Trinity Safety

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HELLO & WELCOME...

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## Fire special

### 7 Reasons to Manage Your Fire Risks Systematically and Effectively

As someone responsible for Health and Safety, you probably wont need any persuading of the need to take fire risks seriously, but you may need some support to bring skeptical colleagues round to your way of thinking. Here we put 7 key arguments for minimising the fire risk, together with handy facts you can use to get support from others.

#### 1) Fires put people in grave danger

Think about the Piper Alpha oil platform disaster in 1988 which 167 people died, or the kings cross tube fire, in which 31 tragically lost their lives in a rush hour inferno which began with no more than a cigarette tossed into escalator machinery. Just this year, a Director was personally prosecuted after a young worker was badly burned after being told to stand on top of a skip and pour flammable thinners onto burning waste. David Stead was handed an immediate 8 month jail term and disqualified for 7 years from acting as a company director. It's true that most fatal fires (62%) happen in the home or other residential settings where controls may not be as tight as in the workplace and, crucially, people are often asleep when fire breaks out.

#### 2) Fire can jeopardise profits and cause massive disruption

The Piper Alpha fire reduced one of the most profitable North Sea oil platforms to just a smoking stump. Even when no one's killed, fire can cause huge financial losses. After the Buncefield petrol storage depot fire in 2005, Total UK, was fined £3.6 million, plus £2.6 million costs,

Hertfordshire Oil Storage ltd was fined £1.45 million with £1 million costs and the British Pipeline Agency had to pay £300,000 plus 480,000 costs. Local businesses lost £70 million as a result of disruption caused by the fire and the investigation alone cost £17 million.

3) Firefighting can be almost damaging as fire itself

Of course, if we have a fire, we expect it to be put out promptly. But even that's not risk free. In one major fire, a large volume of electrical equipment including PVC insulated cabling was involved. PVC burns to create hydrochloric acid and the firefighting water that ran off was strongly acidic. It had to be chemically neutralised before it could be released to the drain and in the meantime, thousands of pounds worth of equipment was damaged by the corrosive conditions.

4) Fire safety breaches leave firms open to prosecution

Failing to comply with fire safety laws such as the Regulatory Reform (Fire Safety) Order is a criminal offence. Fire and rescue authorities, along with other enforcement bodies such as the HSE, have not hesitated to prosecute offenders – especially where duty holders' actions (or failure to act) have put people's lives at risk. On top of fines and court costs, such cases generate bad publicity that can in turn translate into lost business for the organisation concerned.

5) Online buying is leading to concentration of the risk

The Association of British Insurers warns that the rise in online shopping has led to larger distribution centers with more closely packed goods, increasing the risk of fire spreading. When the Sony warehouse was destroyed by fire during August 2011 riots, a staggering 3.2 million pieces of stock were destroyed along with the building; the insured losses alone exceeded £80 million. Could a similar disaster hit your organisation?

6) But we have insurance...

Insurance cover comes at a price and often does not compensate for damage to customer goodwill. Many firms affected by a fire are just unable to recover from the blow: by the time they are up and running again, customers have moved on to other suppliers. When the center for Economics and Business Research report studied warehouse fires in 2014, it concluded that the average business upheaval lasted twelve months: the greatest disruption was felt by firms with small to medium sized warehouses not fitted with sprinklers which would have operated to put the fire out automaticall.

7) Even a small fire can prove very costly

With fire, the worst that can happen is total destruction of your assets coupled with loss of life. But fire can also cause serious losses even when it is on a much smaller scale. Intact buildings will need to be checked for structural integrity and extensive redecoration (with all its disruption) will be needed to repair smoke damage and restore premises to their normal function.

## Follow this action plan to meet your key legal duties

In England and Wales, the key UK fire safety legislation is the Regulatory Reform (Fire Safety) Order 2005 (FSO). Almost identical rules are in force in Scotland and Northern Ireland.

### Action plan to comply with FSO employer duties

1. **Carry out a fire risk assessment** and keep it under review so that it remains current.
2. **Follow good prevention principles**: for instance, remove hazards as the most effective way of minimising risk.
3. **Plan, organise, control, monitor and review** the fire precautions and record them in writing.
4. **Eliminate or reduce risks from dangerous substances**, for instance, replace a highly flammable solvent with a non- flammable alternative, or (to minimize the risk) only use it in the smallest possible quantities.
5. **Provide fire detection and firefighting equipment**. In deciding what's needed, the responsible person should take account of risk factors such as the nature of the building, the number of people and the work they do.
6. **Nominate competent person to implement the measures.** Competence is defined as having sufficient training and experience or knowledge to enable the measures to be properly implemented.
7. **Ensure escape routes/exits** allow people to evacuate the premises quickly and safely.
8. **Set up emergency procedures, including safety drills.**
9. **Take extra precautions where there are dangerous substances**: information, warnings and escape facilities are required, both to protect those employed and the emergency services who might come to help.
10. **Maintain all fire safety equipment,** e.g. alarms, detectors, extinguishers and emergency lighting, so that its able to function properly if there's a fire.
11. **Give people information** to enable them to understand the fire risks as well as the systems set up for their protection. Tell them your main risk assessment findings as well as the names of anyone appointed with a special role under your fire procedures. Also inform third parties (e.g. service providers, contractors, the self-employed) who work in or on the premises.
12. **Train employees,** both on induction and if new or increased risks are introduced. This must take place in work time, explain the fire risk and tell people what they need to do to keep themselves and others safe.
13. **Co-operate and co-ordinate:** where there's more than one responsible person (e.g. in multi occupied offices), they're required to work together to prevent fire and minimize its consequences.

# How to prevent fire breaking out in 5 simple steps

Fire is a classic example of where prevention always beats cure (ask any director who's had a fire).

## 1) Have a valid fire risk assessment

The recommended approach to fire risk assessment is exactly the same as for a health and safety risk assessment. Check yours with the following 5 questions:

1. Have you identified how fires could start? Consider faulty electrical equipment and smoking but also hot surfaces. Welding/grinding, friction and static electricity. Remember, not all fires are accidental.
2. Did you consider who is at risk? Include employees, contractors, visitors, students and residents. If people sleep on your premises, that increases the risk.
3. Have you evaluated your current control measures? Look first at measures that prevent fire (e.g. electrical maintenance and control of smoking) then at those that minimise its consequences. Satisfy yourself that everyone could get out safely and quickly in the event of fire.
4. Is your assessment recorded and implemented? Capture your conclusions in the form of a fire safety plan and tell people what it says.
5. Is your assessment current? Review and revise so that your arrangements remain up to date, relevant and effective.

## 2) Prevent electrical fires

Measures such as regular inspection and testing will also protect you from fires. Ensure all electrical work is done by competent contractors; they will size cables correctly for the load, install suitable protection against overloading/overheating and make connections safely. Keep your central heating in good order to minimize the need for portable heaters. Encourage staff to report any sign of electrical fault (e.g. damaged plugs and leads) or overheating (burn marks, scorching) and look for these warnings when you carry out a safety inspection.

## 3) Guard against arson

Arson is one of the commonest causes of fire so it's vital to consider deliberate as well as accidental fires in your fire risk assessment. Once started, these fires usually cause more damage than accidental fires. That's not surprising, since by definition they were started deliberately often maliciously towards the organisation in question.

## 4) Control hot work

Hot work is burning, welding, brazing, soldering and grinding, with the potential for hot sparks/molten metal to ignite other material. It also included the use of blow torches and gas fueled tar boilers for roof construction and repair. Most often its done by maintenance engineers or contractors working on your premises. The risk if greatest when there are flammable or highly flammable materials nearby. Use a permit to work so that hot work is always carried out by permission and subject to the right safeguards.

## 5) Focus on fuels and ignition sources

Fires require fuel, oxygen and a source of ignition, so removing either the fuel or the source of ignition will prevent fire. Common fuels implicated in workplace fires are wood, cardboard, paper and plastic often waste materials. Others are cooking oil in kitchens, flammable glues/solvents and foam cushioning in furniture. Whatever the combustible material though.

## Check these key safeguards are in place to keep people safe in case of fire

Occasionally, all our best preventative efforts fail and fire breaks out. Read on to discover the 8 essential emergency measures that should be ready – just in case. Correctly applied, they will prevent a small fire becoming a disaster; at the same time, they'll ensure everyone is able to get out safely and minimise costs and disruption. Below, we've given a few key questions to make sure you've covered the essentials

### 1) Be ready to raise the alarm

These days, most work premises are fitted with automatic alarms that use heat and/or smoke detectors to pinpoint the fire, but the minimum requirement is that there is some means of warning everyone that there is a fire and they need to evacuate. If you are responsible for any sort of residential accommodation, for example, a school, nursing home, hospital or hotel, you need to take into account that people may be asleep on the premises and unaware there is a fire. Test alarms weekly using different call point each time and make sure everyone can hear the alarm – no matter where they are or what they are doing.

### 2) Plan for safe evacuation

It's a legal requirement to plan for everyone to exit safely should there be a fire and this is one of the most important topics to cover in your fire risk assessment. But whatever the nature of your business, the higher the fire risk, the shorter the travel distance to a safe place should be. Here 'safe place' normally means outside in the open air, but in some circumstances (e.g. large buildings, hospitals, care homes) it could be a protected refuge within the building. Whatever the premises, it should be possible for everyone to get to a place of safety within two minutes.

Most people on your site will be able to leave the premises unaided. But where this is not the case, and indeed where a person would require any kind of special help in the event of fire (for example, deaf person may not hear the alarm) you should sit down with them and produce a personal emergency evacuation plan (PEEP). This is a simple record of the help needed: even more important though is to make sure that the help is actually available.

Many firms display building diagrams showing the escape routes (and other fire information such as extinguishers, alarm call buttons, assembly points) but there is no specific requirement to do so. What you must through have are signs are showing the way to exits: wherever anyone is working, it should always be possible to see at a glance at least one fire escape route. Signs should be rectangular, have a green background and include the 'running man' symbol; signs consisting of words alone (e.g. FIRE EXIT) are not, strictly speaking, legal. They should be at least 120 x 340mm for easy viewing at distances

of up to 17m use larger signs for greater distances. Also provide signs to indicate firefighting equipment such as extinguishers.

## 3) Don't undermine built in fire safety

Your workplace almost certainly has fire protection designed and built in. it works by: (1) preserving structural integrity in the event of fire; (2) containing the fire to prevent its spread to other parts of the building, and (3) creating protected routes/areas so that people can quickly get to a place of safety.

From a day-to-day safety point of view, the essential action is to ensure nothing undermines this built in protection. Two common examples are fire doors left open (most serious when the building is left unoccupied) and installing equipment and services in such a way as to breach the fire protection. Here, the key action is to check the work on completion to ensure all wall penetrations have been fire sealed to make it impossible for smoke/fumes to pass through.

If open fire doors are a problem, consider magnetic latches linked to the fire alarm: these allow the door to be left open so that people can come and go freely but automatically close it as soon as the alarm is triggered.

Special care is needed with buildings under construction as the 'final' fire safety measures may not yet be in place; at the same time, processes such as welding, grinding and the use of blow torches create a heightened risk of fire starting.

The key actions are to minimise the storage of combustible material (such as timber and plastic) and ensure that waste (e.g. used pallets, wrapping and packaging) are removed promptly. All ignitions sources should be tightly controlled and extra extinguishers provided in any areas specially at risk.

## 4) Install enough extinguishers of the right type

Extinguishers play a vital role in 'first aid' firefighting. Used promptly and effectively, they can prevent a small fire becoming a big one; they also buy time for people to evacuate and for the fully equipped and professionally trained fire service to arrive. For the duty holder, the two key actions are to ensure that (1) there are enough extinguishers and (2) they are of the right type. Check both points as part of your fire risk assessment.

In the average workplace, the combustible materials most commonly implicated in fires are wood, paper and carboard: this points to water as the preferred extinguisher. But since electrical equipment is often present and most water extinguishers cannot then be used safely, it needs to be supplemented by either dry powder (colour code blue) or CO2 (colour code black). Powder extinguishers are effective but very messy, so in practice the 'standard' fire point is one water plus one CO2 extinguisher. Supplement these with other extinguishers according to the situation, e.g. foam (for flammable liquid fires) and wet chemical (for hot fat/cooking oil).

How many should you have? Three rules of thumb are: (1) you should have at least one A-rated extinguisher (for example, 9 litre water or foam) for every 200m2 of floor area; (2) there should be at least two such extinguishers per floor; and (3) no one should be more than 30m from an extinguisher. Mount

them on walls at waist height to make them easier to grab and to discourage their misuse (e.g. as door stops).

5) Appoint fire marshals to help everyone get out safely

Unless you only have a handful of employees, its good practice to appoint fire wardens or marshals to help organize any evacuation. Marshals should check each area as people exit, then carry out a roll call at the assembly point. If they then find someone is unaccounted for, they should inform the firefighters. Do not re-enter until the firefighters have confirmed it's safe to do so. How many should you have? It's at your discretion but one per floor or department is a good starting point. Allow for holidays and sickness as well.

6) Check people can see how to get out

Ideally emergency lighting will already be fitted in your building, but if not, and you only have a small number of employees, you could meet the requirement simply by providing a large torch in a suitable place. Do though make regular checks that it is working properly and recharge or fit new batteries as required. For fitted emergency lighting do a quick visual inspection every day (is the little red or green light on?) with more in depth checks monthly and annually. The annual check should include verifying that the lighting will stay on for 3 hours, or whatever is the designed battery life.

7) Safeguard your non-employees

Fire safety measures should protect all premises users. This means that your fire risk assessment should cover everyone- not just employees. Who needs to be included will depend in your exact circumstances.

8) Protect employees who work at other sites

It's easy to see fire safety as a premises issue that only affects people while they are in your building. But if you have staff such as field engineers who work at other people's premises, they need to be trained in the two key aspects of fire safety: prevention and emergency action. Imagine the impact on your business if one of your employees started a fire that wiped out a customer's property!