



LONDON FIRE BRIGADE

FIRE SAFETY GUIDANCE NOTE

Number:

Fireworks and Firework Displays

GN07

This Guidance Note gives advice on the legal requirements and safety standards for fireworks/firework displays for both residential and commercial properties.

The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (The Order) in London.

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please contact your local borough Fire and Community Safety Centre or visit our web site at <http://www.london-fire.gov.uk>

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1 INTRODUCTION

- 1.1 Firework displays, whether private or public, should be enjoyable occasions for all concerned. Whilst in the interests of safety it is recommended that displays should be organised and produced by professionally competent operators, private events, whether at home or for a private audience i.e. sports clubs, schools etc., can be both enjoyable and safe provided that the organisers take the necessary safety precautions and that the hazards associated with fireworks and bonfires are not underestimated.

2 CONTENT

- 2.1 This Guidance Note provides advice on the following subjects:
- Firework Safety - Section 3
 - Firework Displays - Section 4
 - Firework Regulations 2004 - Section 5
 - Selling Fireworks and the Law - Section 6
 - Storage of fireworks – Section 7
- 2.2 The information provided in this Guidance Note has, in part, been adapted from a number of guidance documents produced by the Department for Business, Innovation and Skills (BIS). Please refer to Section 8: Publications and Other Guidance Information Available. There are a number of other websites such as www.saferfireworks.com, the RoSPA site, www.direct.gov.uk/fireworks and www.fireworksafety.co.uk that give information with regard to this subject.

3 FIREWORK SAFETY

- 3.1 If using fireworks always follow the advice below:
- Never play with fireworks. They are explosives and can hurt you.
 - Only buy fireworks marked BS 7114.
 - Only adults should light or hold fireworks.
 - When you are watching fireworks, stand well back.
 - Keep fireworks in a closed box.
 - Follow the instructions on each firework.
 - Light them at arm's length, using a taper.
 - Never go near a firework that has been lit. Even if it hasn't gone off, it could still explode.
 - Fireworks will frighten your pets, so keep them safely indoors.
 - Never put fireworks in your pocket or throw them.
 - Always supervise children around fireworks.
 - Light sparklers one at a time, Always wear gloves and hold them at arm's length. Never give sparklers to children under five. When your sparkler goes out, DON'T TOUCH IT. It could still burn you, so put it hot end down in a bucket of water made ready for this purpose.
 - Do not drink alcohol if setting off fireworks.

4 FIREWORK DISPLAYS

- 4.1 These tips are intended for those organisers who are mounting firework displays for the general public. There is also important information about your responsibilities to the public and to your staff.

- 4.2 Remember – the ten minutes it takes to read this could make the difference between a successful event and a tragedy.

Planning Ahead

- Running a display takes a lot of work, so try to share the load by planning ahead.
- Set up a committee whose members can each take responsibility for a particular task (including one person to be in charge of all safety arrangements).
- Be clear on who will do what and when.
- Be sure each member has a photocopy of this guide and follows its advice.
- If possible, try to recruit at least one person with previous experience of firework displays.
- Remember – fireworks not marked with 'Complies with BS 7114 Part 2 1988' are only suitable for use by professionals.

Contacting the Right People

- It is very important to keep the authorities informed of your plans.
- November 5th is always a busy time for them, so please give them plenty of warning about your plans.
- You should contact:
 - The Fire Brigade
 - The Police
 - First Aid Service
 - Local Authority

Be Prepared

- 4.3 As well as liaising with the Local Authority, Police, Fire Brigade and First Aid organisations, you or your appropriate team member should:
- Arrange for your fireworks to be delivered and stored securely (and circulate the manufacturer's general instructions to your team).
 - Animals can be terrified by fireworks. Warn your neighbours and any local farmers in advance so they can keep pets indoors and take other necessary precautions.
 - Arrange for you and your team to be trained in the various tasks for the night, including all emergency drills.
 - Arrange for first aid posts to be staffed by qualified people. Borrow or hire special clothing (bibs, jackets etc) to identify you and your team on the night.
 - Arrange some form of public address system – as a safety measure, not just for commentary. A loud hailer will do as a bare minimum.
 - Arrange for fire extinguishers, buckets of water, buckets of sand and metal litter bins to be available on the night.
 - Check that plenty of electric torches will be available on the night, with full batteries.
 - Publicise the fact that spectators are not allowed to bring their own fireworks (including sparklers) and will not be admitted if they do so.
 - Prepare all necessary signs.
 - Make absolutely sure that you'll have enough people available to help you on the night (including some cover for illness).

- Draw up a detailed checklist of tasks and indicate who is to be responsible for each one.
- Check whether you are adequately insured to cover any firework-related injuries to those present at the display.
- Vet any traders you intend to allow on the site.

Picking the Right Location

- 4.4 You should choose a large, clear and well-mown area free from obstructions, well away from any buildings, trees and hazards like overhead cables, with as many safe entrances and exits as possible. These must be away from the firing area and dropping zone.
- 4.5 Make sure that all entrances are well lit, clearly signposted and kept free from obstructions. Clear away any undergrowth or very long grass. Have plenty of (metal) litter bins around the site. Make sure you can cater properly for disabled spectators. Watch out for any animals likely to be housed nearby.
- Allow at least 50m x 20m for your firing area.
 - Beyond this you will need a dropping zone for spent fireworks of 100m x 50m in the downwind direction.
 - Spectators should be kept back on the opposite side to the dropping zone at least 25m from the firing area.
- 4.6 Falling fireworks can cause damage, so site any designated car parking well away from your display area and dropping zone and upwind of the display. Signpost any car park clearly and make sure that the entrance is quite separate from pedestrian access. Do not permit parking anywhere else.

Keeping in Control

- 4.7 Proper crowd control is essential and needs good planning.
- Arrange for some stewards to be responsible for just this – at least one steward for every 250 spectators. Their job won't be finished until the display is over, the site is cleared and made safe. Your stewards should be easy to identify, perhaps with fluorescent bibs or jackets.
 - Be certain that your team know what to do in an emergency and have practised safety drills.
 - Spectators must not be allowed into your display area. If they do encroach, stop the display immediately. Prepare and erect signs to clearly show the area.
 - Beware of overcrowding – seek advice from the police and follow it.
 - None of the organisers should drink alcoholic drinks before or during the display.
 - Do not allow spectators to enter the site with their own fireworks – even sparklers. Make sure that there are signs explaining this at all entrances and in publicity prior to the display.

Experience Counts

- Take great care at all times. Plan your display in advance, make sure you know which fireworks are going to be let off in what order. Take the fireworks from a secure container only when they are to be let off.
- Recruit people with previous experience of firework displays. Have as few people as possible actually involved with the fireworks.
- Do not allow smoking by your team when fireworks are being handled, or at any time during the display.
- Unpack fireworks with great care and well away from any open fire, naked flame or flammable material. Remember that they are fragile and can easily be broken. Keep fireworks in a secure box which is kept closed.
- Before lighting any firework, read the instructions on it carefully (by torchlight).

- Make sure that the wind blows away from spectators. The display should be angled away from spectators.
- For lighting display-type fireworks, a device called a Portfire is often provided by the manufacturer. Use Portfires when available and always light fireworks at arm's length. Keep unused Portfires in a secure box and never carry them in pockets.
- Alternative forms of safety lighters, such as a slow match, are often available.
- Never use matches or lighters for lighting fireworks at a display. If any firework fails to go off, don't go back to it. It could still be live and could go off in your face. Half an hour is the absolute minimum time to wait before you consider approaching it again.
- A sudden change of wind could cause aerial fireworks to fall dangerously among spectators. In very windy weather, you should consider putting off the display altogether, however disappointing that might be.

Bonfires Need Planning Too

4.8 Bonfires need a lot of organising and can be a hazard. Many displays are a great success without one.

- If, after careful consideration, you do decide to have a bonfire, make one person responsible for it, from early planning to final clearing up, and make sure it is the appropriate size for the space you have.
- Do not site it too near your display or firework storage area. And don't site it anywhere near fences or trees.
- Never use flammable liquids like paraffin or petrol to get it going as this can result in uncontrolled spread of fire or explosion.
- Check immediately before lighting that there is no animal or even a young child hidden inside.
- Disposing of the spent cases is potentially dangerous and should be done with great care only after all your spectators have gone. Never put fireworks on a bonfire, even if they are duds.
- Do not burn dangerous rubbish (e.g. aerosols, paint tins or foam-filled furniture).
- Remove any rubbish from your bonfire area in advance so there is nothing that can be thrown onto the fire on the night.

After the Event

4.9 The work for you and your team does not finish when the last firework goes off:

- Spectators need to be cleared safely from the site.
- The bonfire needs to be put out completely.
- Spent firework cases must be gathered. Look for used fireworks with a torch and use tongs or some other suitable tool, and wear strong gloves.
- Do not allow any children to collect firework cases.
- If any fireworks look as if they have not gone off after at least half an hour, soak them in a bucket of water and ask the Fire Brigade for advice.

5 FIREWORKS REGULATIONS 2004

5.1 These regulations impose the following restrictions:

Curfew

5.2 The curfew prohibits persons from using adult fireworks (anything apart from party poppers or caps) during night hours (11pm to 7am). Exceptions allow use until 1am on the nights of Chinese New Year, Diwali, New Years Eve, and until midnight on November 5th. There is also an exception for the

purposes of local authority firework displays, national public celebrations or national commemorative events.

Noise

- 5.3 The supply, purchase or possession of a category 3 firework that has a noise level exceeding 120 decibels is banned.

Notices

- 5.4 Suppliers of adult fireworks must display a notice stating that it is a criminal offence to supply adult fireworks to those under the age of 18, and for those under 18 to possess such fireworks. Fireworks suppliers' must provide a local licensing authority with information about fireworks in circumstances where the total net explosive content of fireworks supplied in a single transaction exceeds 50 kilograms.

Licensing (see also Section 7- Storage of Fireworks)

- 5.5 Suppliers of adult fireworks are required to hold a licence, except at certain times of year. The licence allows the holder to supply fireworks on the first day of the Chinese New Year and 3 days immediately preceding it, on the first day of Diwali and 3 days immediately preceding it, from 15 October to 10 November and 26 December to 31 December. Traders wishing to supply at any other time must obtain a separate licence.

OTHER LEGISLATION RELATING TO THE SUPPLY & USE OF FIREWORKS

Firework (Safety) (Amendments) Regulations 2004

- 5.6 These regulations, made under the Consumer Protection Act 1987, amend the Firework (Safety) Regulations 1997 (as amended) to include:
- A ban on the supply of air bombs.
 - A replacement of the definition of mini-rockets – to restrict mini rocket sales to help keep them away from young people.
 - A change in the legal defence of suppliers if they are caught selling to under 18s. This is an incentive for suppliers to be more diligent in determining the age of purchasers, i.e. ask for proof of age.

The Fireworks (Safety) Regulations 1997 (as amended)

- 5.7 **Age of purchase:** Fireworks (except those listed below) must not be supplied to persons under 18. Note that caps, cracker snaps, novelty matches, party poppers, serpents and throwdowns must not be supplied to persons under 16.
- 5.8 The following fireworks must not be supplied to the general public:
- Air bombs, aerial shells, aerial maroons, shell-in-mortar and maroons-in-mortar.
 - All bangers (including "batteries" containing bangers, such as Chinese Crackers).
 - Mini-rockets.
 - Fireworks with erratic flight (e.g. ground spinners, jumping jacks, squibs).
 - Some Category 2 and 3 fireworks (as classified by BS 7114) which exceed size limits specified in the 1997 Regulations.
 - All category 4 fireworks.

Other measures

- Packets of sparklers to carry additional warning – "Warning: not to be given to children under five years of age".

- Retail boxes of fireworks must not be split.
- All fireworks intended for use by the general public must comply with British Standard BS 7114 Part 2.
- All fireworks not suitable (as determined by the Regulations) for the use by the general public to bear the warning – “This device must not be sold to, used by, a member of the general public.”

Penalties

- Failure to comply with these requirements can result in prosecution and a fine of up to £5000 or a prison sentence of up to six months, or both.

The Pyrotechnic Articles (Safety) Regulations 2010

- 5.9 The Regulations implement Directive 2007/23 of the European Parliament and of the Council of 23 May 2007 on the placing on the market of pyrotechnic articles (“the Pyrotechnic Directive”).
- 5.10 They revoke subject to substantial savings and transitional provisions various primary and secondary legislation relating to fireworks, including the Fireworks (Safety) Regulations 1997 (S.I. 1997/2294).
- 5.11 The Regulations set out key prohibitions on the supply of fireworks and other pyrotechnic articles such that category 1 fireworks can only be supplied to persons of 16 years or older and category 2 and 3 fireworks, category T1 theatrical pyrotechnic articles and category P1 pyrotechnic articles can only be supplied to persons of 18 years or older. Category 4 fireworks, category T2 theatrical pyrotechnic articles and P2 pyrotechnic articles can only be supplied to persons with specialist knowledge. Regulation 42 of the Regulations sets out what is required to be a person with specialist knowledge.
- 5.12 The rules in Part 2 of the Regulations apply to category 1, 2 and 3 (consumer) fireworks and come into force on 4th July 2010. In contrast the rules applying to more specialist types of pyrotechnic articles in Part 3, including category 4 (professional) fireworks came into force on 4th July 2013.
- 5.13 The key change in relation to the manufacturing process of pyrotechnic articles is the requirement for them to pass a conformity assessment procedure which includes independent third party approval by a person notified to the European Commission.

6 SELLING FIREWORKS

- 6.1 If you sell fireworks you have certain obligations to the public and your staff:
- You must register or obtain a licence to store
 - Store fireworks safely
 - Do not sell to under 18s
 - Know your fire drill
 - You must display a sign where fireworks are supplied or exposed for supply
 - Keep all fireworks in a dry place.
 - Label all containers 'Fireworks-Highly Flammable' (and always keep these containers closed).
 - Do not allow any smoking anywhere near fireworks being displayed or sold. Put up 'No Smoking' notices.
 - Unplug any electrical fitting that is inside a display case containing fireworks.
 - Never let customers handle any fireworks while they are choosing.
- 6.2 It is illegal to:
- Sell adult* fireworks to anyone under the age of 18 or;
 - Possess adult* fireworks in a public place;

- Throw or discharge a firework in a street or public place.

*(Any firework except for a cap, cracker snap, novelty matches, party poppers, serpents and throwdowns)

7 DISPOSAL OF FIREWORKS

- 7.1 Advice is contained in the Chief Fire Officers Association document CFOA Circular 2016-12 The Safe Disposal of Damaged Fireworks, with regard to the disposal of fireworks across separate groups. The document relates to consumer fireworks (i.e. those that are to be supplied to members of the public) that have become damaged and which are leaking explosive composition, or have partially functioned. This document has been prepared principally for retailers and those who might need to deal with damaged fireworks.
- 7.2 It should be noted that the safest way of dealing with a firework, that is complete and undamaged, is to function it in accordance with the instructions provided with the firework.
- 7.3 The Guidance "copies out" parts of differing Explosives law, for example, that which gives advice on the Explosives, The Explosives Regulations 2014, where it states that , "Any person who discards or disposes of explosives or explosive-contaminated items must ensure, so far as reasonably practicable, that they are discarded, or disposed of safely"
- 7.4 The Guidance continues by giving advice to the Public, Retailers and Wholesalers with regard to disposal of fireworks. This advice is copied below.
- 7.5 If it has been determined that drowning in water for a specific period of time will render the firework non-explosive, even after the firework has dried out and there is no gas generation or self-heating during or after the drowning, then subsequent disposal of the soaked firework with domestic rubbish may be an appropriate action for the general public to take.
- 7.6 Any person who discards or disposes of explosives or explosive contaminated items must ensure, so far as reasonably practicable, that they are discarded or disposed of safely Regulation 28 – (1)
- 7.7 Retailers and others at work should be advised that even if a pyrotechnic article has been treated to render it non-explosive, any residual chemicals may render it hazardous waste and appropriate disposal of the residue may be required. This may include the sending/transporting of the treated firework residue to an appropriate disposal site.
- 7.8 Wholesalers should seek advice on the safe disposal of the damaged fireworks(s) directly from the supplier, manufacturer or importer.

8 STORAGE OF FIREWORKS

- 8.1 The Explosives Regulations 2014 came into force on 1 October 2014 and largely replaced the Manufacture and Storage of Explosives Regulations 2005. If you store fireworks, you will require a licence from the local authority (London Borough) Trading Standards office. The licence is granted to a person (or company) and not to the site.
- 8.2 A licence is required if storing:
- Up to 250kg of Hazard Type 4
 - Up to 100kg of a combination of Hazard Type 3 and 4
 - Up to a 100kg of Hazard Type 3
- (This includes both the amount held on the shop floor and at the rear of, elsewhere in, the premises).
- 8.3 Most fireworks in retail premises are Hazard Type 4, but if in doubt please contact your supplier. The quantities are often marked on the explosives outer packaging. If storing large quantities of fireworks

(e.g. between 250kg and 2000kg of Hazard Type 4 fireworks) you need to licence the store with the local Trading Standards office.

9 BIBLIOGRAPHY

9.1 Further guidance may be obtained from the following publications:

AVAILABLE FROM	TITLE
HSE Books www.hse.gov.uk	Giving your own fire work display: how to run and fire it safely. ISBN 97807 1766 1626
The Stationery Office (Mail, Telephone, Fax & Internet Orders) TSO Orders/Post Cash Dept PO Box 29 Norwich NR3 1GN Telephone: 0870 600 5522 Fax orders: 0870 600 5533 Web: www.tso.co.uk	Firework Legislation Fire safety at open air events and venues. (This guide can also be downloaded free of charge from: https://www.gov.uk/government/collections/fire-safety-law-and-guidance-documents-for-business)
British Standards Institution (Sales) 389 Chiswick High Road London W4 4AL Telephone: 020 8996 9001 Fax: 020 8996 7001 Web : www.bsi.org.uk	Standards referred to in this Guidance Note: BS7114 Part 2 1988
Royal Society for the Prevention of Accidents (RoSPA) www.saferfireworks.com	Firework Safety Code Retailers guide : Selling fireworks Safe and successful firework displays Guidance on the Pyrotechnic Articles (Safety) Regulations 2010, issued July 2013
Chief Fire Officers Association 9 – 11 Pebble Close Tamworth Staffordshire B77 4RD www.cfoa.org.uk 01827 302399	CFOA Guidance 2016-12 The Safe Disposal of Damaged Fireworks

The above publications are current at the time of preparation of this Guidance Note (see date at foot of last page).