the premises.

Health Technical Memorandum 05-03 Part L – 'NHS fire statistics 1994/95–2004/05' indicates that 29% of fire incidents are attributed to arson. Prevention should therefore be a priority. In attempting to prevent, detect and control arson, healthcare organisations will need to select a combination of measures to produce an effective policy, taking the following into account:

- this Health Technical Memorandum;
- other Firecode publications cited by this Health Technical Memorandum;
- all statutes, regulations and guidance referred to in Firecode documents;
- the NHS Security Management Manual;
- the advice of the local fire and police authorities;
- the advice of staff in the healthcare organisation (estates staff, hospital fire safety, security, building control advisers etc).

Arson not only poses a fire risk, but impacts upon the security arrangements for the organisation.

Acknowledgements

The following individuals and organisations have contributed to the production of this guidance:

Duncan Stainforth – West Yorkshire Fire and Rescue Service

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Peter Wiles – Welsh Health Estates

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Contents

1 Introduction and scope

General application

1.1 This Health Technical Memorandum provides guidance on the additional fire and other precautions that may be adopted to prevent, detect and reduce arson in NHS premises. It complements and should be read in conjunction with the rest of the Firecode suite of Health Technical Memoranda, and in particular Health Technical Memorandum 05-03 Part K – 'Guidance on fire risk assessments in complex healthcare premises'.

1.2 Much of the guidance is intended to prevent life-threatening fires occurring in the clinical areas of hospitals. The principles apply equally to all parts of healthcare premises where the act of intentionally setting them or their contents on fire would pose serious threats to life, undermine their strategic importance and effectiveness, create large-scale disruption to services or incur significant financial loss.

1.3 The recommendations of this Health Technical Memorandum should be considered at an early stage during the planning and design of new hospitals and healthcare premises or major extensions to existing premises. In all existing premises, consideration of the potential for arson and its consequences should be a component of the fire risk assessment conducted in pursuit of compliance with the terms of the Regulatory Reform (Fire Safety) Order 2005.

1.4 Locations identified as vulnerable in the significant findings of the fire risk assessment should receive prompt attention in accordance with the guidance in this Health Technical Memorandum, especially where the outcome of a fire is likely to have a significant impact on the safety of a patient care area.

1.5 Advice should be sought from the local fire-and-rescue service as well as police authorities on how best to take account of the threat of deliberate fire-raising when considering the design of new premises or the refurbishment of existing premises. Many fire-and-rescue services now have a dedicated arson reduction team that can give specific, informed advice. The organisation's local security lead can also provide valuable advice, and he/she should seek the cooperation of the organisation's fire adviser to complete a security risk assessment, which will be separate from but complementary to the fire risk assessment.

Purpose of this Health Technical Memorandum

1.6 This Health Technical Memorandum provides sufficient general information and technical and management guidance to ensure that when new, extended or altered healthcare premises are being designed, appropriate measures are incorporated to reduce the potential for arson.

1.7 The recommendations of this Health Technical Memorandum cannot take account of all the circumstances that may be found in healthcare facilities. They are intended to highlight only those circumstances that will normally need to be considered. Any measures adopted will necessarily have to reflect the specific circumstances prevailing in the premises, whether structural, organisational or managerial.

Management

1.8 Chapter 3, 'The responsibilities of management in preventing and controlling arson' of this Health Technical Memorandum refers to the managerial and organisational arrangements necessary to ensure that the potential for arson is taken into account in new schemes. In addition, as circumstances permit, the aim should be to use the guidance to improve standards in existing premises and when developing the overall fire safety strategy for hospitals and other healthcare premises. These measures, when applied in association with the guidance in other Firecode guidance, will reduce the potential for arson attack.

1.9 Simple "good housekeeping" measures and the improved management of security arrangements may be implemented quickly and easily, and these

measures themselves may have a significant impact on the potential for deliberate fire-raising.

1.10 Waste material should not be allowed to accumulate anywhere in the premises, and well-constructed metal waste bins with metal lids should be located in safe areas that can be observed by members of staff.

1.11 Where large "wheelie" bins (for example 1100 litres or above) are provided, they should be capable of being locked and should be kept locked.

1.12 Waste should be collected regularly and placed in metal skips outside the building, prior to its disposal. A high percentage of waste consists of materials that are easily ignited, and skips should be covered and kept locked, sited away from any other building that may be an exposure hazard, and where possible should be in areas with good surveillance. In addition, consideration may be given to including an automatic extinguishing system. Hazardous materials and substances will also require particular safety and security actions.

1.13 Waste bins should not be located in multi-storey or underground car parks or where the close proximity of vehicles could significantly increase the fire load.

1.14 The disposal of all waste should be subject to a waste management policy and good, well-managed storage and handling protocols (see Health Technical Memorandum 07-01 – 'Safe management of healthcare waste' for more guidance).

1.15 Measures needing more complex consideration, technological resolution and/or the allocation of significant resources should be prioritised on the basis of risk and incorporated in the annual business plan.

1.16 The prevention, control and detection of arson should form a routine part of the training given to staff in accordance with the training requirements of Health Technical Memorandum 05-01 – 'Managing healthcare fire safety' and Health Technical Memorandum 05-03 Part A – 'General fire safety'.

1.17 Other Firecode guidance makes provision for securing means of escape, in case of fire, from healthcare premises. It is emphasised that any arrangements for improving the security of premises must not, in any way or at any time, subvert the availability of escape routes and the use of final exits in an emergency.

Note

Where the word "metal" is used above, it refers to ferrous metals, but this does not preclude the use of other fire-retardant materials.

2 The extent of the problem and the motivation for arson

The increasing problem of arson in all healthcare premises

2.1 Arson is a significant cause of fire in all types of premises. It is a cause for concern to those who are required to meet the costs of such fires – especially healthcare providers because of the inherent life risk in most of the premises they occupy and the impact that fire damage may have on the wider provision of healthcare.

2.2 Many fires in healthcare premises occur in parts of the building where the materials or commodities stored provide a ready source of fuel. Premises of this type, where fewer people may be encountered, present an attractive target because they allow the deliberate fire-raiser to set a fire undisturbed, undetected and with an available route of escape. However, in hospitals, fires due to arson may only occasionally be planned events.

2.3 In many cases, arsonists are likely to start a fire whenever they are presented with a casual opportunity. These are circumstances where:

- there is an ample supply of fuel (for example waste bags awaiting disposal in a corridor);
- they have an ignition source (for example matches or cigarette lighter); and
- they feel they are unlikely to be discovered (for example no visible surveillance, no-one is around and there is an escape route available).

2.4 Typically, vacant premises or those that are only occupied during the daytime are potentially more vulnerable to extensive damage (see also Chapter 3, 'The responsibilities of management in preventing and controlling arson').

2.5 Fires started by an arsonist may involve the use of a flammable liquid as an accelerant or merely the combustible materials available at the location. Multiple points of origin, either locally or in various vulnerable parts of the building, indicate that a fire may have been started deliberately.

2.6 The fire statistics provided to the Department of Health by hospitals and healthcare premises providing sleeping accommodation during the period between 1994 and 2005 show that some 29% of fires attended by fire-and-rescue services are started deliberately. This broadly reflects the widely reported national growth pattern for this offence. This figure indicates that nearly one in three fires are of deliberate origin; yet it probably understates the problem, as anecdotal evidence suggests that hospital staff do not always summon the fire-and-rescue service for small fires that they themselves have managed to quickly extinguish using first-aid fire-fighting equipment.

2.7 Healthcare providers should monitor and review their own statistics to assist in their policy to reduce arson.

2.8 Staff awareness of the problem, achieved through training, is essential in hospitals. Any increase in the number of maliciously started fires indicates a possible lapse of effective security measures or failure of staff to recognise a potential problem. This is largely a consequence of the "open-door" nature of the premises and the open culture inherent in the provision of healthcare.

2.9 Nevertheless, it is essential that the security arrangements relating to public access are examined in detail and open access restricted, so far as possible, to those areas where it is essential for treatment or care. Access to other areas should be limited and supervised, but access controls must not hinder egress and means of escape in the event of an emergency.

2.10 Staff should be trained to challenge those who:

- have no visible means of identification;
- are in a restricted area and appear to be unfamiliar with the premises; or
- otherwise exhibit suspicious behaviour.

2.11 All challenges should be reported to security staff and recorded to establish any patterns, trends etc.

Factors that may provide the motivation for arson

2.12 A number of factors, taken individually or collectively, may provide the drive for a person or group to undertake an act of arson. The most common of these are reviewed below. However, it should be recognised that a person pre-disposed to set fires deliberately in an occupied healthcare facility will, if challenged, most likely provide a legitimate reason for being in the premises and is unlikely to be easily identified.

Mental instability

2.13 Arson associated with mental ill-health is a relatively frequent occurrence in hospital units accommodating people with mental illness. A significant number of motivating factors can be identified, including pyromania.

2.14 Pyromania is an uncontrollable impulse to set things on fire. Persons affected by it will often remain at the scene of the incident and even attempt to take part in fire-fighting because of the pleasure and the feeling of fulfilment it gives them.

2.15 It is important to note that the impulse to start fires deliberately could also be as a consequence of frustration or sexual perversion, physical head injury (the very reason the person is present in the premises), as a side-effect of medication, or due to dementia/confusion.

Grievances

2.16 Arson stimulated by a grievance can take several forms. By its nature, it may be common across a wide range of premises. Workplace-related factors may include:

- dismissal, fear of unemployment or job relocation (for example contracted-out services);
- revenge against a colleague, superior or employer, perhaps due to personality conflicts, as a response to public humiliation or to jealousy;
- lack of advancement or appreciation of effort, and failure to achieve promotion or better pay.

2.17 A grievance may also be expressed in an act of arson where there is a perceived dissatisfaction in the level of care by a patient, family member or friend.

Economic or political objectives

2.18 The targets for these arson attacks may be selected to demonstrate the reasons for the form of protest, for example:

- pressure-group action (animal rights, nationalist causes, terrorist acts);
- strikes or industrial sabotage.

Related criminal activities

2.19 Arson may be associated with other criminal acts, for example:

- to conceal a burglary or fraudulent activities;
- to disguise sabotage;
- as part of an attempt at blackmail;
- vandalism (often associated with alcohol or drugs).

Arson by children

2.20 Children are often able to gain entry to all types of premises by exploiting lapses in security arrangements, and may start fires to conceal theft or simply as a result of boredom.

Fraud

2.21 Arson is commonly used as a means to destroy the evidence of internal fraud or stock discrepancies.

3 The responsibilities of management in preventing and controlling arson

Firecode responsibilities

3.1 Health Technical Memorandum 05-01 – 'Managing healthcare fire safety' states that the chief executive is responsible for ensuring that current fire legislation is met and that, where appropriate, Firecode guidance is implemented.

3.2 Current fire legislation includes the statutory duty under the Regulatory Reform (Fire Safety) Order 2005 to complete and maintain fire risk assessments. They must have, for each of their premises, an ongoing programme for:

- assessing fire risk;
- introducing and maintaining an adequate level of fire precautions, including fire alarm and detection systems; and
- training staff in first-aid fire-fighting and evacuation procedures.

3.3 Other Firecode guidance provides detailed guidance in support of these responsibilities.

Management strategy

3.4 Arson must be a component of the overall management strategy and fire risk assessment used to deal with the range of fire safety risks. Arson, from whatever quarter or motive, should be viewed as preventable – at least to such a degree that its possible effect is reduced to the lowest practicable level, taking into account all the circumstances. Prior attention to the threat presented by an arsonist should limit their ability to dislocate services, damage property and waste scarce resources.

3.5 A management plan to combat arson should address the following topics:

- managing the risk;
- the security arrangements;
- practical measures to mitigate the risk;
- fire alarm and detection systems;
- fire containment and extinguishment;
- fire safety policies and precautions.

3.6 Clear guidance in respect of the last three of these topics is in the Firecode suite of guidance, in particular:

- Health Technical Memorandum 05-01 – 'Managing healthcare fire safety';
- Health Technical Memorandum 05-02 – 'Guidance in support of functional provisions for healthcare premises';
- Health Technical Memorandum 05-03 Part A – 'General fire safety'.

3.7 Health Technical Memorandum 05-03 Part K provides the means to assess and record the fire risk.

3.8 Security arrangements are not covered by Firecode guidance (but see paragraph 3.15, 'Security arrangements'). Nevertheless, adequate security measures are an important measure in protecting premises against arson. Improved security arrangements are therefore likely to form an important component of any measures adopted to limit the potential for arson (see paragraph 3.18, 'Security controls').

3.9 When developing any strategy to address the risk of arson, the following should be involved:

- the fire safety manager;
- the fire safety adviser;
- the local security lead;
- appropriate representative(s) of estates and facilities staff;
- appropriate representative(s) of the local fire-and-rescue service.

Risk management

3.10 Healthcare premises are vulnerable to arson by any number of persons (for example patients with disturbed patterns of behaviour, employees and others who may enter sites, including contractors and even casual passers-by). Stores, including those

with pharmaceuticals, may be targets for theft and consequently fires to conceal the theft. The following premises are particularly vulnerable:

- isolated or disused premises;
- premises situated in run-down or socially deprived areas; and
- premises in areas where large crowds congregate at night or where disturbances frequently occur.

3.11 Where the area has a history of criminal activity or meets any of the other criteria identified in the following paragraph, consultation with the police and the local security lead should take place. This consultation should be reflected and recorded in the risk assessment together with appropriate measures to mitigate the risk.

3.12 Healthcare premises, especially hospitals, may be attractive to the arsonist because:

- sites are often accessible 24 hours per day;
- many sites comprise a widely dispersed range of buildings with poor or limited external lighting;
- many buildings have a high number of access and egress points;
- once entered, buildings often provide unrestricted access to all floors, including service tunnels, plantrooms, underground walkways and a range of departments;
- the transient nature of the hospital population ensures their presence will go largely unnoticed and unchallenged by patients, other visitors and staff;
- there are easy opportunities for theft and pilfering;
- due to poor "housekeeping" measures, there is ready access to combustible materials (once identified, such practices must be eliminated);
- commercial enterprises on healthcare premises, particularly shops, may stock large quantities of combustible materials.

3.13 The security of premises with regard to fire safety should be assessed, taking account of these circumstances. Premises accommodating ambulances, animal and medical research facilities or laboratories etc are known targets for arsonists and protest groups. Where such premises are identified as particularly vulnerable, security arrangements must be carefully considered in consultation with the police and any other relevant parties.

3.14 Central distribution facilities incorporating large warehouses bring together strategic resources, and their loss or contamination through deliberate fire-raising may have a serious effect on the delivery of healthcare over a nationally significant geographical area. The strategic importance of these premises, the high value of the building contents and the potential impact of their loss must be taken into account when assessing the fire protection measures. The installation of an automatic fire suppression system (sprinklers) could be considered. Whilst this may not reduce the potential for deliberate fire-raising, it may provide a higher level of fire protection and could significantly reduce the effects of fire.

Security arrangements

Introduction

3.15 Attention to security arrangements will make a very positive contribution to the prevention of arson. The NHS Litigation Authority's insurance pooling scheme includes an assessment of physical security measures in place within NHS trusts. There are three levels of compliance; compliance with each level brings a substantial reduction in insurance premium costs. Generally, security can be much improved by:

- keeping unauthorised persons out of vulnerable locations;
- quickly detecting intruders who may gain access to these locations;
- training staff on the need to challenge unauthorised visitors, particularly in isolated, infrequently visited or vulnerable locations.

Limitation of access

3.16 This procedure involves a variety of measures, such as:

- physical security – that is, creating zones that are secure and strictly off-limits to all but a few authorised personnel;
- a graded system of access control to limit access only to those who require it for specific zones or areas that can be audited to establish who has had access when an incident has occurred;

- the security badging of legitimate visitors such as contractors, servicing personnel and business visitors with appointments, plus the control of their access to, and egress from, designated zones.

3.17 However, it is more difficult, but not impossible, to control access in this way for the wider general public, out-patients etc.

Note

Authorised persons who are cleared for access to designated zones may need further special permission to work on particular plant or equipment by means of permits-to-work etc. Work practices involving the use of concentrated heat or naked flames should be subject to a specific system of control (for example a "hot" permit-to-work system) that includes pre- and post-work inspections and, in the most hazardous case, direct supervision.

Security controls

3.18 An effective security system must include strictly controlled accountability for all keys, swipecards, codes, identification passes etc. As part of normal close-down procedures for each day or other specified period, a nominated person should be responsible for a security register, which may be manually or electronically managed. The purpose of the register is to identify non-returned keys or passes at the end of each work period.

3.19 Security control systems are only as effective as the quality of their administration; it is important that lapses in security, failure to return keys on time, failure to return passes etc are followed up and appropriate temporary measures adopted to ensure security or means of escape is not compromised.

Detection of intruders

3.20 Intrusion detection equipment will detect the presence of an arsonist and other intruders, and may be essential for vulnerable parts of premises that are unattended or have reduced surveillance for long periods (overnight, weekends etc). Equipment should be sited in order to ensure optimum protection against sabotage and should be monitored to ensure its continuing effectiveness. (Technical guidance about suitable equipment is not given in this Health Technical Memorandum.)

3.21 Camera surveillance of vulnerable areas is only as effective as the monitoring and staff-response procedure associated with it, should a criminal activity be detected, including arson. Such equipment will act as a deterrent, since an arsonist will have no wish to be identified; however, if no supporting staff response system is in place, the value and impact of the system is greatly reduced.

Security patrols

3.22 Frequent but irregularly timed visits by security staff both during and outside normal hours to vulnerable parts of premises will help to deter arson and may even lead to the discovery of preparations for an attack. Indicators of such preparations may include:

- a number of doors being wedged open (so that fire will spread quickly);
- small kindling placed at various locations (to start simultaneous fires);
- an accumulation of combustible material (fuel) where it would not normally be expected to be found;
- external windows open when they are normally closed (to provide oxygen);
- signs of disturbance or unusual practices such as electrical equipment left on when it is not normally;
- strange or unusual equipment or materials present, not consistent with the normal use of the area etc.

3.23 Patrols are particularly important at the onset of "silent hours", at close of work or overtime working, especially by contractors etc.

Precautions with personnel

3.24 All staff should be encouraged during fire safety training to report the presence of strangers, particularly in isolated, infrequently visited, strategically important or vulnerable locations. A knowledgeable, informed and observant staff team is perhaps the most effective defence against arson.

Staff selection

3.25 Arson is often undertaken by persons who are, or have been, members of staff. Consequently, staff selection processes could include formal enquiry into the past history of staff and in some selected cases make use of the Criminal Records Bureau (CRB) system (for example those who will work

without supervision for long periods, at night or in other similarly vulnerable circumstances).

3.26 So far as is practicable, new employees, temporary staff, cleaners and contractors should be closely supervised and should not be left to work in isolation for long periods.

Reporting of fires and reporting procedures

3.27 Health Technical Memorandum 05-01 (Chapter 11) requires all outbreaks of fire attended by the fire-and-rescue service to be reported to the Department of Health via the efm-information on-line reporting system. This includes fires occurring in suspicious circumstances.

3.28 Immediately following either:

- a fire started in suspicious circumstances, or
- one suspected as arson, or
- one seen being deliberately started,

line managers should ensure that material evidence in any form is protected from interference, removal or destruction, and that the person discovering the outbreak is available for interview by the fire-and-rescue service and police investigators. The natural desire to clean up after the fire and return to normal as quickly as possible should be strongly resisted until after investigations are completed. In such cases, it would be helpful if the results of any police investigations into the fire could be forwarded to the Department of Health, using the procedure detailed in Health Technical Memorandum 05-01 (Chapter 11).

3.29 There is no mandatory requirement for NHS foundation trusts to report incidents to the Department, but such reporting helps to keep future statistics accurate.

Attendance of security personnel at a fire

3.30 Where a 24-hour security service exists, security personnel should normally arrive quickly at the scene of a fire. Their training as observers should enable them to identify and preserve any evidence for further evaluation when arson is suspected. In premises having a fire-response team, consideration should be given to including a member of the security staff within the fire team.

4 Technical details: Security of automatic fire alarm and extinguishment systems

Automatic fire detection

4.1 Health Technical Memorandum 05-03 Part B – 'Fire detection and alarm systems' recommends the use of analogue addressable automatic fire detection and alarm systems for new hospital installations and when upgrading existing systems. The use of such systems will improve the reliability, speed and accuracy of discovery of fire, particularly in those parts of hospitals that may be infrequently visited or are unoccupied at night. Thus, more precise information can then be passed to the fire-and-rescue service when it is called to attend.

Automatic fire extinguishment

4.2 Automatically operated sprinkler installations are recommended in Firecode (see Health Technical Memorandum 05-02, Health Technical Memorandum 05-03 Part B and Health Technical Memorandum 05-03 Part A – 'General fire safety') only for certain high-risk areas in hospitals (such as underground car parks and certain stores). It is not general policy at this time to install sprinkler systems in all patient care areas of hospitals. However, in a small number of cases, fast response sprinklers have been used in these areas for purposes of life, rather than property protection.

5 Technical details: The potential for sabotage of automatic fire alarm and extinguishment systems by an arsonist

5.1 There are two main possibilities in the event of a deliberately raised fire:

a. where the deliberate fire-raiser has made no attempt to sabotage the fire protection equipment;

b. where the fire-raiser may have sabotaged fire protection equipment in some way, either partly or wholly.

No attempted sabotage

5.2 Where the deliberate fire-raiser has made no attempt to sabotage the fire protection equipment, it would be expected to perform as it should during an accidental fire. However, if an accelerant has been used to start fires in several places simultaneously or in quick succession, without the benefit of an automatic sprinkler installation, a serious and widespread fire is more likely to occur. A multi-seated fire is also more likely to threaten the effectiveness of the evacuation strategy by reducing the opportunity for using alternative escape routes.

5.3 The installation of fire alarm and detection systems that are self-monitoring is encouraged, as they routinely indicate any detector or system failures. This type of system is consistent with the recommendations of Health Technical Memorandum 05-03 Part B.

5.4 Central control and indicating panels for fire alarm systems are normally accommodated in telephone switchrooms with their attendant security arrangements, and are therefore subject to constant surveillance. However, in the case of remotely monitored systems, steps must be taken to ensure that the locations housing equipment, cabling etc are inaccessible to unauthorised persons.

Attempted sabotage

5.5 Consideration here is given only to the case of premises with automatically operated sprinkler systems, where parts of the system may be vulnerable to unwanted interference. Such systems do not normally have any intrinsic protection or monitoring capability. Therefore, security arrangements against intrusion must be applied to give mechanical or structural protection to the whole of the system. This will include the water supply system, internal and external control valves, and the entire pumping system, including the main and standby electrical supplies and their controlling equipment.

5.6 The operating positions of all control switches and valves should be legibly and durably marked and, whenever possible, switches and valves should be locked in their operational modes.

5.7 Remote monitoring of the control positions of important installations and the means of access to such installations should be considered.

6 References

Health Technical Memorandum 05-03 Part K – 'Guidance on fire risk assessments in complex healthcare premises'.

Regulatory Reform (Fire Safety) Order 2005.

Health Technical Memorandum 05-03 Part A – 'General fire safety'.

Health Technical Memorandum 07-01 – 'Safe management of healthcare waste'.

Health Technical Memorandum 05-01 – 'Managing healthcare fire safety'.

Health Technical Memorandum 05-01 – 'Managing healthcare fire safety', Welsh edition.

Health Technical Memorandum 05-02 – 'Guidance in support of functional provisions for healthcare premises'.

NHS Litigation Authority's insurance pooling scheme.

efm-information on-line reporting system.

Health Technical Memorandum 05-03 Part B – 'Fire detection and alarm systems'.

Sprinkler systems in healthcare premises (Welsh Health Estates Guidance Note).