

**Fire & Electrical Safety Ltd**



## **Supporting Notes For A Domestic Firework Risk Assessment**

**To Be Used In Conjunction With Our  
Domestic Firework Risk Assessment Form**

**Remember remember the **risks** in November  
even without treason and plot.  
Amidst the fun, harm can be done  
to those who went and forgot.**



# Fire & Electrical Safety Ltd

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## Firework Risk Assessment

The point of this domestic firework risk assessment is to remove or reduce the risk of a fire at your private event and remove or reduce the chance of people being hurt if there is a fire.

### What Is Fire?

A fire needs three things to exist:

- Oxygen
- Fuel
- An Ignition Source

Fire needs oxygen and fuel to burn and it needs an ignition source to start and on firework night there is no shortage of all three. We cannot remove oxygen from the air and we don't want to or the bonfire won't burn and fireworks won't explode, not to mention the inevitable suffocation! But you can control the area of the display, contain the ignition sources and the particularly volatile fuel sources.

By keeping an eye on all fire and ignition sources and keeping them contained and away from your guests you can significantly reduce the chance of a fire happening.

By keeping anything flammable away from these ignition sources you can significantly reduce the chances of a fire happening.

By controlling both of these things with your excitable guests in mind, you will remove the chance of there being an accident or fire at your display.

### What Ignition Sources Might Start A Fire?

Stand back and think about the firework display you are planning. Ask yourself the question "What ignition sources are there that might start a fire?"

The most common are: the leaping flames of the bonfire itself, whirling fireworks, whizzing fireworks, popping fireworks, clap of thunder fireworks, matches or lighters, sparklers, cooking equipment and outside lighting. Are there any more for your event?

## **Fuel Sources – What Will Burn Easily?**

Some things are more likely to burn which will give off smoke and help spread the flames. What is most likely to catch fire at this event?: clothing, fireworks (hopefully), used fireworks, bushes and trees, garden shed and furniture, neighbors' gardens and houses and last but not least – the bonfire!

### **So, at your fireworks display, how might a fire start?**

- Careless storage of fireworks – near heat sources may mean an early impromptu event?
- Excitable guests getting too close to bonfires or fireworks.
- Carelessness when letting off the fireworks – a firework is basically the barrel of a loaded gun.
- Faulty fireworks.
- After the bang – hot embers from fireworks falling on spectators, garden furniture and shrubbery.
- Hot embers blowing from the bonfire onto spectators, garden furniture, and shrubbery.
- Sparklers – pretty things that burn.
- Bangers in rolls as well as the sky – are you serving up hot dogs? How are they being cooked – kitchen or outside amongst spectators?
- Unwanted fizzes and pops on the ground – electrical faults with any outside lighting set up for the event.

### **How are people most likely to get hurt at the planned display?**

- Fire is the obvious one here but let's not forget about smoke building up from fireworks and bonfires – this can cause harm very quickly if allowed to build up.
- Carelessness when letting off the fireworks. Looking for Oohs and Aaahs rather than Ooops and Ouch!
- Picking up spent fireworks that are still hot.
- Picking up fireworks that 'did not go off'.
- Throwing fireworks that have gone off onto the bonfire may give an unexpected encore.
- Sparklers get very, very hot.
- In a busy sociable environment cooking equipment can get knocked.
- Lots of people panicking if a fire or accident does occur.
- Animals or children getting over excited.



## What steps might remove or reduce the chance of a fire happening?

By managing or separating possible fuel sources and ignition sources a fire is unlikely to happen.

- Only buy fireworks that meet British Standards BS 7114.
- Store fireworks in a dry place, free of heat sources or electricity. Store them in a metal box.
- Only use fireworks in categories 1 – 3. Anything more than that can only be operated by a firework professional. As they can be lethal.
- Ensure there are just one or two designated people launching the fireworks. No one else.
- Ensure the instructions are read in daylight before the event.
- Ensure the operators have not drunk alcohol before the display.
- Ensure the operators are using torchlight to see what they are doing not naked flames.
- Ensure fireworks are lit using a long taper or firework lighter at arms length from a bucket of loose earth – never launch while holding.
- Ensure all clothing, particularly children or operators, is of minimal flammable risk such as wool.
- If there is no wind, launch any rockets straight up and not an angle so there is minimal risk of them coming down on spectators or any non-controlled areas such as neighbors' gardens. If there is wind, take wind direction into account.
- Do not throw used fireworks onto the bonfire as explosives may still be present.
- Dampen used fireworks before disposing to ensure they are safe.
- Have you warned neighbors of your firework display so they can clear their garden of flammable debris in advance?
- Do not give sparklers to children under 5 as they cannot understand the risks.
- Use paper and dry kindling to start the bonfire not old engine oil, petrol or methylated spirits.
- A bonfire is safest if you have space 18 meters clear of the house, garden shed, fences trees and bushes.
- If grass, trees and hedges are very dry due to lack of rain think very carefully about whether you will go ahead.
- Use battery operated outside lighting where possible.

## What steps might remove or reduce the chance of people getting hurt?

By planning and making sure everyone knows what to do if there is a fire, the need of communication in an emergency is reduced and chance of escape is greatly increased.

- Is your garden a large enough space to do everything you want to do? Can you arrange a viewing area at a safe distance from the bonfire and firework launch pad? Especially important if there are children there.
- Ensure that spectators are between any fire risks and exit routes.
- Ensure that pets are safe inside the house or staying with friends for the evening.
- Do not approach a firework that did not go off or attempt to relight it. Consider it spent and dampen it to make safe.
- Keep buckets of water and sand close to hand to the launch pad.
- Instruct no one but allocated people to pick up used fireworks.
- When picking up used fireworks use tongs or dampen the firework before picking it up.
- Do not use a sparkler if holding a baby who could reach out to touch it.
- Only set up a bonfire if the garden is big enough to allow smoke to disperse – take wind direction into consideration on the day as this may trap smoke in a small enclosed garden.
- Burn only dry fuel as this will smoke less and do not burn rubber tyres, or anything containing plastic, foam or paint as this will give off more toxic smoke.
- Keep any cooking equipment in an area of it's own away from spectators and under constant supervision.
- Ensure any electrical cables run for outside lighting are run outside the areas where the spectators are.
- Cover any external plug sockets with waterproof plastic bags
- Have an emergency procedure and ensure everyone is familiar with what to do if a fire or accident does occur:
  - Allocate someone specific to call emergency services in case of fire.
  - Allocate responsible people to take charge and guide everyone to a safe place clear of the garden and the house.
  - Allocate specific people to operate sand or water or extinguishers in case of fire.
  - Ensure everyone knows the 'Stop, drop and role' protocol if clothing does catch fire.
  - Put burns immediately under cold running water for at least ten minutes.
  - Do not try to clear any clothing that may be attached to the burn and seek immediate medical help.

**Where as this is a thorough guide to a home display, if you are doing a larger public display you should do a more thorough, bespoke risk assessment in line with the risk assessments and safety policy of the hosting venue. For further advice on commercial fire safety please contact Fire & Electrical Safety Ltd today.**

