



Shropshire Fire and Rescue Service



Outdoor Public Event Safety Information Pack

MAKING
SHROPSHIRE
SAFER

Foreword

Public events can range from village fetes, sporting activities, small food & drink festivals and music events to large concerts and festivals

Whatever the size and expected attendance by members of the public, a fire safety strategy and an emergency and evacuation plan play a vital role in managing safety at the event and they are a requirement under Fire Safety legislation.

Where members of the public are invited to participate in a planned event, the event organiser and/or owner of the property or land where the event is staged has responsibility, or a duty of care, for public safety before, during and after the event, whatever the size.

This handbook provides an easy reference guide to the requirements and recommendations of Shropshire Fire and Rescue Service and the National Fire Chiefs Council (NFCC)

This reference guide is designed to provide general information and access to guidance documents in relation to safety at your event, and will cover the following;

- 1. Fire Safety Legislation**
- 2. Fire Risk Assessment**
- 3. Emergency Plans**
- 4. Organisers Checklist**
- 5. Occupancy Factors**
- 6. Temporary Structures**
- 7. Catering Facilities**
- 8. Firework Displays / Bonfires**

1. Fire Safety Legislation

The Regulatory Reform (Fire Safety) Order 2005 places a duty on the “Responsible Person” to carry out a Fire Risk Assessment. For outdoor events this is generally the designated “Event Organiser”.

General Guidance:

General Fire Precautions

The Responsible Person must take such General Fire Precautions that will ensure, so far as is reasonably practicable, the safety of relevant persons.

The term ‘General Fire Precautions’ means:

- Measures to reduce or eliminate the risk of fire on the premises and the risk of the spread of fire on the premises
- Provision of suitable means of escape from the premises
- Measures for ensuring that the means of escape can be safely and effectively used at all times
- Provision of suitable and adequate firefighting equipment
- Provision of suitable means for detecting and giving warning of a fire on the premises
- Measures for ensuring the maintenance and testing of fire precautions and equipment
- Provision of suitable arrangements for the action to be taken in the event of a fire including:
 - Instruction and training for employees
 - Measures to mitigate the effects of a fire

2. Fire Risk Assessment

The Responsible Person must carry out a suitable and sufficient assessment of the risks to which persons are exposed to, for the purposes of identifying the general fire precautions measures to be taken in order to comply with 'the Order'.

A series of guidance booklets have been published by Central Government to assist Responsible Persons with this process, and the guidance document specific to open air events and venues can be downloaded from the following web link: -

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/14891/fsra-open-air.pdf

3. Emergency Plans

Your emergency plan should be appropriate to your event or venue. It should be kept on site and available for inspection and could include:

- How people will be warned if there is a fire;
- Where people should assemble after they have left the premises and procedures for checking whether the premises have been evacuated;
- Identification of key escape routes, how people can gain access to them and escape from them to a place of total safety;
- How the evacuation to a place of safety should be carried out;
- Assessing the adequacy of the number of staff to supervise the evacuation;
- What training staff require and the arrangements for

- ensuring that this training is given;
- How the fire and rescue service, and any other necessary services, will be called and who will be responsible for doing this;
- Arrangements for fighting the fire i.e., provision of fire extinguishers
- The action to be taken by staff in the event of fire, including those who have specific fire safety functions (e.g. nominated deputies, fire marshals, etc.);
- The arrangements for any people at particular risk, for example, contractors, maintenance workers, members of the public, people with a disability;
- Any specific arrangements for parts of the event with a high fire risk i.e. fireworks displays.
- Evacuation procedures for everyone on the site, including details of escape routes;
- Arrangements for calling the fire and rescue service and informing them of any special hazards.

4. Organisers Checklist

When you first begin planning any event the Event Organiser should gather as much information as possible to ensure that all relevant safety information can be viewed, and appropriate arrangements put in place well before the event takes place.

It is important to remember that organizing any event could take months of planning, so starting that planning process early will help you gather the correct information. The NFCC document will help with the initial planning and also as a reminder for what you need to provide based on the size of your event

<https://www.shropshirefire.gov.uk/file/nfcc-event-organisers-checklist-5docx>

5. Occupancy Factors / Exit Widths

When planning your event you will need to know the expected occupancy for the venue. This is to ensure that, in the event of an emergency, the exits are wide enough and sufficient in number to safely evacuate people from the venue / area.

As your escape routes need to be adequate for the number of people likely to use them, you will first need to consider how many people, including staff, public and others such as contractors, may be present at any one time.

For some events the maximum numbers of people likely to be present will be known, e.g. where the event is ticketed or limited by seating. If occupant numbers are not known (e.g. at non-ticketed or non-seating events), a simple calculation can be performed in order to determine the maximum operating capacity using the formula below:

Number of people =
Occupied area (m²) / Occupant density (type of event)

(Table 3 on Page 66 of CLG Guide for Open Air Events will provide the appropriate occupant density for the use of the area, see link below)

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/14891/fsra-open-air.pdf

Once you have your occupancy (number of people) for your event, you will need to ensure that there are sufficient exits and exit widths to accommodate the evacuation of all these

people in an emergency.

The capacity of an escape route is determined by the rate at which people pass along the route during each minute of the defined escape time. **The following are suggested rates of passage for open-air parts of venues:**

- on all routes within seated accommodation (including gangways and ramps) and stairways;
73 people/metre/minute; and
- on all routes in other parts of the event or venue (including within standing accommodation);
109 people/metre/minute.

The width and capacity of the escape routes required for the number of people present can be calculated by using the formula below.

$$\text{Total exit width} = \frac{\text{number of people}}{\text{flow rate} \times \text{escape time}}$$

Examples of this calculation are available on page 68-69 of the CLG Guide Open Air Events using the link above.

Events using indoor venues, arenas or temporary buildings / structures, occupancy numbers will depend on other factors such as travel distance to an exit and the numbers of exits available within the building / structure

6. Temporary Structures

Most outdoor events may also have a number of temporary structures such as marquees or cabins where people will be present or encouraged to visit.

Each temporary structure will need a separate Fire Risk Assessment to determine the risk within that structure and ensure adequate General Fire Precautions are in place.

For example, a marquee at a flower show with only floral displays would be considered low risk, as there are limited ignition sources and therefore it is unlikely that a fire could start and develop quickly enough before everyone has made their escape.

However, a marquee at a food festival with cooking ranges being used would be considered a high risk as a fire is more likely to start due to the number of ignition sources and it could develop more quickly with the use of flammable fats and oils and this could affect the means of escape for people before they have made their escape.

The links below provide access to a Fire Risk Assessment template for any temporary structures and also the Fire Safety requirements for the use of tented structures that may provide sleeping accommodation.

<https://www.shropshirefire.gov.uk/file/nfcc-temporary-structures-fradocx>

<https://www.shropshirefire.gov.uk/file/nfcc-semi-permanent-tented-structuresdocx>

7. Catering Facilities

Wherever possible any extensive all catering facilities, particularly these with deep fat fryers, should be located in areas dedicated to catering. If located within or adjacent to other activities or structures they should be separated from those activities or structures by either a suitable distance or

by fire resisting construction and provided with adequate ventilation. Where flues pass through any part of the structure, (e.g. temporary building) the structure should be protected by fire-resisting construction and the flue should terminate at a point where emissions can disperse in the open air.

In permanent buildings where fire shutters are used to separate the risk from other areas these should be capable of operating both manually and by fusible link. Where a fire detection and warning system is installed, the fire shutter should also be designed to close on the activation of the system.

All food concessions and catering facilities will fall within the scope of the Regulatory Reform (Fire Safety) Order and as such the traders should be completing a Fire Risk Assessment for their facilities dependent on the risk in their concession. Again, just selling tea and coffee from a van is a significantly lower risk than a trader selling fish and chips using a deep fat fryer.

The link below provides access to a Fire Risk Assessment template for food concessions.

<https://www.shropshirefire.gov.uk/file/nfcc-food-concessions-fra-1docx>

8. Fireworks Displays / Bonfires

Fireworks are used in many productions from a small show to major rock concerts and it's important to understand the risk they can pose.

Fireworks, pyrotechnics, and explosives can cause fires and explosions. They have the potential for a violent release of

pressure and heat that can cause severe harm to people and damage to structures. These materials can be ignited or detonated by contact with ignition sources or by contamination, where other chemicals or water cause the material to become unstable.

Preventative measures include:

- Excluding ignition sources.
- Appropriate storage containers.
- Training in the handling of fireworks and explosives; and
- Establishing separation distances between buildings containing explosives.

One of the most common problems with the use of fireworks is lack of pre-planning. Fireworks are often required, but decisions are made very late with the result of trying to incorporate them into a show after everything else. With early planning many of the problems can be overcome and unnecessary risks reduced.

Particular care should be taken with certain types of fireworks that produce:

- Sparks / fall-out which can remain hot for some time even after returning to ground level (e.g. star effects, gerbs, stage mines, saxons, airbursts);
- Fall-out over a wide area (e.g. waterfall effect, saxons, airbursts);
- Considerable heat (e.g. coloured fire);
- Considerable amount of smoke (e.g. smoke puffs, coloured smoke, waterfall effect);
- Naked flame (e.g. flame effects).

You should adopt and enforce a clear policy prohibiting people from bringing flares or fireworks into the event or venue.

There are guidance documents available from the Explosive Industry Group to assist with planning a firework event.

“Working Together on Firework Displays” – A guide to planning and safety at firework displays for organisers and professional operators. (Blue Guide)

<http://www.eig2.org.uk/wp-content/uploads/WTOFD-Blue-Guide.pdf>

“Giving Your Own Firework Display” – A guide for displays where the fireworks are to be fired by people without specialist knowledge or training. (Red Guide)

<http://www.eig2.org.uk/wp-content/uploads/GYOFD-Red-Guide.pdf>

Bonfires

Bonfires are normally associated with fireworks displays around November and if you are organizing a bonfire and fireworks display then planning is the key element to a safe event.

Ensure that a site plan is drawn up so that everyone is clear which areas are designated for public viewing and the operational elements of the event. This will need to include;

- Bonfire Area, this should be well clear of buildings, trees and hazards like overhead cables.
- Entrances and exits. Identify how people enter and exit the site and these should be well away from the Firing Area & Drop Zone
- Firing Area for fireworks, allow an area of at least 50m x 20m for your firing area must be well clear of the bonfire and public viewing areas.
- Drop Zone for fireworks, you must allow a dropping zone for spent fireworks of 100m x 50m in the downwind direction.

- Spectators, the public viewing area should be kept back on the opposite side to the drop zone and at least 25m from the firing area.

When planning a bonfire and firework event, there is other legislation such as The Environmental Permitting Regulations 2016 that need to be considered as well as Fire Safety Legislation.

Organisers need to be aware that it is illegal to burn many types of wastes. Setting fire to treated wood, plastics, tyres, rubber, and oil can both pollute the environment and harm human health. It is therefore important that the event organiser is vigilant and carries out the following:

- Keep your location secure so others cannot add unsuitable waste material to the bonfire pile.
- Ensure that only materials such as untreated wood and branches are burnt. Make sure you know where the material has come from and that it is in line with the guidance available.
- We advise that you view the material at the place of origin before it is imported to your site, to reduce the risk of any issues arising.

If the Environment Agency suspect inappropriate or unsuitable waste materials are to be burnt at an event, or there is a potential for significant harm to the environment, they can issue a STOP notice which can require adjustments to be made or prevent an event from taking place.

The links below provide additional information on the planning of bonfires and firework displays and also information in relation to burning of waste on bonfires.

<https://www.fireservice.co.uk/safety/bonfires/>

<https://www.gov.uk/government/publications/burning-of-waste-on-campfires-and-bonfires/burning-waste-on-campfires-and-bonfires-rps-50>

Where can I go for help?

If you require further guidance on the contents of this booklet, please contact:

**The Business Fire Safety Department,
Shropshire Fire and Rescue Service**

Tel: **01743 260 200**

E-mail: **businessfiresafety@shropshirefire.gov.uk**



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