

# Guidance on small firework displays

## 1 Introduction

This guidance gives advice on safety for small outdoor firework displays that attract about 100 to 500 spectators that are typically run by organisations such as schools, public houses and parish councils etc. Advice on large displays can be found in Guidance on Large Firework Displays (document FSGN26).

Organisers of smaller displays may still find the advice useful but may need to extract the recommendations that are appropriate to the type of display they are planning. Public safety is dependent upon good organisation.

## 2 Organising a display

Start organising your firework display as early as possible. One person needs to be in overall control and have final responsibility for health and safety, it is often easiest if a committee (no matter how informal) is formed to share the work.

## 3 Site Size and Location

The display site should be as large as possible and will be dependant upon the expected number of spectators and the types of fireworks to be used. The site should incorporate the following features:

- **Spectator Area:** An area for spectators of appropriate size to prevent overcrowding;
- **Safety Area:** A clear area between spectators and the firing area;
- **Firing Area:** Location from which fireworks are set off;
- **Fall Out Area:** A clear area where the debris from the spent aerial fireworks land.

There should be a minimum distance between spectators and the firing area of 25m.

The firing site and the fallout area should be away from trees, combustible materials, buildings, parked cars, etc. Undergrowth on the site should be cleared and grass cut short in the vicinity of the display area.

The fall out area (required if using aerial fireworks) should be a minimum of 50m deep x 100m, this should be modified for certain types and sizes of firework.

The firing area should be a minimum of 20m deep x 50m if using aerial fireworks, or 15m x 50m if no aerial fireworks are used.

Bonfires should be located at least 15m away from other areas, buildings, roads etc.



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## 4 Liaison with other Authorities and Firefighting Arrangements

The Police should be contacted as soon as possible informing them of the location of the site and its layout including all entrances and exits. The Local Authority may need to be contacted regarding entertainment legislation. Contact should be made with the fire service at least 28 days before the event. They will be interested in:

- How the emergency services will be called;
- Access for emergency vehicles;
- Marshalling crowds and traffic in emergency conditions;
- Arrangement of spectators enclosures;
- Local firefighting arrangements;
- Buildings and other features nearby which could be affected by a fire;
- An adequate means of access to the whole site, as well as to the display area, should be agreed with the emergency services, and be maintained before and throughout the display;
- An adequate number of fire extinguishers and supplies of sand, buckets of water, etc., should be provided; certain stewards should be trained in the operation of firefighting equipment, as advised by the local fire service;
- Provide at least two spectator exits from the site which are large enough, spaced well apart, clearly marked, kept free from obstructions and well lit;
- Provide suitable litter receptacles throughout the spectator area;
- Provide at least one suitably equipped first-aid point, staffed by a qualified first-aider.

## 5 Storing and Handling of Fireworks

Under no circumstances should firers smoke when handling fireworks or on the firing site.

All fireworks other than those already set up for the display should be kept in a closed container, in an area of the site that is not accessible to the public.

Keep the number of fireworks being worked on at any one time to a minimum.

Once fireworks have been set up, ensure the firing area is not left unattended.

## 6 Setting up and Firing Fireworks

Fireworks come with detailed instructions from the manufacturer or supplier on how to set them up, it is recommended that firers read the instructions and examine the fireworks in advance.

The possibility and importance of a sudden change of wind should be remembered, as it can result in sparks and spent rocket sticks falling among spectators and smoke obscuring the display.

All fireworks with aerial effects should be angled away from spectators, to ensure that remnants fall where they can cause neither injury nor damage (i.e. in the fallout area). Firing over the heads of spectators should be avoided.



Only allow firers in the firing area. For most displays two firers will be sufficient. At least one firer should have some previous experience of firing large fireworks.

Firers are recommended to wear substantial outer clothing made of wool or some fire-retardant material, gloves, safety goggles, safety helmets and substantial footwear.

Should a firework fail to go off, leave it for at least 30 minutes. In most cases it will then be best to immerse it in a bucket of water.

## **7 Clearing up After the Display**

The firing, safety and fall-out areas should be kept free from spectators until the firers have had time to clear up, locate and retrieve any fireworks that have misfired.

The whole site should be checked for partly spent fireworks and other remains that could be hazardous.

Arrange for the whole site to be checked at first light to make a final check that the site is clear.

Ensure the bonfire is completely extinguished and keep spectators out of the bonfire area until this has been done.

## **8 Spectator Control**

All staff should know their duties if evacuation of the site becomes necessary. Arrangements and a drill for calling the emergency services should be pre-planned.

Spectators should be kept away from the firing site behind a suitable barrier. Firing should cease if spectators breach the barrier.

The back and sides of the firing site should be kept completely clear for the duration of the firing.

The maximum number of stewards should be provided for crowd control. This should not be fewer than two for up to 500 persons, and one for each additional 250 persons, but the actual number should, if possible, be discussed with the Police. Every steward should be readily identifiable, e.g. by wearing a fluorescent jacket. The stewards should not be engaged on any duties which would hinder the prompt discharge of their duties. In the event of an emergency, including the evacuation of the site if necessary; they should be so placed as to be able to easily enter into the crowd. Overcrowding should not be permitted.

A small public address system or loudspeaker should be provided to ensure that announcements and instructions can be clearly heard by all spectators at larger displays.

No spectators should be admitted to the display with their own fireworks. Notice of this should be published in advance and exhibited at all entrances.

In enclosed areas, a sufficient number of entrances and exits should be provided for spectators to be admitted in an orderly manner and to permit ready dispersal at the end of the display.



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## 9 Bonfires

Make one person responsible for the bonfire and allow only that person and designated helpers into the bonfire area. Do not use petrol or paraffin to light the fire.

Do not burn dangerous rubbish such as foam-filled furniture, rubber, aerosols etc. Materials producing light ash which could blow about such as corrugated cardboard, are unsuitable for burning.

Before lighting the fire, check its construction carefully to make sure it is stable and that there are no children or animals inside.

The people looking after the bonfire are advised not to wear lightweight clothing that could ignite relatively easily. Wool or other material of low flammability and strong boots are recommended.

### FURTHER ADVICE

The Health and Safety Executive produces various leaflets and guidance documents detailing practical advice on firework display safety, the most appropriate being:

Giving Your Own Firework Display: How to run and fire it safely

HS(G) 124 ISBN 0 7176 6162 8

<http://www.hse.gov.uk/pubns/books/hsg124.htm>

Working Together On Firework Displays: A guide to safety for firework display organisers and operators

HS(G) 123 ISBN 0 7176 6196 2

<http://www.hse.gov.uk/pubns/books/hsg123.htm>

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