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Risk Control

Arson prevention
The protection of premises
from deliberate fire raising

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» CONTENTS

Scope	3
Synopsis	3
Definitions	3
Introduction	3
Recommendations	4
1. General considerations	4
2. Management	4
3. Fire protection	5
4. Physical security measures	6
5. Electronic security measures	7
6. Manned guards	7
7. Vehicles	8
8. Checklist	9
References	18
Further reading	19

➤ SCOPE

All businesses are potential targets for deliberate fire-raising; these recommendations present a range of measures that may be considered to assist business and property owners to reduce the arson risk. The measures outlined are generic in nature and may be adapted for application in a wide spectrum of residential, commercial and industrial premises. The guidance presented in this document applies to occupied buildings only; the management of unoccupied buildings is addressed in a separate guide: **Code of practice for the protection of empty buildings: Fire safety and security** (ref. 1).

The guidance should be taken into consideration when fire risk assessments are carried out in compliance with the Regulatory Reform (Fire Safety) Order 2005 and equivalent legislation in Scotland and Northern Ireland (refs. 2 to 5).

➤ SYNOPSIS

These recommendations aim to raise awareness of the problem of deliberate fire-raising in residential, commercial and industrial premises.

Practical actions that may be taken to deter arsonists, both in terms of physical security measures and management procedures, are outlined.

It is emphasised that the possibility of deliberate fire-raising should form part of the fire risk assessment that is undertaken for the premises in compliance with national legislation.

➤ DEFINITIONS

Arson

This term is used in a generic manner throughout this document to refer to all forms of deliberate fire-raising, including wilful or 'culpable and reckless' fire-raising in Scotland.

➤ INTRODUCTION

Deliberate fire-raising, or arson as it is commonly referred to in England and Wales, is a serious threat to all premises, be they residential, commercial or industrial. It is a problem that is not new, but one that has grown since the 1950s to the extent that over 40% of all fires in industry and commerce and over 20% of fires in residential properties are now lit deliberately. Because of the magnitude of the problem, it is often overlooked that many measures can be introduced to deter fire-raising at little cost to a business.

It is often forgotten that some 90 people die and over 2,000 are injured each year in fires that are started deliberately. Deliberate fire-raising should therefore not just be thought of as property loss, but be more widely considered as a life safety issue. In addition, a high proportion of organisations that suffer a fire (however it starts) do not reopen for business. An effective arson prevention strategy is therefore necessary not only to protect life and property but also to ensure the continued smooth-running of business operations.

Although all properties are potential targets for arson, those particularly at risk are businesses in financial difficulty, schools, unoccupied buildings, premises where animal experiments are undertaken, embassies, newspaper premises, intensive animal breeding and rearing units, furriers, fur farms, livestock markets, companies involved in the transport of animals for slaughter and similar premises where sensitive or emotive work is carried out.

Fires lit deliberately cause much greater property loss and are therefore more costly than those lit accidentally. This is because deliberate fires may be:

- lit using multiple points of ignition;
- lit at vulnerable points in the building;
- assisted by the use of flammable liquids or other accelerants;
- started at a time when there will be a delay in the fire being discovered (such as when the premises are unattended or only partially occupied);
- assisted by compromising fire protection measures in the building (for example, fire doors may be wedged open to help a fire develop and spread throughout the property), or by the sabotage of automatic fire protection measures (such as by isolating a sprinkler system or automatic fire detection installation); and
- an attempt to destroy evidence of another crime.

In occupied buildings, most malicious fires occur in storerooms and warehouses where there are often few staff to witness the crime being committed or to discover the fire during its early stages. In such areas, there is a plentiful supply of combustible materials, the racks or stacked items providing both cover for the arsonist and fuel for the fire.

The scale of business disruption following a deliberate fire does not necessarily reflect the amount of damage to the property. For example, a very small fire can have a significant impact on business operations, depending on the vulnerability of machinery, process plant, raw materials and stocks of finished products.

In many businesses, it is not just the flames that put a halt to normal business routines but the spread of smoke, toxic gases and the pungent smell. Even at a considerable distance from the seat of the fire there may be electronic data processing equipment, sensitive machine tools or stocks of fabrics or food that are totally unusable and will need cleaning, repair or disposal and replacement before normal business operations can resume. It is not surprising that a significant proportion of businesses fail following a determined arson attack.

Most malicious fires are started during the hours of darkness, but this does not mean that premises are safe during daylight working hours. Fires are easily started in commercial and industrial premises that are not continuously occupied, and even when they are, vigilance has to be maintained against action taken by intruders or rogue members of staff. In retail and other premises, large numbers of the public may be present and this introduces further problems in managing the threat.

In all premises, the fight against deliberate fire-raising should start with an arson risk assessment undertaken as an integral part of the fire risk assessment carried out for the premises under the Regulatory Reform (Fire Safety) Order 2005 and equivalent legislation in Scotland and Northern Ireland (refs. 2 to 5). Following this, a management action programme should be devised and implemented. Although security measures will undoubtedly feature strongly in this programme, this is not a universal panacea and many other actions will have to be considered, many of which may be specific to the nature of the business, the buildings that it occupies and the area in which it is situated.

➤ RECOMMENDATIONS

1. General considerations

- 1.1 In every business a designated person should oversee an arson risk management programme to ensure all aspects are properly managed and that any required actions are implemented and reviewed regularly.
- 1.2 The arson risk management programme should be devised following an arson risk assessment for the premises in compliance with the Regulatory Reform (Fire Safety) Order 2005 or equivalent legislation in Scotland and Northern Ireland (refs. 2 to 5). When devising the arson risk management programme it should be remembered that the legislation is primarily aimed at minimising loss of life and that additional measures, which may not necessarily be costly, may well be beneficial in providing additional protection to the property and ensure business continuity.
- 1.3 The arson risk assessment should include:
 - 1.3.1 Identifying potential reasons for setting fire to the premises, including:
 - whether malicious attacks have occurred in the neighbourhood lately;
 - the susceptibility of the building;
 - the type of occupancy;
 - the security measures adopted, both internally and externally; and
 - the crime profile of the area.
 - 1.3.2 Identifying the potential hazards:
 - people who may be affected by a fire;
 - the combustible materials present; and
 - ignition sources that could be used to start a fire.
 - 1.3.3 Identifying potential arsonists, who may be intruders, visitors, contractors or staff. Many deliberate fires are started by young teenagers; vigilance should therefore be maintained should groups of teenagers congregate in the vicinity of the premises.
 - 1.3.4 Removing, reducing or eliminating sources of fuel located outside the premises that may be available to an intruder gaining access to yards, parking areas and similar external facilities. This includes minimising the availability of flammable liquids and gases (see sections 2.20 and 2.21).
 - 1.3.5 Denying access to combustible elements of the premises' construction.
 - 1.3.6 Reviewing existing security and general fire protection arrangements and making improvements to the regimes, where appropriate.
 - 1.3.7 Recording the findings of the assessment.
 - 1.3.8 Reviewing the assessment periodically.
- 1.4 Where new premises are being considered, a full risk assessment should be undertaken before moving into the area. The need for, and the costs of, additional security measures should be taken into account if considering locating to an area with a high incidence of crime and/or vandalism.

2. Management

- 2.1 An important element of the fire risk assessment undertaken in compliance with the Regulatory Reform (Fire Safety) Order 2005 or equivalent legislation in Scotland and Northern Ireland (refs. 2 to 5) is an assessment of the threat of a fire being started deliberately.
- 2.2 Wherever possible, every effort should be made to ensure that good staff relations are maintained.
- 2.3 When recruiting staff, references should always be taken and followed up. This is particularly important with regard to warehouse or other staff who are likely to be working in business critical areas, working alone or with the minimum of supervision.
- 2.4 Supervisory staff should be reminded of their responsibilities to minimise the potential for arson.
- 2.5 A record of all visitors and contractors entering the site should be maintained for security purposes, as well as to ensure that everyone is accounted for in the event of an emergency.

Staff

- 2.6 During their fire training sessions, employees must be made aware of the problem of arson and the measures taken to prevent such incidents occurring.
- 2.7 Staff should report any fire, however small, to their supervisor or line manager.
- 2.8 Every fire should be investigated and any that may have been deliberately started should be reported to the police, even where the fire was extinguished without the attendance of the fire brigade.
- 2.9 Temporary employees, outside contractors or any other persons working in the premises must receive the same fire safety induction and continuing fire safety awareness instruction as permanent members of staff and should always be adequately supervised.
- 2.10 Where premises are not continuously occupied, a named individual should be made responsible for securing the building at the end of each working day. All external doors and windows should be checked as part of this close-down procedure. A check should also be made that all internal fire doors are shut and fire protection systems are operational.
- 2.11 Staff should be encouraged to challenge anyone that is not recognised as working on the premises and should report any suspicious behaviour to their supervisor.
- 2.12 The layout of the premises should be designed to avoid the need for employees to pass through storage or similar areas with low levels of manning during their normal day-to-day activities. If this is not possible, special attention should be paid to security in these areas, such as screening off stored products and raw materials.

Waste control

- 2.13 Storage of pallets, combustible waste and similar materials against the building or beneath canopies constitutes a severe fire hazard. All such materials, including wheelie bins and skips, must be removed and a clear space of at least 10m maintained.

- 2.14 Waste should also be stored clear of external escape routes from the premises.
- 2.15 Waste should be stored outside the premises in non-combustible containers fitted with non-combustible lids. If waste must be stored closer than 10m to a building or other structure it must be contained in non-combustible lockable containers that are subject to a regular inspection to ensure that they are not over-filled. Containers should be locked shut out of working hours.
- 2.16 Wheelie bins should be located in designated areas and retained securely in position.
- 2.17 All waste should be removed from the site regularly to avoid an excessive build-up of materials.

External storage

- 2.18 External storage of combustible raw materials and products should be minimised with any necessary materials stored at least 10m from buildings and structures.
- 2.19 Wherever possible, raw materials should be delivered to the site on an 'as-needed' basis.

Flammable liquids and gases

- 2.20 The volumes of flammable liquids kept on site should be minimised and stored as set out in RC20-1: **Recommendations for the storage of highly flammable and flammable liquids: Part 1: General principles** (ref. 6), which is available from the RISCAuthority website. Doors to flammable liquid stores should be secured by a deadlock complying with BS 3621: 2007 + A1: 2009: **Thief resistant lock assembly. Key egress** (ref. 7) or padlocks conforming to BS EN 12320: 2001: **Building hardware. Padlocks and padlock fittings. Requirements and test methods** (ref. 8) CEN Security Grade 5 and a suitable padlock bar or bolt.
- 2.21 The number of cylinders of compressed gases, especially acetylene, kept on site should also be minimised and stored as indicated in RC8: **Recommendations for the storage, use and handling of common industrial gases in cylinders including LPG** (ref. 9), which is available from the RISCAuthority website.

Cabins and similar combustible buildings

- 2.22 All timber and other combustible cabins or temporary buildings, introduced to the site for whatever purpose, should be located at least 10m from any permanent building or structure.

3. Fire protection

- 3.1 Effective compartmentation of a building is the key to minimising fire spread and thus costly property damage and business interruption.
- 3.2 During maintenance and refurbishment operations, it is essential that fire stopping is replaced or inserted where required.
- 3.3 Wherever possible, temporary compartmentation should be installed during any prolonged refurbishment works undertaken by contactors.
- 3.4 A suitable number of appropriate portable fire extinguishers, approved and certificated by an independent, third party certification body, should be provided in accordance with BS 5306-8: 2000: **Fire extinguishing installations and**

equipment on premises: Selection and installation of portable fire extinguishers. Code of practice (ref. 10).

- 3.5 In premises where vandalism may occur, the fire extinguishers may be attached to local alarms, designed to operate when a fire extinguisher is moved from its hook or floor tray, to act as a deterrent provided that the linkage does not compromise the ease of access and use of the extinguisher. (Several proprietary devices are available for this purpose.) Such devices can be a deterrent to vandalism.
- 3.6 Regular checks should be conducted to ensure that extinguishers are in their correct positions and any hose reels are in good working order.
- 3.7 Care should be taken when specifying fire extinguishers in certain environments, to ensure that the firefighting medium will not cause damage or contamination should an extinguisher be set off as an act of vandalism.
- 3.8 Extinguishers for use outside the premises should be protected from the environment by the provision of suitable cabinets or containers. These should be prominently signed and easily openable in an emergency.
- 3.9 Automatic fire detectors should be installed in accordance with the findings of the fire risk assessment for the premises. The installation should form a recognised category L or P automatic fire detection and alarm system as defined in BS 5839-1 (ref. 11).
 - 3.9.1 In manufacturing and warehouse facilities and in some other premises where the threat of arson may be higher than normal, the fire risk assessment will often indicate that the installation should be designed and installed in accordance with an appropriate level of category P installation so as to protect property, as well as lives in the event of a fire.
 - 3.9.2 The installation should be designed, installed, commissioned and maintained by a company approved and certificated by an independent, third party certification body.
 - 3.9.3 The installation should be linked via remote signalling to an approved and certificated alarm receiving centre (ARC), in accordance with BS 5979 (ref. 12).
- 3.10 In premises where vandalism or impact damage may occur, the glass of a fire alarm call point may be protected with a hinged sheet of clear plastic. Proprietary devices are available for this purpose.
- 3.11 Where there is a significant risk of deliberate fire-raising, serious consideration should be given to the installation of an automatic fire sprinkler installation, specifically designed to give maximum coverage to walls, ceiling/roof and voids. Any new sprinkler system should be designed and installed in accordance with **LPC Rules for automatic sprinkler installations incorporating BS EN 12845** (ref. 13).
- 3.12 The location of the sprinkler stop valves should be made known to the fire and rescue service on their arrival. The valves should be located in a secure area and be strapped open to prevent unauthorised access.
- 3.13 Hydrants on the site should be tested periodically in accordance with BS 9990 (ref. 14), with any necessary remedial action being undertaken and recorded.

4. Physical security measures

Perimeter protection

- 4.1 The perimeter fence or wall is the first line of defence and must present both an imposing obstacle and psychological deterrent. It should be high enough and strong enough to deter entry and should incorporate gates or doors of equal strength to the main structure.
- 4.2 Potential arsonists do not like to be seen. Where possible, therefore, the perimeter security should comprise welded mesh or palisade fencing complying with BS 1722 (refs. 15 and 16) to allow any intruder inside the enclosed area to be visible from outside.
- 4.3 The security fencing and gates should reach a height of at least 2.4m.
- 4.4 Gates and doors should be without significant gaps beneath and be secured when the site is not occupied by padlocks conforming to BS EN 12320 (ref. 8) CEN Security Grade 5 and a suitable padlock bar or bolt.
- 4.5 Perimeter fences, walls and gates should be kept in good repair and inspected on a regular basis (for example, once a day, week or month depending on the degree of risk). Any damage should be repaired immediately and any attempts at flyposting or the attachment of other adornments be removed without delay.
- 4.6 Where possible, loading bays, doors and windows to the buildings should be located well back from the main gates and other points of entry to the site.
- 4.7 Vegetation should be cleared to remove fuel for a fire as well as to prevent cover being provided for an intruder.

Security lighting

- 4.8 Good lighting can deter intruders and thus be a cost-effective deterrent against deliberate fire-raising. It is recommended that security lighting be installed to provide external illumination of the entire site or concentrate on particularly vulnerable areas such as recessed doorways.
- 4.9 Security lighting luminaires should be installed as high as possible and, where vulnerable, be protected from physical damage by thrown missiles.
- 4.10 Operation may be by a time clock, but during hours of darkness should be permanently lit and not configured to operate on actuation of a motion sensor.

The building envelope

- 4.11 The design of a building should be such that there are a minimum number of areas in which an intruder may hide undetected. Thus recesses for doors and architectural devices that result in areas outside the premises not being overlooked or visible from outside the fence should be avoided.
- 4.12 The number of entrances should be reduced to a minimum compatible with providing safe means of escape from the premises in the event of an emergency.
- 4.13 All points of entry to the building(s) should be supervised. Where this is not possible, those that are left unattended should be secure from the outside. Such entrances may be secured by a digital lock, but in the case of designated fire exits, the doors should be easily and

immediately openable from within by a single action. A separate guide S11: **Security of emergency exit doors in non-residential premises** (ref. 17) is available from the RISC Authority website.

- 4.14 Reception areas should be provided with facilities such as segregated toilet areas for visitors, who may include contractors and delivery persons. In some businesses the provision of small meeting rooms in the reception area for short transactions removes the need for visitors to gain access to the main business areas of the premises.
- 4.15 Toilets, and in some cases mess facilities, should be available for drivers of vehicles to eliminate the need for them to have access to the warehousing or manufacturing areas from the delivery bay.
- 4.16 Intruders should be denied access to roofs from where entry may be made into the premises. Often skylights and roofs are the most vulnerable points of a building. Where trees are overhanging they should be pruned and suitable measures, such as anti-climb paint, employed to prevent the use of down pipes, internal walls and outbuildings from being used to climb to upper areas of the premises.
- 4.17 External stairways should be made secure if they can give access to roofs or upper floor windows.
- 4.18 Regular reviews should be carried out with regard to the security of sites where construction or refurbishment work is being carried out; in these cases frequent changes are often made to the access routes to the site. Checks should be made to ensure that these do not lead to increased opportunities for access by intruders.
- 4.19 Particular consideration should be given to the integrity of the building envelope in the case of historic buildings, buildings with lightweight cladding, or those incorporating some modern forms of construction, where the potential for the exposure of or access to combustible materials may be increased.
- 4.20 Similarly, in some cases the walls themselves may be breached using simple hand tools exposing combustible materials beneath. Combustible cores may also be exposed at the site of service penetrations.

Doors, windows and other openings

- 4.21 External doors, other than designated emergency exits, should be secured by locks complying with BS 3621 or BS EN 12209 (refs. 7 and 18).
- 4.22 Keys must be managed effectively. All keys should be regularly accounted for and regularly audited. If any are found to be missing, all locks should be changed.
- 4.23 Wherever possible, post should be delivered to the premises during working hours. Where this is not feasible, locked letter boxes should be provided outside the building or sheet metal containers fitted on the inside of letter slots to contain fires from lighted materials such as fireworks. Proprietary letter boxes are available which incorporate an automatic fire extinguisher.
- 4.24 Unused letter slots should be permanently sealed.
- 4.25 Gaps under external doors should be reduced to prevent lighted materials being introduced beneath them.
- 4.26 Consideration may need to be given to protecting buildings

against ram raiding where perimeter protection of external areas is not practical. A separate guide S10: **Guidance for the protection of premises against attacks using vehicles (ram raids)** is available from the RISC Authority website (ref. 19).

- 4.27 All windows in the building accessible from the outside should be secured shut by key-operated locks at the end of the work period or when the building is vacated.
- 4.27.1 For retail and some other premises, serious consideration may need to be given to protecting shopfronts, vulnerable windows and doors with security shutters. Further information is set out in the various parts of BS 8220 (refs. 20 to 22) and LPS 1175 (ref. 23) and LPS 1056 (ref. 24).
- 4.27.2 Skylights should be protected to prevent access and the introduction of ignited materials via this route.
- 4.27.3 Consideration should be given to protecting windows that might be vulnerable to attack with protective film or security glazing.
- 4.27.4 Further advice regarding security glazing is set out in BS 5357: **Code of practice for installation and application of security glazing** (ref. 25).
- 4.28 New premises should be designed with the minimum number of windows at ground and basement levels.
- 4.29 Air vents, overflow pipes and duct outlets should be protected or located in inaccessible positions to prevent flammable liquids being introduced to the premises via this route.

5. Electronic security measures

Intruder alarms

- 5.1 If physical security measures are breached, it is important that an intruder is detected at as early a time as possible. If there is no existing system then an installation complying with BS EN 50131-1 (ref. 26) should be installed to ensure a police response in the event of an incident. A separate guide S9: **Intrusion and hold up alarm systems (I&HAS): Considerations for installers and other stakeholders** (ref. 27) is available from the RISC Authority website.
- 5.2 The supply, installation and maintenance of the system should be undertaken by an alarm company approved by a UKAS-accredited certification body.
- 5.3 In the event of the alarm being activated, it should be ensured that there will be a response. The installation should therefore be linked to an alarm receiving centre (ARC) approved and certificated by a UKAS-accredited certification body using a secure, monitored connection. Systems with alarm confirmation should be provided with dual path signalling.
- 5.4 Where smoke-producing security devices are installed, these should comply with BS EN 50131-8 (ref. 28). The insurer of the premises should be consulted before the installation of such measures. A separate guide S7: **Security Fog Devices** (ref. 29) is available from the RISC Authority website.
- 5.5 Consideration should be given to the fitting of local audible alarm devices on fire exit doors. These should form part of the wider strategy for hours of normal occupation determined by the risk assessment.

Closed circuit television

- 5.6 To both detect and deter intruders and infiltrators, it is recommended that there be CCTV coverage of all vulnerable areas, whether within or outside the buildings.
- 5.7 Colour images are preferable to black and white pictures.
- 5.8 In order to act as a possible means of identification of an intruder or fire-raiser, the images should be of an adequate quality and the system should be operated in accordance with BS 7958 (ref. 30).
- 5.9 Cameras should be monitored to ensure that they are neither moved, nor their view obscured.
- 5.10 Sufficient lighting should be provided, or night time vision cameras used, to ensure pictures are of suitable quality during the hours of darkness. In particular, facial features should be identifiable and vehicle number plates readable within the area that the cameras are intended to monitor.
- 5.11 To be fully effective, the system should comply with BS 8418 (ref. 31) and thus be activated out of business hours by detectors within the secure perimeter area of the premises. This technology allows alarm signals and CCTV images to be connected to an approved remote video response centre (RVRC) so that unauthorised persons approaching or entering a site or building may be challenged and a keyholder or response service dispatched to attend.
- 5.12 The supply, installation, maintenance and remote monitoring of the CCTV system should be undertaken by a company with accreditation by an independent UKAS-accredited third party certification body.

6. Manned guards

In England, Wales, Scotland and Northern Ireland, all contract guards are now required to hold a security licence issued by the Security Industry Authority (SIA). Licences are individual, but at a company level companies that adhere to the SIA licence rules and other relevant procedural matters can be identified by the award of 'Approved Contractor Scheme' (ACS) status.

There are two standards which are particularly important with reference to manned guards:

- BS 7858: **Security screening of individuals employed in a security environment. Code of practice** (ref. 32) lays down procedures for employers to follow to check that prospective employees do not have a criminal past; and
- BS 7499: **Static site guarding and mobile patrol services. Code of practice** (ref. 33) lays down criteria for the provision of manned security services and compliance with this standard should be specified as a minimum. It is essential to ensure that the contractor is inspected and certified by an independent organisation as complying with this standard and also has a quality assurance programme in operation.

Many guarding companies demonstrate independently inspected compliance with BS 7499 and other relevant codes of practice by holding approvals from inspectorate bodies such as the National Security Inspectorate (NSI).

Security personnel can be used to provide two different levels of service: permanent guards and mobile patrols.

Permanent guards

- 6.1 Sometimes known as 'resident' or 'static' guards, this type of service provides a continuous security presence at the protected building. As part of the arson risk assessment, a permanent security presence is preferable to periodic visits by mobile patrols outside of normal working hours.
- 6.2 Permanent guards can be provided either by a contract company or can be directly employed. If a contractor is to be utilised, it is imperative to select a company whose procedures comply with the appropriate standards.
- 6.3 Not only is use of an approved, professional guarding company preferred but, if possible, agreement should be reached that a dedicated team be assembled to protect the location so that they may become familiar with the assignment.
- 6.4 Specifiers should ensure that the selected company has guards that are adequately trained, fully screened and well supervised.
- 6.5 Where security staff are to be employed directly, references should be carefully scrutinised. Guidance is to be found in BS 7858 (ref. 32) and BS 7499 (ref. 33). It is preferable that security personnel should be engaged from a company approved by a UKAS-accredited certification body and accorded the status of Approved Contractor by the Security Industry Authority (SIA).
- 6.6 In the case of a building having only one guard, the guard must be able to communicate with the police or their own control centre to enable them to call for assistance. The control centre should maintain an alternative means and process for contacting guards at appropriate routine intervals.
- 6.7 Normal health, safety and welfare regulations apply where security guards are working and appropriate facilities (such as water, toilets, lighting and heating) should be provided.

Mobile patrol services

- 6.8 Many security service companies provide a patrol service where a guard will visit the premises a specified number of times each day, at random intervals. While mainly acting as a deterrent, such patrols may provide an acceptable minimum level of security for certain premises. In some cases, security contractors also offer a keyholding or response service, where they will respond as a keyholder when required by the owner, emergency services, utilities or local authority.

Managing security staff

- 6.9 Care should be taken to ensure that comprehensive patrol routes are established and that a mechanism exists for checking that any patrols are correctly carried out.
- 6.10 Comprehensive assignment instructions should be prepared for manned guarding duties at the premises. These should include requirements of actions to be taken, patrolling and record keeping. In particular, comprehensive records and records auditing should be maintained for:
- all inspections and patrols;
 - contract personnel operating and any visitors;
 - any incidents or actions affecting the security or safety of the building; and
 - the issue and return of keys.

- 6.11 In the case of small- or medium-sized organisations, consideration should be given to security companies acting as key holders. Advice on keyholder selection and their duties is set out in a RISC Authority document S6: **Electronic security systems: Guidance on keyholder selection and duties** (ref. 34), available from the RISC Authority website.
- 6.12 Security personnel should receive the same fire safety induction training as other staff on the site. They should also be made aware of the location of any particular fire hazards such as flammable liquid stores, gas cylinder compounds and similar facilities.
- 6.13 Plans of the site should be to hand and security staff should be able to give clear and concise directions and information to fire and rescue service personnel. Security staff should know the location and mode of operation of gas and other relevant shut-off valves.
- 6.14 Security patrols should close any fire doors, windows or perimeter doors that are found open and report any damage noted to the building, the perimeter fence, fire protection equipment or security systems.
- 6.15 Patrols should also ensure that hydrants on the site are accessible and not obstructed by pallets of goods or parked vehicles.
- 6.16 Notification should be given to security and reception staff of any visitors who may be expected to enter the site, together with their vehicle registration numbers.

7. Vehicles

- 7.1 Where products or services may result in vehicles being a target for protest groups, the loading, movement and parking of vehicles should be subject to a risk assessment that is reviewed periodically.
- 7.2 Where possible, car parks should be within sight of the business premises and segregated from vehicle loading and delivery areas.
- 7.3 Access to car parks should be controlled, so as to prevent entry by unauthorised vehicles and pedestrians.
- 7.4 Where car parks are enclosed, a suitable number of appropriate fire extinguishers should be available.
- 7.5 Vehicles should not be parked within a building unless an area with appropriate fire protection has been provided specifically for this purpose.
- 7.6 Vehicles should not be parked beneath awnings or canopies (unless specifically designed for this purpose) or adjacent to unprotected windows of the premises.
- 7.7 Parking areas should be remote from outside storage areas, including those used for the storage of combustible waste materials.
- 7.8 Loaded vehicles left parked outside premises at night may be a target for thieves who may attempt to destroy evidence of theft by setting fire to them. Unless unavoidable, this practice should not habitually be followed.

8. Checklist

		Yes	No	N/A	Action required	Due date	Sign on completion
8.1	General considerations (section 1)						
8.1.1	Does a designated person oversee an arson risk management programme to ensure all aspects are properly managed and that any required actions are implemented and reviewed regularly? (1.1)						
8.1.2	Has an arson risk management programme been devised following an arson risk assessment for the premises in compliance with the Regulatory Reform (Fire Safety) Order 2005 or equivalent legislation in Scotland and Northern Ireland? (1.2)						
8.1.3	Does the arson risk assessment include the following: <ul style="list-style-type: none"> • identifying potential reasons for setting fire to the premises?; • identifying the potential hazards?; • identifying potential arsonists?; • removing, reducing or eliminating sources of fuel located outside the premises?; • denying access to combustible elements of construction?; • reviewing existing security and general fire protection arrangements and making improvements to the regimes where appropriate?; and • reviewing the assessment periodically? (1.3) 						
8.1.4	Where new premises are being considered, has a full risk assessment been undertaken before moving into the area? (1.4)						
8.2	Management (section 2)						
8.2.1	Is every effort made to ensure that good staff relations are maintained? (2.2)						
8.2.2	When recruiting staff, are references always taken and followed up? (2.3)						
8.2.3	Are supervisory staff reminded of their responsibilities to minimise the potential for arson? (2.4)						
8.2.4	Is a record of all visitors and contractors entering the site maintained for security purposes, as well as to ensure that everyone is accounted for in the event of an emergency? (2.5)						
8.2.5	During their fire training sessions, are employees made aware of the problem of arson and the measures taken to prevent such incidents occurring? (2.6)						
8.2.6	Do staff report any fire, however small, to their supervisor or line manager? (2.7)						
8.2.7	Is every fire investigated and any that may have been deliberately started reported to the police, even where the fire was extinguished without the attendance of the fire brigade? (2.8)						

		Yes	No	N/A	Action required	Due date	Sign on completion
8.2.8	Do temporary employees, outside contractors or any other persons working in the premises receive the same fire safety induction and continuing fire safety awareness instruction as permanent members of staff? (2.9)						
8.2.9	Where premises are not continuously occupied, is a named individual responsible for securing the building at the end of each working day? (2.10)						
8.2.10	Are staff encouraged to challenge anyone who is not recognised as working on the premises and report any suspicious behaviour to their supervisor? (2.11)						
8.2.11	Is the layout of the premises designed to avoid the need for employees to pass through storage or similar areas with low levels of manning during their normal day-to-day activities? (2.12)						
8.2.12	Is a clear space of at least 10m maintained between the building and stored pallets, wheelle bins, skips, combustible waste and similar materials? (2.13)						
8.2.13	Is waste stored clear of external escape routes from the premises? (2.14)						
8.2.14	Is waste stored outside the premises in non-combustible containers fitted with non-combustible lids? (If waste must be stored closer than 10m to a building or other structure, is it contained in non-combustible lockable containers that are subject to a regular inspection to ensure that they are not over-filled?) (2.15)						
8.2.15	Are wheelle bins located in designated areas and retained securely in position? (2.16)						
8.2.16	Is all waste removed from the site regularly to avoid an excessive build-up of materials? (2.17)						
8.2.17	Is the external storage of combustible raw materials and products minimised with any necessary materials stored at least 10m from buildings and structures? (2.18)						
8.2.18	Are raw materials delivered to the site on an 'as-needed' basis? (2.19)						
8.2.19	Are the volumes of flammable liquids that are kept on site minimised and stored as set out in the RC20-1? (2.20)						
8.2.20	Are doors to flammable liquid stores secured by a deadlock complying with BS 3621 or padlocks conforming to BS EN 12320 CEN Security Grade 5 and a suitable padlock bar or bolt? (2.20)						
8.2.21	Is the number of cylinders of compressed gases, especially acetylene, that are kept on site minimised and stored as indicated in RC8? (2.21)						

		Yes	No	N/A	Action required	Due date	Sign on completion
8.2.22	Are all timber and other combustible cabins or temporary buildings located at least 10m from any permanent building or structure? (2.22)						
8.3	Fire protection (section 3)						
8.3.1	Has effective compartmentation of the building(s) been established? (3.1)						
8.3.2	Is fire stopping replaced or inserted where required during maintenance and refurbishment operations? (3.2)						
8.3.3	Is temporary compartmentation installed during any prolonged refurbishment works undertaken by contactors? (3.3)						
8.3.4	Are a suitable number of appropriate portable fire extinguishers, approved and certificated by an independent, third party certification body, provided in accordance with BS 5306-8? (3.4)						
8.3.5	To act as a deterrent in premises where vandalism may occur, are the fire extinguishers attached to local alarms designed to operate when a fire extinguisher is moved from its hook or floor tray? (3.5)						
8.3.6	Are regular checks conducted to ensure that extinguishers are in their correct positions and any hose reels are in good working order? (3.6)						
8.3.7	Is care taken when specifying fire extinguishers to ensure that the firefighting medium will not cause damage or contamination should an extinguisher be set off as an act of vandalism? (3.7)						
8.3.8	Are extinguishers for use outside the premises protected from the environment by the provision of suitable cabinets or containers? (3.8)						
8.3.9	Are automatic fire detectors installed in accordance with the findings of the fire risk assessment for the premises, the installation being a recognised category L or P automatic fire detection and alarm system as defined in BS 5839-1? (3.9)						
8.3.10	Is the AFD installation designed, installed, commissioned and maintained by a company approved and certificated by an independent, third party certification body? (3.9.2)						
8.3.11	Is the installation linked via remote signalling to an approved and certificated alarm receiving centre (ARC) in accordance with BS 5979? (3.9.3)						
8.3.12	In premises where vandalism or impact damage may occur, is the glass of the fire alarm call points protected with a hinged sheet of clear plastic? (3.10)						

		Yes	No	N/A	Action required	Due date	Sign on completion
8.3.13	Where there is a significant risk of deliberate fire raising, has serious consideration been given to the installation of an automatic fire sprinkler installation, specifically designed to give maximum coverage to walls, ceiling/roof and voids? (3.11)						
8.3.14	Is someone appointed to inform the fire and rescue service on their arrival of the location of the sprinkler stop valves? (3.12)						
8.3.15	Are the sprinkler stop valves located in a secure area and strapped open to prevent unauthorised access? (3.12)						
8.3.16	Are any hydrants on the site tested periodically in accordance with BS 9990, with any necessary remedial action being undertaken and recorded? (3.13)						
8.4	Physical security measures (section 4)						
8.4.1	Does the perimeter fence or wall present both an imposing obstacle and psychological deterrent? Is it high enough and strong enough to deter entry and incorporate gates or doors of equal strength to the main structure? (4.1)						
8.4.2	Does the perimeter security comprise welded mesh or palisade fencing complying with BS 1722 to allow any intruder inside the enclosed area to be visible from outside? (4.2)						
8.4.3	Do the security fencing and gates reach a height of at least 2.4m? (4.3)						
8.4.4	Are the gates and doors without significant gaps beneath and are they secured when the site is not occupied by padlocks conforming to BS EN 12320 CEN Security Grade 5 and a suitable padlock bar or bolt? (4.4)						
8.4.5	Are perimeter fences, walls and gates kept in good repair and inspected on a regular basis with any damage being repaired immediately and any flyposting removed without delay? (4.5)						
8.4.6	Are loading bays, doors and windows to the buildings located well back from the main gates and other points of entry to the site? (4.6)						
8.4.7	Has vegetation been cleared to remove fuel for a fire as well as to prevent cover being provided for an intruder? (4.7)						
8.4.8	Has security lighting been installed to provide external illumination of the entire site or concentrate on particularly vulnerable areas such as recessed doorways? (4.8)						
8.4.9	Are the security lighting luminaires installed as high as possible and protected from physical damage by thrown missiles? (4.9)						
8.4.10	Is security lighting permanently lit during hours of darkness and not configured to operate on actuation of a motion sensor? (4.10)						

		Yes	No	N/A	Action required	Due date	Sign on completion
8.4.11	Is the design of the buildings such that there are a minimum number of areas in which an intruder may hide undetected? (4.11)						
8.4.12	Has the number of entrances been reduced to a minimum compatible with providing safe means of escape from the premises in the event of an emergency? (4.12)						
8.4.13	Are all points of entry to the building(s) supervised? Where this is not possible, are those that are left unattended secure from the outside? (4.13)						
8.4.14	Are reception areas provided with facilities such as segregated toilet areas for visitors (who may include contractors and delivery persons)? (4.14)						
8.4.15	Are toilets, and mess facilities, available for drivers of vehicles to eliminate the need for them to have access to the warehousing or manufacturing areas from the delivery bay? (4.15)						
8.4.16	Are intruders denied access to roofs from where entry may be made into the premises? (4.16)						
8.4.17	Have external stairways been made secure where they can give access to roofs or upper floor windows? (4.17)						
8.4.18	Are regular reviews carried out with regard to the security of sites where construction or refurbishment work is being carried out? (4.18)						
8.4.19	Is particular consideration given to the integrity of the building envelope in the case of historic buildings, buildings with lightweight cladding, or those incorporating some modern forms of construction, where the potential for the exposure of or access to combustible materials may be increased? (4.19)						
8.4.20	Are there areas where the walls themselves may be breached using simple hand tools exposing combustible materials beneath, or where combustible cores are exposed at the site of service penetrations? (4.20)						
8.4.21	Are external doors, other than designated emergency exits, secured by locks complying with BS 3621 or BSEN 12209? (4.21)						
8.4.22	Are keys managed effectively, with all keys being regularly accounted for and regularly audited? (4.22)						
8.4.23	Is post delivered to the premises during working hours or, where this is not feasible, are locked letter boxes provided outside the building or sheet metal containers fitted on the inside of letter slots to contain fires from lighted materials such as fireworks? (4.23)						
8.4.24	Are unused letter slots permanently sealed? (4.24)						

		Yes	No	N/A	Action required	Due date	Sign on completion
8.4.25	Have gaps under external doors been reduced to prevent lighted materials being introduced beneath them? (4.25)						
8.4.26	Has consideration been given to protecting buildings against ram raiding where perimeter protection of external areas is not practical? (4.26)						
8.4.27	Are all the building's windows that are accessible from the outside secured shut by key-operated locks at the end of the work period or when the building is vacated? (4.27)						
8.4.28	Are any shopfronts, vulnerable windows and doors protected with security shutters? (4.27.1)						
8.4.29	Are skylights protected to prevent access and the introduction of ignited materials via this route? (4.27.2)						
8.4.30	Has consideration been given to protecting windows that might be vulnerable to attack with protective film or security glazing? (4.27.3)						
8.4.31	Have new premises been designed with the minimum number of windows at ground and basement levels? (4.28)						
8.4.32	Are air vents, overflow pipes and duct outlets protected or located in inaccessible positions to prevent flammable liquids being introduced to the premises via this route? (4.29)						
8.5	Electronic security measures (section 5)						
8.5.1	Has an intruder detection alarm complying with BS EN 50131-1 been installed to ensure a police response in the event of an incident? (5.1)						
8.5.2	Is the supply, installation and maintenance of the intruder alarm system undertaken by an alarm company approved by a UKAS-accredited certification body? (5.2)						
8.5.3	Is the intruder alarm system linked to an alarm receiving centre (ARC) approved and certificated by a UKAS-accredited certification body using a secure, monitored connection? (5.3)						
8.5.4	Where smoke-producing security devices are installed, do these comply with BS EN 50131-8 and has the insurer of the premises been consulted? (5.4)						
8.5.5	Has consideration been given to fitting local audible alarm devices on fire exit doors as part of the wider strategy for hours of normal occupation determined by the risk assessment? (5.5)						
8.5.6	In order to detect and deter intruders, is there CCTV coverage of all vulnerable areas, whether within or outside the buildings? (5.6)						

		Yes	No	N/A	Action required	Due date	Sign on completion
8.5.7	Are the CCTV images recorded in colour rather than black and white? (5.7)						
8.5.8	Are the CCTV images of an adequate quality and is the system operated in accordance with BS 7958? (5.8)						
8.5.9	Are cameras monitored to ensure that they are neither moved, nor their view obscured? (5.9)						
8.5.10	Is sufficient lighting provided, or night time vision cameras used, to ensure pictures are of suitable quality during the hours of darkness? (5.10)						
8.5.11	Does the CCTV system comply with BS 8418 and thus be activated out of business hours by detectors within the secure perimeter area of the premises? (5.11)						
8.5.12	Is the supply, installation, maintenance and remote monitoring of the CCTV system undertaken by a company with accreditation by an independent, UKAS-accredited, third party certification body? (5.12)						
8.6	Manned guards (section 6)						
8.6.1	Is there a permanent security presence on site rather than periodic visits by mobile patrols outside of normal working hours? (6.1)						
8.6.2	If a contractor is utilised, do the procedures of the selected company comply with the appropriate standards? (6.2)						
8.6.3	Has a dedicated team that may become familiar with the assignment been assembled to protect the location? (6.3)						
8.6.4	Does the selected company have guards that are adequately trained, fully screened and well supervised? (6.4)						
8.6.5	Where security staff are employed directly, have references been carefully scrutinised? (6.5)						
8.6.6	In the case of a building having only one guard, is the guard able to communicate with the police or their own control centre to enable them to call for assistance, with the control centre maintaining an alternative means and process for contacting guards at appropriate routine intervals? (6.6)						
8.6.7	Are appropriate facilities (such as water, toilets, lighting and heating) provided to satisfy normal health, safety and welfare regulations where security guards are working? (6.7)						
8.6.8	Have the benefits of a keyholding or response service, where the security contractors respond as a keyholder when required by the owner, emergency services, utilities or local authority been investigated? (6.8)						

		Yes	No	N/A	Action required	Due date	Sign on completion
8.6.9	Have comprehensive patrol routes been established with a mechanism for checking that any patrols are correctly carried out? (6.9)						
8.6.10	Have comprehensive assignment instructions been prepared for manned guarding duties at the premises? (6.10)						
8.6.11	Have security personnel received the same fire safety induction training as other staff on the site, including an awareness of the location of any particular fire hazards such as flammable liquid stores, gas cylinder compounds and similar facilities? (6.12)						
8.6.12	Are plans of the site to hand and are security staff able to give clear and concise directions and information to fire and rescue service personnel? Do security staff also know the location and mode of operation of gas and other relevant shut-off valves? (6.13)						
8.6.13	Are security patrols instructed to close any fire doors, windows or perimeter doors that are found open and report any damage noted to the building, the perimeter fence, fire protection equipment or security systems? (6.14)						
8.6.14	Do patrols ensure that hydrants on the site are accessible and not obstructed by pallets of goods or parked vehicles? (6.15)						
8.6.15	Is notification given to security and reception staff of any visitors who may be expected to enter the site, together with their vehicle registration numbers? (6.16)						
8.7	Vehicles (section 7)						
8.7.1	Where products or services may result in vehicles being a target for protest groups, is the loading, movement and parking of vehicles subject to a risk assessment that is reviewed periodically? (7.1)						
8.7.2	Are car parks within sight of the business premises and segregated from vehicle loading and delivery areas? (7.2)						
8.7.3	Is access to car parks controlled, so as to prevent entry by unauthorised vehicles and pedestrians? (7.3)						
8.7.4	Where car parks are enclosed, are a suitable number of appropriate fire extinguishers available? (7.4)						
8.7.5	Are vehicles prohibited from parking within a building unless an area with appropriate fire protection has been provided specifically for this purpose? (7.5)						

		Yes	No	N/A	Action required	Due date	Sign on completion
8.7.6	Are procedures in place to ensure that vehicles are not parked beneath awnings or canopies (unless specifically designed for this purpose) or adjacent to unprotected windows of the premises? (7.6)						
8.7.7	Are parking areas remote from outside storage areas, including those used for the storage of combustible waste materials? (7.7)						
8.7.8	Is the practice of leaving loaded vehicles parked outside premises at night avoided? (7.8)						

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