

For: Heads of all Establishments/Settings
OCC Managers
Governors/Management Committees
Trade Union Safety Representatives
Employee Notice Boards
Intranet



Firework Safety

Health and Safety at Work etc. Act 1974
Firework (Safety) Regulations 1997
Fireworks (Safety) (Amendment) Regulations 2004
Fireworks Regulations 2004
Control of Explosives Regulations 1995
British Standard BS7114:1988 now superseded by EN14035

Purpose

The purpose of this document is to give advice and guidance on safety for outdoor firework displays organised by County Council establishments/settings.

Scope

This applies to all establishments/settings planning to organise a firework display or use fireworks as part of any other event.

Managers Responsibilities

If you are thinking of organising a firework display you must start the planning as early as possible.

A competent person must be in overall control of the event and have the final responsibility for health and safety matters. This person will actually be in control of the event and not just a nominated senior member of staff. Other individuals will have tasks given to them but the person in overall control must have the final say on all matters.

Information

Not all fireworks are suitable for use by people without specialist knowledge. The recognised standard for fireworks in the UK is British Standard EN14035. This standard puts fireworks for sale to the general public into categories 1, 2, and 3. These can be used for your firework display. A firework falling into one of these categories will also be marked as follows:

- Category 1 - '**Indoor Firework**' - e.g. party popper.

Issued by the Health, Safety and Wellbeing Team, Shared Services, Unipart House, Garsington Road, OXFORD, OX4 2GQ

- Category 2 - '**Garden Firework**' - e.g. many of the fireworks making up small selection boxes, or
- Category 3 - '**Display Firework**' - e.g. the largest fireworks on retail sale.
- Category 4 - **fireworks are those, which are incomplete and/or are not intended for sale to the general public. You must not, therefore, use or possess any Category 4 fireworks whatsoever unless you are a registered fireworks professional.**

It is recommended that a complete display kit, including instructions, is purchased from a reputable supplier rather than obtaining single fireworks.

In the event of a professional fireworks operator carrying out the display make sure that you are clear on who does what in the event of an emergency (see 'What will you do if something goes wrong?' in Annex 1).

Under the Fireworks Regulations no adult firework (all fireworks except party poppers and sparklers etc.) can be set off between the hours of 11pm and 7am except on the following dates where you can set them off until:

- 🕒 November 5th – 12 midnight
- 🕒 New Years Eve – 1am
- 🕒 Chinese New Year – 1am
- 🕒 Diwali – 1am


For further information and advice:

Specialist Advice

Specialist advice and information is provided by the Health and Safety Executive (HSE).

['Working together on Firework Displays – A guide to safety for firework display organisers and operators'](#)

['Giving Your Own Firework Displays – How to run and fire it safely'](#)

	email and web addresses	
Specialist:		
HSE	www.hse.gov.uk	0845 345 0055
General:		
Health, Safety & Wellbeing Team	email: healthandsafetyhelp@oxfordshire.gov.uk web address: http://intranet.oxfordshire.gov.uk/links/intranet/healthandsafety	Helpdesk 01865 797222

Annex 1

Selecting a site for the display

The site for the display is not merely the area where the fireworks are lit. The display site is the whole area used for the display and is made up of:

- **The Spectator Area** - from which the spectators watch the display
- **The Safety Area** - a clear area between the spectators and the firing area to ensure that spectators are at a safe distance from the fireworks during the display
- **The Firing Area** - from which the fireworks are set off
- **The Fall-out Area** (or Dropping Zone) - an area kept clear of all people where the debris from spent aerial fireworks lands
- **The Bonfire Area** - the area provided for the bonfire.

The location of these areas in relation to each other and to the prevailing wind is shown at Annex 2 the minimum sizes of each area is also shown.

The site should be as large as possible but at least as big as the dimensions shown in Annex 2. It will also need to take into account the type of firework to be used and the anticipated numbers of spectators.

Ensure that the site chosen is free of dry, cut grass and other easily combustible materials and that there are no overhead obstructions that may affect the firing of the display. Check particularly for overhead power lines as well as trees etc. and take notice if there are thatched roofs or hay and straw storage in the locality.

Access & Egress

Access to the Safety, Firing, Bonfire and Fall-out areas by unauthorised persons must be prevented by the use of some form of suitable physical barrier appropriate to the size and composition of the crowd.

At least two spectator entrance/exit routes should be provided which will be large enough for the anticipated numbers, well spaced apart, clearly marked, kept free from obstructions and well lit. Keep an agreed emergency service route into and out of the site clear of obstruction and readily available at all times. (It is preferable to have emergency access routes separate from normal entrances and exits). Pedestrian and vehicle routes should be separated if possible.

Local Considerations / Emergency Provisions

When selecting a site consideration to local residents should be borne in mind. Once the site is selected you should make and maintain local contact. The police, fire service, farmers, neighbouring occupiers and other establishments such as elderly persons' homes, hospitals and local residents should be kept informed generally to let them know what will be happening.

Where appropriate, local aerodromes should be advised. In the latter case the airport authority should be informed at least seven days in advance.

Provision of Site Facilities

Once a site has been chosen then the following provisions need to be considered and made available throughout the event.

Fire Fighting Equipment

The site must have adequate fire fighting facilities to deal with small fires. These will include fire extinguishers, buckets of water and fire blankets, which must be available throughout the display site and until after the clear up operation has been completed. For fire safety, an adequate number of identifiable stewards must be provided, all of whom will have been instructed in the use of the fire-fighting equipment.

Communication – sound systems

A small public address system or loudhailer will ensure that announcements or instructions can be heard by all spectators at larger displays.

First Aid

Provide at least one suitably equipped first aid post. It must be manned by an appropriate number of competent people and ensure it is clearly signed and easily accessible at all times. It should be accessible to a road-going ambulance.

Waste Disposal

Suitable litter receptacles should be provided throughout the display area.

Parking

Where car parking is provided this, ideally, should be well away from the display site and preferably upwind of it. Car parking should be well signed and vehicular and pedestrian access routes to and from the parking area totally segregated from each other. Parking needs to be supervised to ensure that the emergency access routes are not obstructed.

Stewards

An adequate number of competent stewards should be provided whose responsibility is general crowd control and also in relation to:

- Access & Egress, and
- Policing of barriers to stop unauthorised person gaining entrance to the fall out areas

Their function is **not** fire safety **nor** fire fighting and they are in addition to the stewards provided for that purpose.

Crowd safety stewards should be easily identifiable by means of, for example, high visibility jackets, waistcoats or tabards. They should control the entry of spectators to the display site and prevent admittance of any spectators with their own fireworks or alcoholic beverages.

If there is a delay in the start of the display keep it to a minimum and keep the spectators informed and seek their co-operation.

Handling of the Fireworks before, during & after the display

Keep the fireworks in the original packaging in a secure, cool, dry place away from all sources of ignition and highly flammable substances.

Take the display fireworks to the display site only on the day of the display and provide a safe place at the display site to store them until they are needed. They should be stored in a building or a closed metal or wooden container located in an area to which unauthorised persons have no access.

Setting up the fireworks

Firers should read the instructions and examine the fireworks in advance. This is best done in daylight a few days before the display. Always protect fireworks at all times from damp before firing them.

Instructions on how to set up and fire fireworks are supplied on fireworks labels and in instruction leaflets enclosed with firework packs. Sometimes they are supplied separately by the manufacturers. **It is most important to ensure that the instructions are read by those who will be setting off the fireworks - the firers - in advance so that they are confident to proceed with the display safely.**

General advice

The following general advice should not be confused with the detailed instructions for firing provided by the supplier or manufacturer.

Where there are two or more firers they should be aware of what each will do during the display and the best approach to this is by preparation of a firing plan.

Fireworks should be set up only in the firing area and smoking is not allowed while handling fireworks or within the firing area once fireworks are present. Fireworks should always be set up in daylight and once in position the firing area must always be attended and controlled by a competent person.

Fireworks must never be modified or tampered with in any way. Fireworks on frames, if not ready-assembled, need to be carefully assembled and securely mounted according to their instructions. Adhere strictly to separation distances and handle fireworks delicately to avoid loosening or damaging their fuses.

Roman candles must be securely fixed in an upright position or buried in accordance with their instructions. Ensure that they are never secured to trees.

All aerial fireworks should be placed at the rear of the firing area, located so as to be free from overhead obstructions and so that debris will land in the fall-out area. Bottles should never be used as launch tubes for any firework. Pay particular attention to avoiding injury to spectators from rocket debris.

Firing the display

Firers only are allowed in the firing area. Restrict the number of firers to the minimum necessary to ensure continuity of the display. Two firers will normally be sufficient.

Personal Protective Equipment

Firers must wear suitable clothing which should consist of stout footwear and outer clothing of wool or other fire resistant material. Normal synthetic fabrics are not recommended. A protective hat, goggles, gloves and hearing protection are advisable. Each firer should be issued with a working battery torch and a whistle to attract attention in the event of difficulty.

Training and experience

Although at least one of the firers should have some experience of firing large fireworks, it is also recommended that all firers are familiar with basic safety principles and preferably should have seen a training video such as 'Celebrate Safely' available from the British Pyrotechnics Association.

Setting off the fireworks

Always set off fireworks as recommended in the instructions from the manufacturers. This will usually be by means of a slow-burning wick or for larger fireworks a port-fire. Do not use matches. Always hold the wick or port-fire at arms length and never lean over a firework.

Those fireworks designed to be fired electrically will be supplied fitted with leads to be connected to a low-voltage source. No attempts should ever be made to convert fireworks designed for flame ignition to electric ignition, or vice-versa.

Misfires or failed fireworks

Leave a firework which fails to go off for at least 30 minutes before placing it in a bucket of water which has been provided solely for that purpose.

Clearing up after the display

The Health and Safety Executive's advice for clearing up the site is equally as clear as that for the display itself. Ensure that the Firing, Safety and Fall-out areas are kept clear of all spectators until the Firers have had time to locate and deal with any misfired and failed fireworks and cleared up the area.

Extinguish the bonfire properly and cool it down before leaving the site. Again keep spectators out of the bonfire area until this is completed.

Return to the site at first light and ensure that it is totally clear of misfired and failed fireworks and any other hazards.

Never put fireworks, even those which are fully spent, on the bonfire or dispose of them by burying.

Fully spent fireworks should be put into suitable refuse receptacles. Misfired or partly spent fireworks must be soaked in a container of water in an area away from the display site where they cannot be tampered with and contact the manufacturers or suppliers for advice on disposal.

Legal requirements

In addition to the requirements imposed by the Health and Safety at Work etc. Act 1974 and other legislation, such as those relating to noise nuisance and event licensing may apply to firework displays although these are likely to be for larger public events.

An unlimited quantity of fireworks can be kept without licensing or registering the place of keeping subject to the following conditions being met:

- The fireworks are for private use and not for sale; and
- Are stored safely and can only be stored for up to 14 days.

What will you do if something goes wrong?

Ensure that well before the day of the display you consider what could go wrong on the day. Ask yourself the questions 'What action will be taken' and 'Who will take that action?'

Eventualities that should be considered and planned for include:

- stopping the display early or cancelling it due to adverse wind or other weather conditions;
- altering the layout of the display site due to changes in the wind conditions;
- accident to someone from a firework;
- bonfire out of control;
- disorderly behaviour by spectators;
- spectators in the Safety, Firing, Bonfire or Fall-out areas.

The on-site procedures for emergencies should make it clear that if the incident cannot be brought under control immediately the emergency services must be called.

Announcements to spectators need to be prepared in advance so that in the event of an emergency you can tell them what has happened and what they are required to do. It is advisable, to have a two-way radio link available between the firers and other people with key responsibilities.

Event appraisal

Always review the whole event, not just the success of the display, and incorporate any reviews into subsequent planning and arrangements.

Annex 2

Firework Displays on OCC Settings

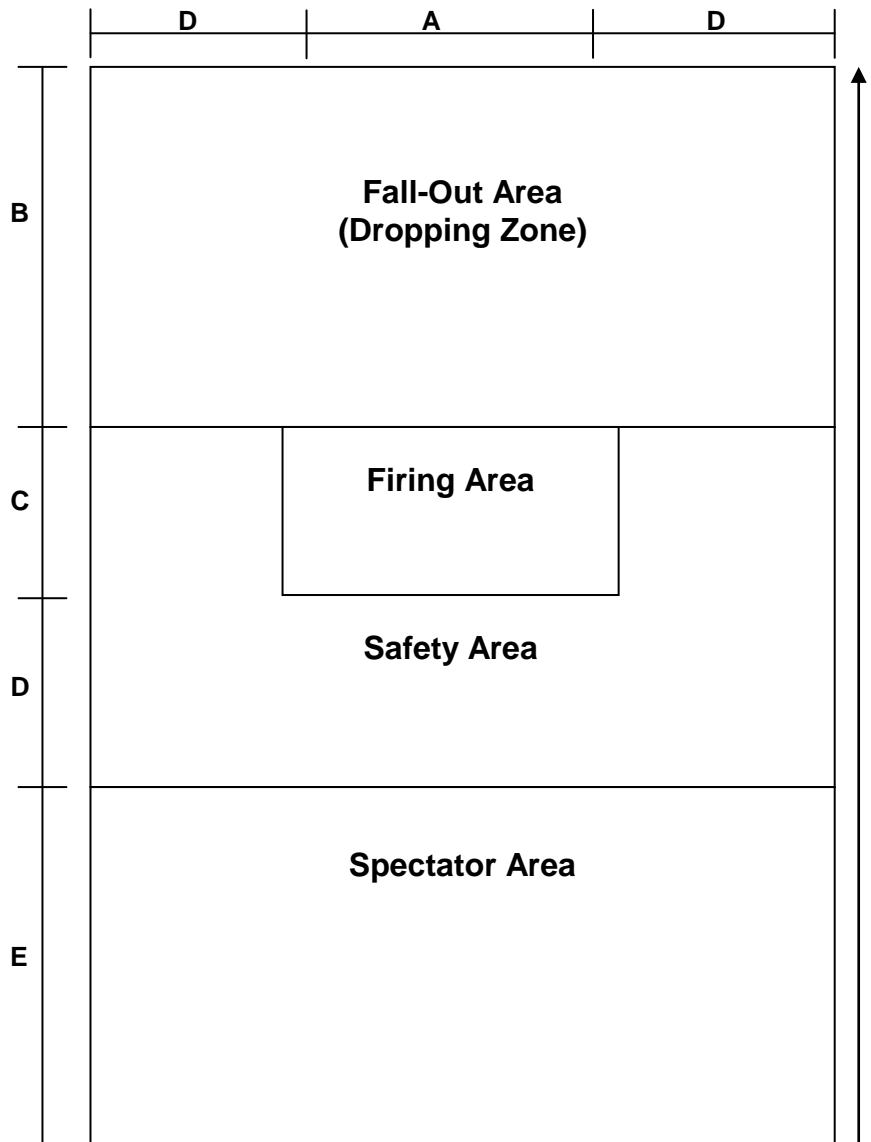
Site layout for displays including aerial fireworks

Measurement	A	B	C	D	E
Minimum Distance (metres)	50	50	20	25	As required to prevent overcrowding

Bonfire Area:

Locate this anywhere, provided it is:

- At least 15 m from other areas, buildings roads, railways and public rights of way
- A safe distance from flammable or otherwise dangerous materials (e.g. petrol, fuel oil, LPG) and overhead electric power lines, and
- Downwind of spectators



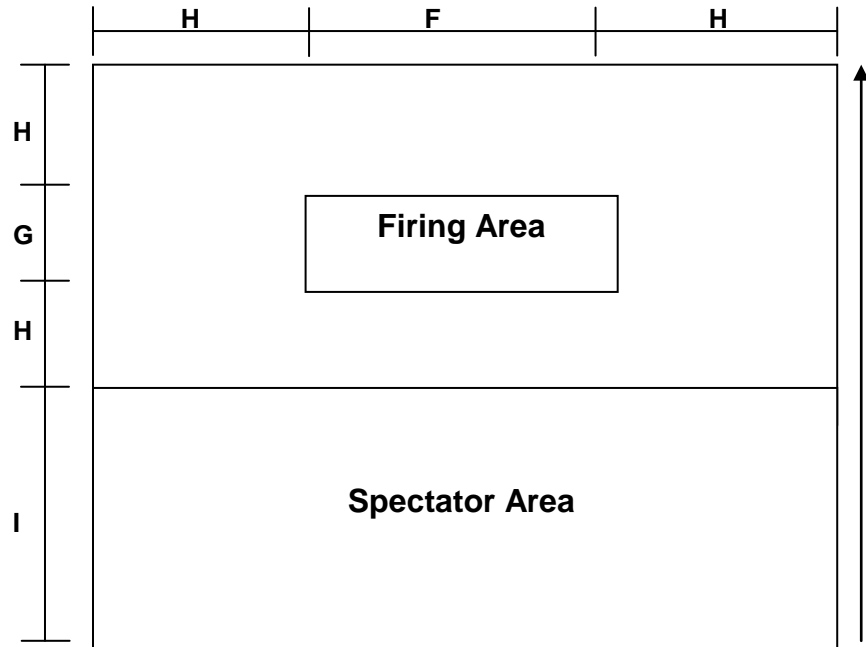
Site layouts for displays excluding aerial fireworks

Measurement	F	G	H	I
Minimum Distance (metres)	50	12	25	As required to prevent overcrowding

Bonfire Area:

Locate this anywhere, provided it is:

- At least 15 m from other areas, buildings roads, railways and public rights of way
- A safe distance from flammable or otherwise dangerous materials (e.g. petrol, fuel oil, LPG) and overhead electric power lines, and
- Downwind of spectators

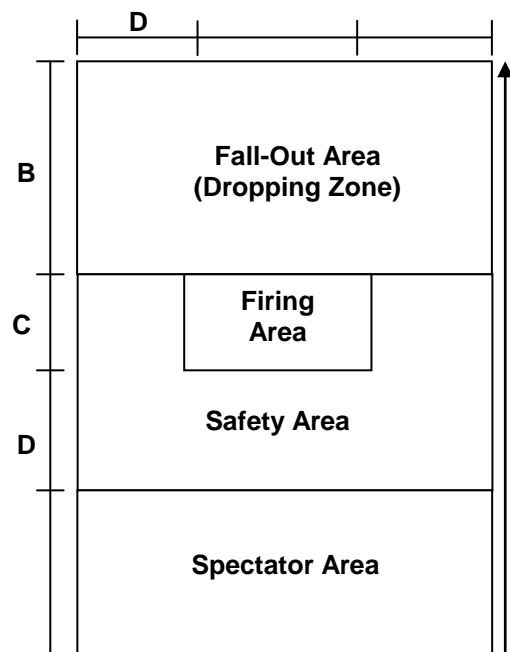


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