

# **Fire Safety Management**

## **Fire Prevention Protocol**

## **Regulatory Reform (Fire Safety) Orders 2005**

# **FIRE PREVENTION PROTOCOL**

## **1. INTRODUCTION**

This protocol contributes to the overall development of fire safety protocols as recommended within Health Technical Memorandum 05-01 Managing healthcare fire safety (second edition). This protocol addresses 'Fire Prevention.

## **2. SCOPE**

This protocol will be implemented throughout all premises, or parts of premises, which the Trust owns, occupies or those for which the Trust is responsible for maintaining and delivering health care services.

## **3. DEFINITIONS**

### **3.1 Fire Safety Advisor**

The fire safety advisor is the appointed member of the trust estates and facilities management team appointed to provide competent fire safety advice to support the Person with Control for premises or departments and ensure appropriate fire prevention measures are been applied and adhered to by all members of staff.

### **3.2 Person with Control**

Any person who at any time has to any extent, control over the premises, or part(s) of the premises. This is usually the senior person in charge which in the context of the management structure of the trust could include a Divisional Manager, a Department Manager, a Matron and a Ward Sister. Each area may have more than one Person with Control, and the extent of their responsibilities is determined by the extent of the control they exercise over the area.

### **3.3 Hot Works**

Any work operation or activity involving the use of open flames or the local application of heat or friction such as welding, soldering, cutting, grinding or brazing.

## **4. CONTEXT**

The safety of patients, visitors, staff and other building users from fire relies upon the fire precautions present within the building and the measures introduced to prevent fires occurring.

Current fire safety legislation in the form of the Regulatory Reform (Fire Safety) Order 2005 requires the "Responsible Person" to take general fire precautions so as to ensure the safety of "Relevant Persons".

Whilst the building and its contents are designed to minimise the spread of fires that may occur, the trust relies upon the diligence and vigilance of staff, volunteers contractors and any other person within the employ of the trust or partners. It is important that essential control measures are in place and observed regarding all the elements which contribute to the cause of fires.

## **5. ROLES AND RESPONSIBILITIES**

Whilst it is incumbent upon all staff to take appropriate measures to prevent the occurrence of fire key personnel have additional responsibilities as follows:

## Fire Safety Advisor

- Identify the appropriate fire preventative measures to adequately address the potential fire risk present;
- Advise the Person with Control on the appropriate fire preventative measures for the hazards identified in their area(s);
- Ensure that staff are aware of the fire preventative measures and their role in preventing fire;
- Ensure that staff are trained in the safe use of equipment, combustibles, oxidising agents and medical gases so as to avoid an incident of fire;
- Periodically, and additionally as part of the fire risk assessment process, undertake a visual inspection of the fire preventative measures;
- Report instances of inadequate fire prevention measures to the Person with Control and record such findings for reporting via the Estates Governance Committee.

## Persons with Control

- Undertake and record the check of fire preventative measures;
- Ensure all staff in the area understand the fire preventative measure and their role in preventing fire;
- Ensure all staff in the area understand the potential for arson and their role its prevention;
- Report via the Helpdesk, any instance of:
  - Damaged and / or faulty electrical equipment;
  - Electrical equipment for which the Portable Appliance Test (PAT) is overdue;
  - Damaged or worn upholstered furniture which exposes the upholstery foam;
  - An accumulation of combustible materials and / or waste in areas other than designated stores or disposal rooms;
  - The presence of oxidising agents other than in a designated store or when being used as part of a controlled process;
  - An unnecessary accumulation of medical gas cylinders; or
  - Any damage to the piped medical gas system.

## 6. THE TRIANGLE OF FIRE

All fires result from the bringing together of three elements namely oxygen, heat and fuel. The combination of these three components is often referred to as the triangle of fire and graphically represented in figure 1 below.

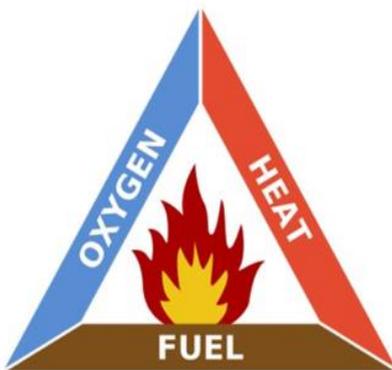


Figure 1 – The Triangle of Fire

The “Triangle of Fire” is corner stone and key element to fire prevention since the absence of any of the three components will prevent a fire from occurring.

Since it is generally not possible to, or desirable to remove oxygen from the environment within premises, the majority of fire prevention concentrates on the control of heat sources for ignition and fuels for combustion.

It is essential to provide control measures to ensure they do not come into contact unless as part of a desirable or controlled process.

## **7. CONTROL OF HEAT SOURCES (SOURCES OF IGNITION)**

The control of heat sources is a critical element in fire prevention since the presence of heat can represent the means by which fuels are ignited to cause a fire.

### **7.1 Control of Cooking / Food Warming Appliances**

The inappropriate use and / or lack of supervision of cooking / food warming appliances have resulted in many incidents of fire and false alarms in healthcare premises. The use of cooking / food warming appliances must always be appropriately controlled to minimise the likelihood of fire. Such controls include ensuring that these appliances are only used in specifically designated areas that are provided with appropriate fire precautions.

#### **7.1.1 Hot Plates / Cooking Hobs**

Hotplates and cooking hobs should only be used in a designated kitchen area which is provided with suitable cooking fume extract and fixed suppression system.

Hotplates and cooking hobs should never be left unsupervised whilst energised or unless the appliance has cooled to room temperature.

Combustible materials should be kept a minimum of 0.5 m away from a hot plate or cooking hob whilst energised or until the appliance has cooled to room temperature.

Combustible materials should not be placed upon any hot plate or cooking hob, even when the appliance is not in use.

#### **7.1.2 Deep Fat Fryers**

Deep fat fryers present a particular challenge for the prevention since their intended use involves high temperatures, and they contain a significant volume of flammable oils.

Deep fat fryers should only be used in a designated kitchen area which is provided with suitable cooking fume extract and a fixed suppression system.

Deep fat fryers should never be left unsupervised whilst energised or unless the appliance has cooled to room temperature and when not in use the lids should be replaced.

#### **7.1.3 Conventional and Fan Assisted Ovens**

Ovens should only be used in a designated kitchen area which is provided with appropriate fire detection and fire resisting construction.

Ovens should never be left unsupervised whilst energised or unless the appliance has cooled to room temperature.

Combustible materials should not be placed in any oven, even when the appliance is not in use.

#### **7.1.4 Food Regeneration ovens**

Food regeneration ovens should only be used in designated areas which are provided with appropriate fire detection and fire resisting construction whilst they are in either refrigeration or regeneration mode.

### **7.1.5 Toasters**

Toasters must be of the Trust approved design (Duality or other similar – all metal body) and should only be used in designated areas which are provided with appropriate fire detection and fire resisting construction.

Toasters should not be left unattended whenever energised, and should be unplugged when not in use.

Combustible materials should be kept a minimum of 0.3 m away from a toaster whilst energised or until the appliance has cooled to room temperature.

Any toaster that is energised or hotter than room temperature must not be positioned beneath a cupboard or other similar structure that would be subjected to the heat rising from the toaster.

Under no circumstances should a toaster be used for any purpose other than toasting suitably sliced bread.

Care should be taken to ensure that the toaster controls are set appropriately, and that the automatic mechanisms for preventing the toast from burning is in a serviceable condition and free to operate without manual intervention.

All toasters should be regularly cleared of crumbs to prevent a build-up of combustible detritus.

### **7.1.6 Microwave Ovens**

Microwave ovens must be of the Trust approved design (low wattage below 800W – metal body) and should only be used in designated areas which are provided with appropriate fire detection and fire resisting construction.

Microwave ovens should not be left unattended whenever in use and should be emptied of their contents once the heating cycle has concluded.

The microwave oven and other room contents must be appropriately located to ensure that the area around the microwave oven is maintained clear for a minimum distance of 100 mm to allow for adequate ventilation.

Combustible materials should be kept a minimum of 0.3 m away from a microwave oven whilst energised.

Under no circumstances should a microwave oven be used for any purpose other than heating appropriately packaged food and care should be taken to ensure that metallic objects are not placed inside the microwave oven.

All microwave ovens should be regularly cleaned to prevent a build-up of combustible detritus.

### **7.1.7 Kettles**

Kettles should only be used in designated areas which are provided with appropriate fire detection.

Care should be taken to ensure that the electrical cable is kept away from the kettle body whilst the kettle is energised.

Before switching on any kettle, the user must ensure there is at least the minimum volume of water required for safe use present in the kettle.

Under no circumstances should a kettle be used for any purpose other than boiling water.

## 7.2 Electrical Appliances

The incorrect use or failure of an electrical appliance may provide sufficient heat to ignite nearby combustible materials. In order to prevent the incident of fire, electrical appliances should always be used in accordance with the manufacturer's instructions.

Care should be taken to ensure that the ventilation of any appliance is not obstructed, and that foreign objects cannot enter the appliance by means of the ventilation openings.

If any electrical appliance, including the electrical cable and plug supplying that appliance is damaged it should be removed from service until such time as the damage has been properly repaired by qualified service / maintenance personnel.

### 7.2.1 Portable Appliance Testing (PAT)

All electrical appliances that can be moved whilst in operation or any appliance which can easily be moved from one place to another is classed as a portable appliance. Generally such appliances are connected to the electrical supply by means of a plug and socket arrangement. All portable appliances should be subjected to a periodic safety test in accordance with the arrangements for Portable Appliance Testing (PAT).

All portable appliances should be provided with a test label that clearly indicates when the next safety test is due for that appliance. Any appliance that is overdue its safety test should be removed from service and a request for testing should be raised via the Estates Helpdesk.

### 7.2.2 Battery Powered Appliance Chargers

Battery powered appliances such as mobile phones, tablet computers, etc. must only be charged using the manufacturer recommended charger. Generic chargers may not be fully compatible with the appliance being charged and must, therefore, not be used.

When charging, combustible materials should be kept a minimum of 0.3 m away from the battery powered appliance, and care should be taken to ensure that the ventilation of the appliance and / or charger is not obstructed.

When charging is complete, or when the appliance is disconnected from the charger, the charger must be switched off and unplugged.

### 7.2.3 Extension Leads and Adaptors

The use of multi-way electrical adaptors and wound extension leads are prohibited in premises occupied by the Trust, except where approved 110V extension leads are used by contractors or maintenance personnel.



The use of extension leads should be minimised with additional fixed electrical sockets being provided where necessary. Where the use of extension leads is unavoidable care must be taken to ensure that their use does not increase the potential for a fire to occur.



Only extension leads procured and supplied by the Trust or trust authorised contractors are to be used on Trust premises. The use of any extension lead obtained other than through the Trust's authorised procurement is prohibited.

Where multi-socket extension leads are used, they must be of an approved, industrial type in line and fused at the block, and the total current used by the appliances plugged into the extension lead must not exceed the extension lead rating.

If in doubt, seek advice via the Estates Helpdesk prior to using any extension lead.

Any extension lead must only be plugged directly into switched wall sockets, and never into another extension lead. The switched wall socket must be readily accessible to allow the power to the extension lead to be easily switched off.

Care must be taken to ensure that the extension lead cable is not routed where it may come into contact with a source of heat or where it may be damaged. Particular attention should be given to extension leads that may run beneath desks which may be inadvertently damaged by rushing beneath the feet of anyone using the desk, or by the castors of chairs.

#### **7.2.4 Refrigerators and Freezers**

Where refrigerators or freezers are used care must be taken to ensure sufficient ventilation to the rear and / or front vents of the appliance. The appliance vents must be periodically cleaned to prevent the build-up of lint and other detritus which may prevent sufficient air circulation through and around the appliance.

Combustible materials should not be placed on top or adjacent to any refrigerator or freezer whilst energised.

The door to any refrigerator or freezer must be kept shut whilst the appliance is energised except for short periods when the contents are being accessed. Any damage to the door seals should be repaired by qualified service personnel as soon as possible or the appliance removed from service.

Should either a refrigerator or freezer begin emitting unusual noises such as hissing or mechanical noise, the appliance should be inspected by suitably qualified service personnel as soon as possible or the appliance removed from service.

#### **7.3 Portable and Fixed Heaters**

**Portable heaters should only be used as an emergency** and should be provided through the Hard FM provider. Where heaters (either portable or fixed) are used, care must be taken to ensure sufficient ventilation and air movement around the heating appliance.

Combustible materials should be kept to a minimum of 0.5m away from any heater.

If any heater, including any electrical cable and plug supplying that appliance where applicable, is damaged, it should be removed from service until such time as the damaged has been properly repaired by qualified service personnel.

Particular attention should be given to portable convection heaters that require sufficient clearance beneath them to allow air to be drawn across the heating elements. If any damage occurs to the convention heater feet, the heating appliance should be removed from service immediately.

Portable heaters must not be located beneath desks or other such obstructions that would be subjected to the heat rising from the heater.

Portable heater must not be plugged into multi-way extension leads.

#### **7.4 Smoking**

The Trust operates under a “smoke-free” policy in which smoking is prohibited anywhere on the Trust’s premises. However, staff must be vigilant since illicit smoking presents an even greater risk.

Where illicit smoking is suspected, staff should check that any smoking material have been fully extinguished and properly disposed of. Particular attention should be given to waste receptacles where carelessly discarded smoking materials may ignite any combustible contents. If the offender can be

identified, staff should ensure that they are reminded of the “smoke-free” policy and where necessary should escalate the issue by referral to security and the site co-ordinator.

Staff members are advised that the Trust smoking policy deems smoking onsite by any staff as a disciplinary offence.

### **7.5 Hot Works**

Any process involving hot works must be subject to an appropriate assessment of fire risk and suitably controlled so as to minimise the likelihood of a fire occurring. Refer to the Trust’s procedures permit for specific guidance and code of practice, Control of Contractors on Sherwood Forest Hospitals Sites.

## **8. CONTROL OF FUELS (COMBUSTIBLE MATERIALS)**

The control of fuels in the form of combustible materials is another critical element in fire prevention since a fire can only start and develop if there is sufficient fuel available.

Whilst many of the combustible materials present in the healthcare environment are either naturally fire retardant or treated with fire retardant chemicals to limit their potential for fire spread, such properties do not prevent those items from being ignited. In the presence of a sustained heating or in an oxygen enriched atmosphere, such fire retardancy is likely to be overcome.

### **8.1 Paper Goods and Other Disposable Items**

Paper goods and many other disposable items represent a significant source of fuel given their abundance and near universal availability in the healthcare environment.

Such combustible items must be kept away from any sources of heat and in particular any items with the potential to produce a naked flame or sparks, or any item whose operation produces elevated temperatures such as heaters or cooking appliances.

Care must be taken to ensure that significant quantities of paper goods and other combustible disposable items are stored in designated storage areas which are provided with appropriate fire detection and fire resisting construction.

The quantity of paper goods and other combustible disposable items stored in any area should be kept to the minimum quantity necessary to meet operational requirements.

### **8.2 Linen**

As with paper goods, linen represents a significant source of fuel given its abundance and near universal availability in the in-patient, healthcare environment.

Items such as bedding, clothing, towels, etc. will exhibit some degree of fire retardancy, however, these items must be kept away from any sources of heat and in particular any items with the potential to produce a naked flame or sparks, or any item whose operation produces elevated temperatures such as heaters or cooking appliances.

Linen must only be stored in designated storage areas which are provided with appropriate fire detection and fire resisting construction.

The quantity of linen stored in any area should be kept to the minimum quantity necessary to meet operational requirements.

### **8.3 Curtains, Drapes and Screens**

Such items will exhibit some degree of fire retardancy, however, their vertical orientation means that should fire can spread more rapidly than if they were in a horizontal orientation.

Particular care should be taken to ensure that curtains, drapes and screens are kept away from potential sources of heat and specifically that they are now allowed to be draped over electrical equipment where they may block ventilation openings or otherwise prevent appropriate air movement around equipment.

Staff should be mindful of the potential for air movements from open windows to deflect curtains and drapes such that they may unintentionally come into contact with sources of heat.

Curtains, drapes and screens must only be stored in designated storage areas which are provided with appropriate fire detection and fire resisting construction.

The quantity of curtains, drapes and screens stored in any area should be kept to the minimum quantity necessary to meet operational requirements.

### **8.4 Furniture**

Whilst generally the majority of furniture in the healthcare environment is constructed using combustible materials, the main cause for concern relates to upholstered furniture such as items have the potential to burn rapidly once involved in a fire.

The upholstered furniture provided in healthcare premises should meet a minimum standard for fire retardancy and with the exception of relatively low risk areas such as offices, should meet the fire performance standards relating to ignition sources 0, 1 & 5. This should be clearly identified on a label permanently affixed to the furniture item. In low risk areas the fire performance standards relating to ignition sources 0 & 1 should be met.

Despite the fire retardancy and tested fire performance of items of furniture, it is important to ensure that items of furniture are kept away from any sources of heat and in particular any item whose operation produces elevated temperatures such as heaters.

Particular care should be taken to ensure that patient bedhead light units are allowed to contact items of furniture, or be energised when in close proximity to furniture where the heat produced from the light unit may be sufficient to ignite the furniture or cause it to char or smoulder.

Upholstered furniture is particularly vulnerable to fire when the outer cover has become damaged whether through wear or vandalism. If the cover fabric is damaged and the filling material is exposed, the item of furniture should be withdrawn from use and repaired as soon as possible irrespective of its location. Items that cannot be economically repaired should be disposed of.

Furniture not in use must only be stored in designated storage areas which are provided with appropriate fire detection and fire resisting construction and the quantity being stored in any area should be kept to the minimum quantity necessary to meet operational requirements.

### **8.5 Flammable Liquids**

The control of flammable liquids is particularly important since they are generally more volatile and can be used to accelerate the development of a fire. Whilst flammable liquids generally represent a greater fire hazard than that of a comparable quantity of solid combustible material, their availability is usually much lower than that of other combustible materials.

## **8.6 Alcohol and Other Spirit Based Sanitiser**

Whilst readily available, the quantities of sanitiser present in any one discrete dispenser do not represent a significant fire hazard. However, where sanitiser liquids and gels are brought into contact with permeable combustible items such as paper goods, textiles or upholstered furniture coverings, the fire risk increases significantly. Hence, care should be taken to limit the potential for sanitiser fluids to inadvertently contaminate other combustible materials, and staff should be vigilant for potential acts of deliberate contamination.

All sanitiser fluids that are readily accessible should be contained within an appropriate dispenser positioned in a suitable location. The quantity of sanitiser made available should be kept to the minimum necessary to meet operational requirements.

Sanitiser fluids not fitted within approved dispensers must only be stored in designated storage areas which are provided with appropriate fire detection and fire resisting construction, and the quantity being stored in any area should be kept to the minimum quantity necessary to sustain immediate operational requirements. In any case, the total volume of sanitiser fluids present in any patient accessed department (quantity in dispensers and being stored) must not exceed 25 litres.

### **8.6.1 Cleaning Solvents**

Although the majority of cleaning products in use do not contain flammable solvents, there may be instances where their use cannot be avoided. In such cases, care must be taken to ensure that such solvent based liquids are not used on surfaces with elevated temperatures such as heaters or cooking appliances.

Any cleaning cloths or other permeable material that have been contaminated with solvent based fluids must be thoroughly aired and, where possible, thoroughly rinsed through to remove any solvent residue prior to their storage or disposal.

Solvent based cleaning fluids must only be stored in designated storage areas which are provided with appropriate fire detection and fire resisting construction, and the quantity being stored in any area should be kept to the minimum quantity necessary to meet immediate operational requirements.

### **8.6.2 Fats and Oils**

Generally any significant quantities of fats and oils will only be present in the main catering facilities.

When cooking with fats and oils it is important to ensure that the temperature of the cooking appliance is appropriately set to prevent ignition.

Care should be taken when filling cooking equipment such as deep-fat fryers with oil to avoid overfilling and spills. Any spills should be immediately cleaned up.

Before emptying oils from deep-fat fryers, the oil must be allowed to cool, preferably overnight. The oil should be drained into a suitably sized metal or heat resistant container provided with a secure lid and appropriate carrying handles or other means for the safe transportation of the waste oil.

All oils and fats must only be stored in designated storage areas which are provided with appropriate fire detection and fire resisting construction. Waste oils must only be stored in designated storage areas which if inside the building must be provided with appropriate fire detection and fire resisting construction and if outside must be suitably secured to prevent unauthorised access.

The quantity of oils and fats stored, including waste oils, in any area should be kept to the minimum quantity necessary to meet immediate operational requirements.

## **8.7 Aerosols**

Since the banning of CFCs as propellants in aerosol containers, butane and propane gases are widely used instead. These and other similar products are extremely flammable. It is important therefore to ensure that aerosols are used carefully and never sprayed at or near items with the potential to produce a naked flame or sparks, or any item whose operation produces elevated temperatures such as heaters or cooking appliances.

Wherever possible, products packaged in pressurised aerosol containers should be replaced with non-aerosol sprays.

Pressurised aerosol containers must be kept away from all items potential heat sources, even when empty.

Pressurised aerosol containers must not be disposed on in the general waste but must be kept separately for collection and appropriate disposal.

Where multiple pressurised aerosol containers are to be stored, they must only be stored in designated storage areas which are provided with appropriate fire detection and fire resisting construction. The quantity of pressurised aerosol containers being stored in any area should be kept to the minimum quantity necessary to meet immediate operational requirements.

## **8.8 Combustible Waste**

The modern healthcare environment generates considerable volumes of combustible waste and regular collection of waste material is essential from wards and patient treatment areas and from designated holding points.

Wherever possible the volume of combustible waste that may be present in ward and patient treatment areas should be minimised. Where practicable this may be achieved by removing the outer packaging of supplies prior to delivery to the ward or patient treatment areas.

Waste materials must only be placed in officially provided containers and at designated collection points such as disposal holds and refuse stores.

In no circumstances should combustible waste be allowed to remain in corridors, even on a temporary basis, unless stored in a designated waste bin. Designated waste bins with lockable lids are provided for depositing waste and staff should ensure that the waste bin lids remain locked at all times, particularly where the waste bin is located in a publically accessible area.

Waste bins must not be allowed to overflow such that the bin lid cannot be locked shut. If additional waste bins are required contact the Helpdesk to request a waste collection.

Combustible waste must not be placed in any case or other such open structure unless contained within a designated secure disposal hold or refuse store which is provided with appropriate fire detection and fire resisting construction.

## **9. CONTROL OF OXYGEN & OXIDISING AGENTS**

Whilst it is generally not possible or desirable to remove oxygen from the premises, the presence of higher concentrations of oxygen can increase the likelihood that a fire may start and increase the intensity of a fire once ignited. It is, therefore, important to limit the potential for oxygen concentration to rise above that normally present in the atmospheric air.

Patients receiving medical gases with a higher than atmospheric concentration of oxygen through a mask, must be warned of the potential dangers of using products containing volatile substances such as paraffin based lip balms and some topical skin treatments.

## **9.1 Piped Medical Gases**

Care should be taken to ensure that the piped medical gas outlets are turned off when not in use.

Before connecting or operating the medical gas system care should be taken to ensure that hands are clean and that any hand sanitiser has fully evaporated.

Where patients are receiving medical gas by means of a mask or nasal cannula, patients should be made aware of the particular dangers of removing the mask or cannula and placing it upon their bedding, clothing or other permeable fabric whilst the gas is still being supplied. Bedding that has become saturated with oxygen is readily ignited with the oxygen enriched atmosphere effectively overcoming any fire retardancy of the fabric.

## **9.2 Medical Gas Cylinders**

Where medical gas cylinders are in use care must be taken to ensure sufficient ventilation in the immediate vicinity of the gas cylinder and in the room of use to prevent an increase in oxygen concentration.

Before handling or operating any medical gas cylinder care should be taken to ensure that hands are clean and that any hand sanitiser has fully evaporated.

When in use cylinders should be firmly secured to a suitable cylinder support.

Cylinders should not be placed on patients beds, they must be placed in specifically designed holders where they can be kept away from direct contact with combustible materials.

Medical gas cylinders should be stored in appropriate storage racks or trolleys to prevent them being knocked over, and away from combustible materials. Cylinders larger than size AE, or where more than two smaller cylinders are to be stored, should be stored in a designated room provided with appropriate fire detection, fire resisting construction and ventilation.

## **9.3 Oxidising Agents**

Although most oxidising materials do not burn themselves, they can produce very flammable or explosive mixtures when combined with combustible materials.

Oxidising substances (e.g. peroxides and nitrates) should be stored in a COSHH metal cabinet well away from organic matter such as wood and paper. Oxidising agents should never be stored in a wooden cabinet or be stored with flammable solvents or reducing agents since this may result in fire or explosion, particularly if a spillage occurs, even without a naked flame or heat present.

The volume of oxidising agents being stored should be kept to the minimum quantity necessary to meet operational requirements.

## **10. ARSON**

Arson is a particular challenge within the healthcare environment since statistics show that it is the greatest cause of fire in the NHS with approximately 29% of fires in healthcare premises attended by fire and rescue services being started deliberately.

### **10.1 Motivation for Arson**

The motivations for arson are varied and are at times complex, however, the majority of arson attacks are motivated by one of the following factors:

### **10.1.1 Mental Instability**

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.

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 feeling of fulfilment it gives them.

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.

### **10.1.2 Grievances**

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 relation (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.

A grievance may also be expressed or manifested through a physical act of arson against the health care premise where there is a considered dissatisfaction in the level of care received by a patient, family member or friend.

### **10.1.3 Economic or Political Objectives**

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.

### **10.1.4 Related Criminal Activities**

Arson may be associated with other criminal acts, for example

- To conceal a burglary or fraudulent activities;
- To distract staff in order to provide an opportunity for a crime to take place such as theft of equipment, valuables or drugs;
- To disguise sabotage;
- As part of an attempt at blackmail;
- Vandalism.

### **10.1.5 Arson by Children**

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.

### **10.1.6 Fraud**

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

## 10.2 Preventing Arson

The particular challenge in preventing arson is that the perpetrator deliberately sets out to bring the three components of the triangle of fire together in order to start a fire. Of these three components, the arsonist is likely to supply the source of heat as a means to ignite available fuel. Since normal atmospheric air contains sufficient concentrations of oxygen to support combustion, the component of the fire triangle that staff can exercise the greatest degree of control over, in order to prevent an arson attack, is the availability of a source of fuel. In some cases the arsonist will introduce combustible materials to use and may use accelerants such as flammable liquids to promote rapid development of a fire. However, in the majority of cases in the NHS deliberately set fires are opportunists using the combustible materials that are readily available.

### Denying the Opportunity for Arson

The understanding of staff and the motivations for arson and their vigilance in identifying those with the potential to deliberately set fire is key to timely intervention preventing the would-be arsonist starting a fire. The majority of arson attacks in the NHS can be prevented by exercising appropriate control over the combustible materials available to the would-be arsonist.

Ensuring that appropriate security arrangements are set in place and applied will deny the would-be arsonist access to combustible materials, including flammable liquid accelerants, and sources of additional oxygen or oxidising agents.

Often, routine contact with staff is enough to dissuade the would-be arsonist from deliberate fire setting for fear of being identified. An effective means of providing such interaction is to offer assistance such as way-finding to anyone that looks out of place. Such an approach is non-confrontational but may prove sufficient to demonstrate to the would-be arsonist that staff are vigilant and likely to be able to identify them.

## 11. MONITORING

The on-going performance of Fire Safety and Fire Prevention will be monitored and reported via the Fire Safety Management System using fire incident records generated by the Datix risk management system, fire risk assessments and records and reports generated by the Fire Safety Manager, Fire Safety Advisor, Maintenance Team Leader and Maintenance staff. Monitoring will be reported to the Fire Safety Committee, Estates Governance Committee, Trust Health & Safety Committee and the Trust Board.

In addition to the above independent third party audits may also be undertaken yearly or as required by the Trust Fire Safety Manager via an Authorised Engineer (Fire).

## 12. RELATED DOCUMENTS

Smoke Free Policy  
Major Incident Plan  
Electrical Safety Policy  
Waste Management Policy and Procedures  
Hot Works Permit to Work  
Management of Contractors Policy  
Relevant Fire Risk Assessment Reports

Document name:	Fire Safety Prevention Protocol v3.0		
Author:	Neil Rowley, Specialist Fire Advisor		
Owning department:	Estates and Facilities Management		
Approved By:	Fire Safety Committee		
Ratified By:	Estates & Facilities Governance Committee		
Supersedes:	Version 2		
Version number:	3.0	Review date:	January 2022