



FIRE SAFETY MANAGEMENT GUIDE FOR COLLEGES AND PROFESSIONAL SERVICES

Section 1: Provides guidance on College's and Professional Service's day to day management responsibilities to ensure the requirements of the University's Fire Safety Policy Standard are met to ensure the safety of staff and students when working / studying at the University.

Section 2: Provides specific guidance on what to consider when risk assessing the fire safety hazards associated with a College or Professional Service's activities.

NOTE: The roles and responsibilities as detailed for Property & Campus Services (PACS) may be carried out by contractors appointed as part of an external Facilities Management contract.

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SECTION 1

1.1 Introduction

Fire is a risk that can affect everyone at the University so it is important the likelihood of a fire starting is remote, the consequences of a fire if one occurred are lessened and everyone knows what to do if there is a fire or emergency.

This Fire Safety Management Guide has been produced to help Colleges and Professional Services (Services) meet the general obligations expressed by the Fire Safety Policy Standard and to facilitate good fire safety management arrangements at a local level.

1.2 Responsibilities

As described within the Fire Safety Policy Standard, each College and Service has responsibility for those areas and activities under their control. In addition, for fire risks to be successfully managed and to prevent a fire, or lessen the impact if one were to occur, the support and cooperation of each College and Service is crucial. The Policy Standard therefore places a clear duty to cooperate, coordinate, communicate and consult with other building users and to plan for emergency situations.

Property & Campus Services (PACS) is responsible for the fabric and services of all University owned, leased or rented buildings (unless otherwise arranged through leasehold or other agreements), including the provision and maintenance of fire safety systems.

More detail on specific PACS responsibilities is contained within the Property & Campus Services Fire Safety Management Guide. Further information on the duties of Colleges / Services can be found in 1.28.

1.3 Nominated Occupier

The University will identify a **NOMINATED OCCUPIER** for each occupied building. The Nominated Occupier will be an entity, eg. a Service or School, and will usually be the predominant occupier.

The Nominated Occupier will identify a contact person to receive and distribute information and ensure tasks and roles as identified in this Guide are undertaken; these include:

- a) Undertaking regular Fire Drills.
- b) Carrying out periodic fire alarm tests.
- c) Maintaining records of Fire Drills and alarm tests in the Fire Log Book (provided by PACS).

1.4 Assessing Fire Risks

In addition to the Building Fire Risk Assessment (BFRA), produced via PACS, each College and Service must consider fire and emergencies within their own risk assessments. The complexities and detail of this will reflect the level of risk generated by the College / Service, and in most cases will be covered by the general operational risk assessment. However, in some cases a more detailed assessment of fire risk will be needed (further detail of what to consider in a specific Fire Risk Assessment is provided in *Section 2*).

In summary, each College and Service is required to:

- Identify a person(s) who will coordinate fire safety matters on behalf of the Head of College / Service and where necessary liaise with PACS and the Health and Safety Office (HSO).
- Ensure any BFRA actions directly under the control of the College / Service are implemented.
- Risk assess fire hazards associated with its activities as part of the generic College / Service risk assessment or as part of a specific risk assessment dependent on the activities undertaken. See *Section 2*).

- Establish appropriate controls to manage any identified fire safety risks.
- Ensure the findings of the risk assessment and required controls are communicated to all persons affected (eg staff, students), with training and instruction provided as necessary.
- Ensure staff, students, short term employees, visiting academics and others under their control receive a suitable Safety Induction and / or provided with appropriate information on fire safety and emergency procedures.
- Ensure any significant fire safety hazards are communicated to PACS for inclusion in the building's Fire Cabinet.
- Review fire safety risks annually or as activity / building / occupancy changes require.

1.5 Cooperation, Coordination and Communication

Where Colleges and Services share premises they shall ensure arrangements are in place to cooperate, coordinate and communicate with other occupying Colleges / Services and / or organisations. This will ensure each building occupier:

- Understands the fire risks associated with each other's activities.
- Knows who is responsible for arranging and coordinating Fire Drills and tests of the Fire Alarm.
- Knows what the building's Emergency Procedures are.

1.6 Consultation

Colleges and Services shall establish arrangements to ensure consultation takes place between person(s) who could be affected by fire safety hazards and / or fire safety arrangements associated with their activities. For example, this could take the form of a Building Liaison Group with minutes kept of agreed actions etc.

1.7 Training and Information

Colleges and Services must ensure staff, students and others under their control are aware of the information provided on Fire Action Notices and the action to take in an emergency situation.

This will include what action to take if they hear the fire alarm, and any specific instruction and information based upon the College's / Service's activities. For example, science based Colleges may need to inform and instruct students on what to do if an experiment goes wrong or if a gas alarm is activated. A summary of responsibilities and emergency procedures can be found on the HSO Website.

In addition, Colleges and Services must identify if staff require specific Fire Safety Training, eg those assisting during a fire evacuation practice. Contact the HSO for advice.

1.8 Personal Emergency Evacuation Plans (PEEPs)

Colleges / Services must contact HSO immediately, if they have a member of staff / student who may need assistance (eg cannot evacuate via stairs) during an emergency evacuation and may require a Personal Emergency Evacuation Plan (PEEP). PEEPS will then be developed with the individual and in association with the College / Service. Additional information on personal evacuation plans can be found on the [HSO Website](#), including general advice for visitors who may require assistance in an emergency.

NOTE: PACS provide and maintain Evacuation Chairs which facilitate the safe evacuation of a person who in an emergency or lift break down could not evacuate via the stairs. Colleges / Services should contact PACS and / or the Health & Safety Office if they would like to train staff in the use of the Evacuation Chairs.

1.9 University Emergency Management Plans and Procedures

The University as part of its Emergency Management Policy may arrange training exercises for key staff (usually arranged through Governance & Compliance) to ensure they understand the action to take in an emergency. The cooperation of Colleges and Services in such training exercises is greatly appreciated.

1.10 Emergency Services Information

Colleges / Services shall inform PACS, of any significant fire safety risks to ensure relevant information is communicated to the Emergency Services and details included within the building's Fire Cabinet.

Such information could include the location of large volumes of chemicals, biological and radiological hazards, use of compressed gas cylinders, animal welfare areas etc.

1.11 Fire Drills

The **NOMINATED OCCUPIER** will arrange for at least two fire drills per academic year. One *announced*, conducted in full knowledge of staff and students and which acts as a training aid. One *unannounced* carried out as if a real event has occurred. The person organising the fire drill will:

- i. Arrange Fire Drills at a time to reflect the building's usual occupancy levels (where the building is habitually occupied outside of normal working hours consider a fire drill during this period).
- ii. Ensure Fire Drill dates and times are agreed with other building users. **Remember** conferences, exams etc.
- iii. Arrange a number of monitors (HSO can assist) to observe behaviour during evacuations and at the Assembly Point, also noting evacuation speed, areas the alarm wasn't heard.
- iv. **BEFORE THE FIRE DRILL** notify Security on **2795** (who will inform the Emergency Services) and the Switchboard on **0** just before the drill.
- v. Activate a Call Point.
- vi. Monitor the evacuation.
- vii. Upon completion, re-set the Fire Alarm Panel.
- viii. Authorise re-entry of the building.
- ix. Notify Security on **2795** and the Switchboard on **0** once the drill is complete, confirming with Security the automatic link was operative.
- x. Record details of each drill in the Fire Log Book (provided by PACS) and any action required.
- xi. Notify any faults immediately to the PACS Helpdesk.
- xii. Address concerns with the relevant College / Service eg students refusing to evacuate.

NOTE: Colleges / Services sharing a building must participate in and assist with fire drills as required.

1.12 Fire Detection and Notification Systems

PACS will ensure a Competent Person tests, maintains and inspects fire detection and notification systems installed in University buildings. If a College / Service identifies a problem, eg damaged call point, they should contact the PACS Helpdesk immediately.

Fire Alarm Systems:

To assist PACS in ensuring the continued operability of the fire alarm system the **NOMINATED OCCUPIER** should arrange for a weekly activation of the fire alarm system (or period otherwise agreed with PACS) following the process below:

- i. Ensure other building occupiers are aware of the fire alarm test.
- ii. Notify Security on **2795** immediately before the test.
- iii. Test the operation of the fire alarm system.
- iv. Confirm with Security on **2795** immediately after the test that the notification link worked.
- v. Record details of each test in the Fire Log Book (provided by PACS) and any action taken.
- vi. Notify any faults immediately to the PACS Helpdesk.

NOTE: Panel keys and training in panel operation can be obtained through PACS.

1.13 Fire Alarm Activations

Colleges / Services shall ensure staff and students understand the action to take on hearing a fire alarm activation. **NOTE:** PACS will be made aware of fire alarm activations, via automated links and / or by Security staff who attend all fire alarm activations.

1.14 Remote Sites

PACS will agree local fire alarm activation arrangements with the relevant College / Service for remote sites (away from Bangor and Menai Bridge).

1.15 Fire Fighting Equipment (Extinguishers) (see Section 2 Page 6 for extinguisher types)

PACS provide, inspect and maintain fire extinguishers in all buildings taking into account the findings and requirements of the BRFA. In addition, Colleges / Services are asked to consider the types of fire extinguishers they require during their risk assessment to ensure extinguisher suitability.

Where local automatic extinguishing systems are installed the appropriate College / Service must agree with PACS suitable testing and maintenance schedules.

Colleges / Services should report any concerns relating to such equipment, including suitability to PACS.

1.16 Means of Escape

Each College / Service shall maintain escape routes by:

- Keeping escape routes / fire exits free from obstructions.
- Checking the operability and maintenance of fire exits and routes as part of their regular health and safety inspections.
- Closing doors leading onto escape routes (especially staircases).
- Closing doors and windows in their area of responsibility at the end of the normal working day.
- Reporting any concerns eg lack of signage via the PACS Helpdesk immediately.

1.17 Signage

- *Fire Action Notices:* PACS provide and display Fire Action Notices, removing old Notices as required. Colleges / Services will be responsible for completing the Notices in the areas they occupy, reporting any defaced / unclear Notices to the PACS Helpdesk immediately.
- *Fire Exit / Assembly Point Signs:* Colleges / Services to inform PACS Helpdesk immediately of any damaged / missing signs, or if they feel additional signs are required.
- *Specialist and local Emergency Procedures Signage:* To be provided by relevant College / Service.

1.18 Chemicals and Flammable Liquids

Systems must be established to ensure only designated, competent persons order chemicals and other potentially hazardous materials. On arrival products must be stored in accordance with the relevant COSHH assessment and in appropriate locations, eg Solvent Store or within chemical storage chests.

In addition, Colleges and Services must ensure all staff and students handling chemicals have received the necessary training, instruction and information to handle chemicals safely (including emergency arrangements). Records of such training should be kept.

Where Colleges and Services store and use large quantities of flammable products a more thorough risk assessment will be required. Further advice is available from the HSO.

NOTE: Colleges and Services must notify PACS of all new areas used for chemical / hazardous material storage and / or if the quantities in existing stores increases significantly with this information included in the building's Fire Cabinet (usually found by the Fire Panel).

1.19 Events & Special Licenses

Colleges and Services arranging events outside of their normal activities shall:

Pre- Event:

When arranging an event the responsible person eg the Event Organiser should:

- Confirm with Conferencing or Timetable **capacity numbers** for the location and ensure it is never exceeded. **NOTE:** Confirm **licensing requirements** if alcohol is to be served, pyrotechnics used.
- Consider the event activities and any other requirement that could impact on fire safety eg parking, children attending, disabled person needs, alcohol consumption, use of smoke machines, use of balloons / candles, pyrotechnics (specific Risk Assessment required), noisy activities / music which could prevent the alarm being heard (this list is not exhaustive).
- If fire safety hazards are identified, confirm with PACS if adjustments to the fire detection / notification system are needed (eg switching detectors from smoke to heat) and with the Conference Office that **licensing requirements** are suitable.
- Establish evacuation arrangements and where people should assemble.
- Identify those who will assist eg staff helpers during the event and in an emergency evacuation.
- Identify who will brief those attending the event on the action to take in an emergency.

During the Event:

- Provide pre-event briefing to attendees (eg what to do if the fire alarm sounds).
- 'Helpers' to check escape routes / exits are kept clear of obstructions etc throughout.
- The Non-Smoking Policy is adhered to.
- Rooms do not become overcrowded and capacity numbers exceeded.
- Noise levels cannot drown out the fire alarm.

- Equipment, waste etc is cleared promptly at the end of the event.

1.20 Furniture / Furnishings

Colleges and Services must purchase new furniture and furnishings from approved suppliers (information available from the Finance Office) confirming the item complies with the Furniture and Furnishings (Fire) (Safety) Regulations and is labelled as appropriate. In addition, Colleges and Services should ensure foam filled furniture remains in good condition, arranging its replacement / repair as necessary.

1.21 Display Work

Colleges / Services should ensure displays eg academic work / general information that contain significant amounts of materials and that are located on critical fire escape routes are made of fire retardant fabric or have been chemically treated to achieve fire retardance.

1.22 General Waste

Colleges / Services shall ensure staff and students understand the University's waste disposal procedures and specific requirements associated with their activities. For example, waste recycling and the bins to use for laboratory waste. Whilst awaiting disposal all waste must be stored securely in a suitable bin and location. Waste must not be allowed to accumulate and must always be disposed of promptly.

NOTE: Colleges and Services must contact the PACS Helpdesk to arrange one-off or large waste collections and the Health & Safety Office regarding chemical waste collections.

1.23 Housekeeping

Colleges and Services should ensure staff and students understand the importance of good housekeeping, keeping fire exits and walkways clear at all times. In addition, Colleges / Services should carry out regular Workplace Inspections (template available from HSO) to ensure good housekeeping standards are maintained for the areas under their control, including their communal / circulating areas. Records of such inspections should be kept, including any action taken.

1.24 Smoking

Colleges / Services shall inform staff, students and visitors that smoking is prohibited within all University buildings, in hired, owned and leased vehicles and when on University land within five metres of any building (with the exception of designated smoking areas). Smoking is banned completely in some places.

1.25 Contractors

When planning works, PACS will liaise with Colleges / Services to agree arrangements for the work to take place. As part of this, the College / Service contact for the works should identify and forward any specific fire safety hazard information to their PACS contact, with the College / Service providing Contractors with an additional on-site briefing on the fire safety hazards as required.

NOTE: Once on site it will be the Contractor's responsibility to familiarise themselves with the information provided on Fire Action Notices eg Assembly Point, Fire Exit routes.

1.26 Naked Flames / Supplementary Heaters

No naked flames may be used by a College / Service unless integral to the activity undertaken (eg a formal experimental process, candles at University catered events), and the hazards associated with their use has been risk assessed with controls communicated to relevant persons.

Concerns regarding heating should be reported to the PACS Helpdesk. If extra electric heaters are needed, Colleges / Services shall ensure the electric heater is PAT Tested before use and at appropriate intervals thereafter, with regular visual inspections carried out once in use. Staff and students must understand they must never cover electric heaters and turn them off when the room is left unoccupied for any length of time.

NOTE: 'Open element' electric heaters must not be used.

1.27 Monitoring and Review

Colleges and Services must undertake regular workplace inspections and establish procedures to monitor their own fire safety management systems. For example, check fire drills / alarm tests are carried out, liaison takes place with other building occupiers, provision of emergency information to staff and students.

In addition, the HSO may undertake formal reviews of local fire safety management arrangements.

1.28 Summary of Key Responsibilities - Heads of College / Service

Each Head of College / Service shall:

- a) Introduce, manage and monitor fire safety arrangements to meet the requirements of this Policy Standard and associated Management Guidance.
- b) Appoint a member of staff to oversee College / Service related fire safety arrangements.
- c) Ensure fire hazards are considered within their own Risk Assessments.
- d) Implement recommendations in Building Fire Risk Assessments, as far as they apply to the College / Service.
- e) Communicate and cooperate with other building users and with PACS on risk management and emergency arrangements.
- f) Notify and liaise with the PACS prior to the introduction of any significant fire safety hazards.
- g) Ensure staff, students, short term employees, visiting academics and others under their control receive a suitable Safety Induction and / or are provided with appropriate information on fire safety and emergency procedures.
- h) Liaise with the HSO with regards to staff, students and visitors who may require support.
- i) Ensure relevant staff receive an appropriate Fire Safety Briefing / Training and instruction.
- j) Complete relevant details on Fire Action Notices for the areas they occupy.
- k) Investigate fire related incidents, taking action as necessary.

Those Colleges and Services which predominantly occupy buildings (Nominated (Predominant) Occupier) will, in addition to the above:

- l) Undertake or arrange regular Fire Drills.
- m) Carry out regular operability tests on the fire alarm system.
- n) Record details of all drills and alarm tests in the Fire Log Book.

Nominated Occupier appointed for the buildings occupied?	Name:
↓	
Person appointed to oversee fire safety arrangements (including remote sites)?	Name:
↓	
If sharing a building, Cooperation, Coordination, Communication and Consultation process in place?	Detail process:
↓	
Fire hazards assessed as part of the generic / individual activity risk assessments?	Name those responsible:
↓	
Significant hazards notified to Property & Campus Services?	Who by:
↓	
Fire Safety Info & Training provided (includes Emergency Procedures, No Smoking Policy, Naked Flame Policy)?	How is info etc given & by whom:
↓	
Arrangements in place to identify those requiring PEEPs?	Who liaises with HSO:
↓	
Arrangements in place to ensure waste, hazardous materials are stored and disposed of correctly?	Detail arrangements:
↓	
Fire Action Notices in occupied areas completed?	By who:
↓	
Fire Drills / weekly Fire Alarm checks undertaken and records kept?	By who:
↓	
Regular workplace inspections undertaken (includes checking fire routes / exits are clear, waste management, storage etc)	Name those responsible & frequency:
↓	
Are fire safety organisation and arrangements monitored eg checks that Fire Drills / Inspections / Training carried out?	How does monitoring take place:



SECTION 2

CONSIDERING COLLEGE / SERVICE FIRE RISKS IN RISK ASSESSMENTS

Property & Campus Services (PACS) will arrange for Building Fire Risk Assessments (BFRAs) to be undertaken of all University buildings in accordance with the Regulatory Reform Fire Safety Order, and which take into account the general activity of the building.

However, Colleges and Services must still consider any fire risks associated with their activities eg use of chemicals in an experiment. This Section provides guidance on what to consider when risk assessing the fire safety hazards associated with a College's / Service's day to day activities.

It also explains when such risks can be considered as part of the College's / Service's generic risk assessment, and when fire safety risks should be considered in more detail, in individual activity risk assessments.

NOTE: The roles and responsibilities as detailed for Property & Campus Services (PACS) may be carried out by contractors appointed as part of an external Facilities Management arrangement.

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What is a Fire Risk Assessment?

A Fire Safety Risk Assessment enables Colleges / Services to determine the likelihood of fire arising as a result of their activities in the buildings they occupy.

Often it will be possible to include fire risks in their generic College / Service risk assessment. However, some Colleges, especially the science based Colleges will need to consider fire safety as a separate Fire Risk Assessment or in individual activity risk assessments. For example students carrying out an experiment that uses a flammable substance.

Who should undertake Fire Risk Assessments?

Fire Risk Assessments should be carried out by a member of staff who is competent in the methods of risk assessment and who understands the activities being carried out in the building. In science based Colleges, it is advisable the person is someone who regularly considers fire as a risk in activity risk assessments and understands how to put information, for example from Material Safety Data Sheets into context.

Types of Fire

Class A:	Fires involving solid materials, mainly of an organic nature eg wood, paper or coal
Class B:	Fires which involve flammable liquids or liquefiable solids
Class C:	Fires which involve gases or liquefied gases
Class D:	Fires which involve metals, such as aluminium or magnesium
Class F:	Liquid fat and oils
Electrical	Fires which involve the electricity supply to live equipment

Is a Specific Fire Risk Assessment Required?

Colleges / Services should contact PACS and obtain a copy of the Building Fire Risk Assessment, which may include valuable information when assessing the fire risks within the buildings they occupy and those arising from its activities.

The following should help determine if a specific fire risk assessment is required:

1. *Office Based / Administrative Activities:* Class A and electrical fires are the biggest risk which can usually be controlled with good housekeeping. Including such risks in the generic College / Service risk assessment will be sufficient.
2. *Research / Science Based Activities / Electronic Engineering / Workshops:* Due to the hazardous substances and processes used, the risk of Class B, Class C, Class D, Class F as well as Class A and electrical fires would need to be considered. As the potential for fire is clearly greater, a specific fire risk assessment and / or fire risks carefully considered in individual activity risk assessments such as an experiment risk assessment will be required.

Stringent controls, training and competency may be needed to manage any risk.

NOTE: If there is a risk, activities could create an explosive atmosphere a specific Dangerous Substances and Explosive Atmospheres (DSEAR) assessment will be required (see page 7).

Carrying out a Fire Risk Assessment

The principles are the same as any risk assessment and follow the '5 Key Steps'. The information can be recorded in the generic College / Service risk assessment, but as explained above, it may be necessary to consider fire safety risks in a specific fire risk assessment or as part of individual activity risk assessments:

- Step 1:** Identify potential fire hazards in the workplace. Include pertinent information gained from the Building Fire Risk Assessment, Material Safety Data Sheets
- Step 2:** Decide who (employees, students, visitors, Fire Service, neighbours) might be in danger, in the event of a fire, in the building or whilst trying to escape from it
- Step 3:** Evaluate the risks arising from the hazards and decide whether the existing fire precautions and controls are adequate or whether more should be done to eliminate the hazard or to control the risk (e.g. specific training and competence)
- Step 4:** Record the findings of the fire risk assessment and details of the actions undertaken and required. Inform all who could be affected of the findings
- Step 5:** Keep the assessment under review and revise when necessary. *Revision should be undertaken whenever there is a significant change of circumstance or personnel or when an additional hazard is introduced*

NOTE: Further guidance on carrying out risk assessments can be found on the HSO Website.

What to Consider

This section provides advice and guidance on what to consider when assessing fire safety risks.

For a Fire to Start: Three elements are needed:

- Ignition Source
- Fuel
- Oxygen

If any one of these is missing a fire cannot start. Taking steps to avoid the three coming together will therefore reduce fire risks.

Once a fire starts it can spread quickly, moving from one source of fuel to another. As it grows, the amount of heat produced increases which can cause other fuels to self-ignite.

Ignition Sources: Look for possible sources of heat that could ignite materials, eg:

- Smokers' materials, eg cigarettes and matches
- Naked flames
- Electrical, gas or oil fired heaters
- Hot processes (such as welding or grinding work)
- Machinery
- Faulty or misused electrical equipment and overloaded electrical supply
- Lighting equipment and halogen lamps
- Hot surfaces and obstruction of equipment ventilation point, eg office equipment, heaters
- Friction (heat)

- Static electricity
- Metal impact
- Arson

Indications of near misses help to identify potential ignition sources, eg 'scorch' marks on furniture or fittings, discoloured electrical plugs and sockets, circuit boards tripping, smell of burning, cigarette ends near bins.

Fuel Sources: Anything that burns is fuel. The most common fuels found at the University are:

<i>Flammables</i>	<ul style="list-style-type: none"> • Liquids eg solvents, petroleum spirit, fats, oils • Liquid based products eg paints, varnish, thinners • Chemicals • Gases eg acetylene, natural gas, LPG • Metals eg lithium, magnesium, potassium
<i>Combustible Materials</i>	<ul style="list-style-type: none"> • Wood, paper, card • Plastic, rubber, foam • Furniture, including fixtures and fittings • Textiles, loose packing materials • Waste materials eg wood shavings, off-cuts, dust, paper
<i>Building Materials</i>	<ul style="list-style-type: none"> • Hardboard, chipboard, synthetic ceiling / wall coverings

Oxygen Sources: The main source of oxygen is air, whether natural airflow through doors, windows etc; or mechanical air movers, air conditioning or air handling units. However, at the University additional oxygen sources can be found in materials being stored or used eg:

- Certain chemicals, oxidising materials
- Compressed gas supply, such as oxygen cylinders and piped gas systems

How Fire Spreads

Most people are familiar with outdoor fires, such as a bonfire, which they can move back from with a choice of escape routes not affected by heat or smoke.

Fires in buildings, behave differently. The smoke from the fire gets trapped by the ceiling and then spreads, enveloping the entire room or space, passing through any holes or gaps in the walls, ceiling or floor to eventually encapsulate the workplace. Heat from the fire also gets trapped in the building, increasing the temperature and as smoke is produced, toxic gases may build up.

It is therefore essential fire precautions are suitable so fires can be detected quickly to ensure escape routes are protected. Specific attention should be given to:

- Areas, particularly unoccupied ones, where detecting the start of a fire could be delayed or the warning may go unnoticed
- Activities with, and / or storage of flammable materials
- People who may be unable to react quickly (children, elderly, disabled persons, visitors etc.)

Controlling Fire Risks and Hazards

Risks of / from a fire can be reduced by:

<i>Reduce the Risk</i>	<ul style="list-style-type: none"> • Use alternative sources of heat eg heating block • Replace flammable products with non-flammable alternatives • Replace radiant heaters with fixed convector heaters • Fit automatic shut downs to non-essential ventilation equipment • Fit suppression systems to high risk equipment eg Fume Hoods • Replace damaged upholstery • Reduce the use of oxygen cylinders and other compressed gas cylinders
<i>Control</i>	<ul style="list-style-type: none"> • Inspect work areas to ensure good health, safety and fire safety standards • Train staff and students in fire prevention, control and safe evacuation • Undertake regular fire drills • Enforce the 'No Smoking' Policy • Order minimum quantities of items • Store items appropriately • Restrict the movement of hazardous substances to trained staff • Dispose of waste promptly and correctly • Schedule cleaning of ducts and flues • Use equipment designed to minimise the risk of fire eg surge protected extension leads • Inspect and test electrical equipment and other hazardous equipment eg gas cylinders regularly • Close doors onto escape routes / stairs • Close doors / windows at the end of the working day

Extinguishers

As part of your assessment check extinguishers are appropriate to the type of hazards identified. Contact PACS if you need to discuss fire extinguisher provision:



Type: Water **(red zone)**

Class of Fire: A

Examples: Fire, paper, wood, material

How it works: Kills the fire by removing the heat

DO NOT: Use on electrical fires



Type: Foam **(cream zone)**

Class of Fire: B

Examples: Flammable liquid fires

How it works: Blankets the fire, removing the heat and starving it of oxygen

DO: Aim the jet at the back of the fire and draw forwards to blanket the fire



Type: Carbon Dioxide **(black zone)**

Class of Fire: B, C and Electrical

Examples: Flammable gases, liquids and fires involving electricity

How it works: Blankets the fire, starving it of oxygen

DO NOT: Hold the discharge nozzle or use in confined spaces



Type: Powder **(blue zone)**

Class of Fire: C, D and Electrical

Examples: Metals, burning liquids and electrical

How it works: The powder smothers the fire to deprive it of oxygen



Type: Wet Chemical **(yellow zone)**

Class of Fire: A and F

Examples: General household fires, deep fat fryers and cooking oils

How it works: Smothers the flames, cooling the oil at the same time

Dangerous Substances and Explosive Atmospheres (DSEAR)

DSEAR applies to workplaces where dangerous substances are present, used, or produced.

Dangerous substances are substances or mixtures of substances (called 'preparations' in DSEAR) that could create risks to people's safety from fires and explosions or similar events, such as 'thermal runaway' from chemical reactions.

The following provides examples of dangerous substances (includes liquids, gases, vapours, dusts):

- Substances or mixtures of substances classified as explosive, oxidising, extremely flammable, highly flammable, or flammable under the Classification, Labelling and Packaging Regulations (CLP).
- Any kind of dust that when spread in air to form a cloud (ie form an explosive atmosphere), can explode.
- Any other substances, or mixtures of substances, which because of their physical properties and the way in which they are present in the workplace create a risk to safety from fires and explosions, but which may not be covered by CLP. For example high flashpoint liquids present in the workplace at elevated temperatures.

What Action is Required?

If Colleges / Services believe they use a dangerous substance that could create an explosive / dangerous atmosphere they must, in addition to a fire risk assessment:

1. Appoint a competent person(s) to identify where an explosive atmosphere could occur.
2. Ensure the competent person(s) has undertaken a DSEAR Risk Assessment of these areas and confirmed they are safe.
3. 'Zone' these areas based on their likelihood and persistence, marking the potentially explosive atmosphere areas with an 'EX' sign.
4. Ensure the 'Zoned' areas are protected from sources of ignition by using equipment and protective systems that meet the requirements of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations.
5. Issue clothing that does not create an electrostatic discharge.
6. Provide sufficient information, instruction, supervision and training to ensure the safety of staff, students and others when working in these areas.
7. Prepare and communicate suitable emergency procedures for these areas.
8. Review the DSEAR Risk Assessment at regular intervals to ensure suitable.



NOTE: Specialist advice may be required to help assess the potential for explosive atmospheres.

Further Information

Information regarding DSEAR, including a template DSEAR Risk Assessment is available on the HSO Website: <http://www.bangor.ac.uk/hss/inflink/dsear.php>