



# TWILIGHT FIREWORK DISPLAYS

Safety Manual

For  
STRATEGY OPENING 2024

**THIS IS NOT A FIREWORKS DISPLAY**



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## **BACKGROUND**

This Event is For Scouts and Explorers ages 10-17 and the pyro provided will kick off the main event.

### **Date**

JUNE 22nd 2024

### **Brief**

Corden to be marked out the night prior and enforced from the beginning of Saturday mornings opening; effects fired after countdown to each of the 4 wristband groups leaving the main site;

Effects will not be fired until each group has left the field and during this time Tony and Callum will be entertaining spectators whilst group is led out.

Once clear process is repeated. With the same effect but a different colour.

A dummy plunger may be used on stage but this will have no operation in the ignition of any pyro or effect.

### **Location**

The firing location is behind the venue. Please see overview lower down.

### **Audience**

Audience numbers are expected to be approximately 1000, these will be children aged 10-17.

### **Duration**

N/A - Single Shot Per Motion

### **Effects**

We have chosen Italian pyrotechnics for this task at around £20 per shot; this T2 pyrotechnic has no hot fallout and zero debris. Despite this a cordon is required as the device is a projection hazard.

### **Responsibilities**

Twilight Fireworks will be responsible for the pyrotechnics provision, set-up, firing and clear-up.

The event organisers will be responsible for the main event generally, retail, food and security. In all circumstances security should adhere to the cordon rules.

### **Notifications**

The Organisers will notify safety services and neighbours.

## THE SITE LAYOUT

Arris's fencing is to be provided in front of where the flags are usually placed. (between Tuck and Venue)

The devices will be fired individually and remotely with a breakout board situated in front of the pyrotechnic device and between the audience.

Remote firing is easier with this type of effect as they are manufactured with igniters pre fitted allowing safe return to a device once fired. (As requested, information on the firing kit can be found here, [https://www.cobrafiringsystems.com/18r2\\_18m\\_18s](https://www.cobrafiringsystems.com/18r2_18m_18s) will be using a 18M+R2)



Yellow = Corden (provided by twilight fireworks)

Orange = Boundary (provided by site if possible)

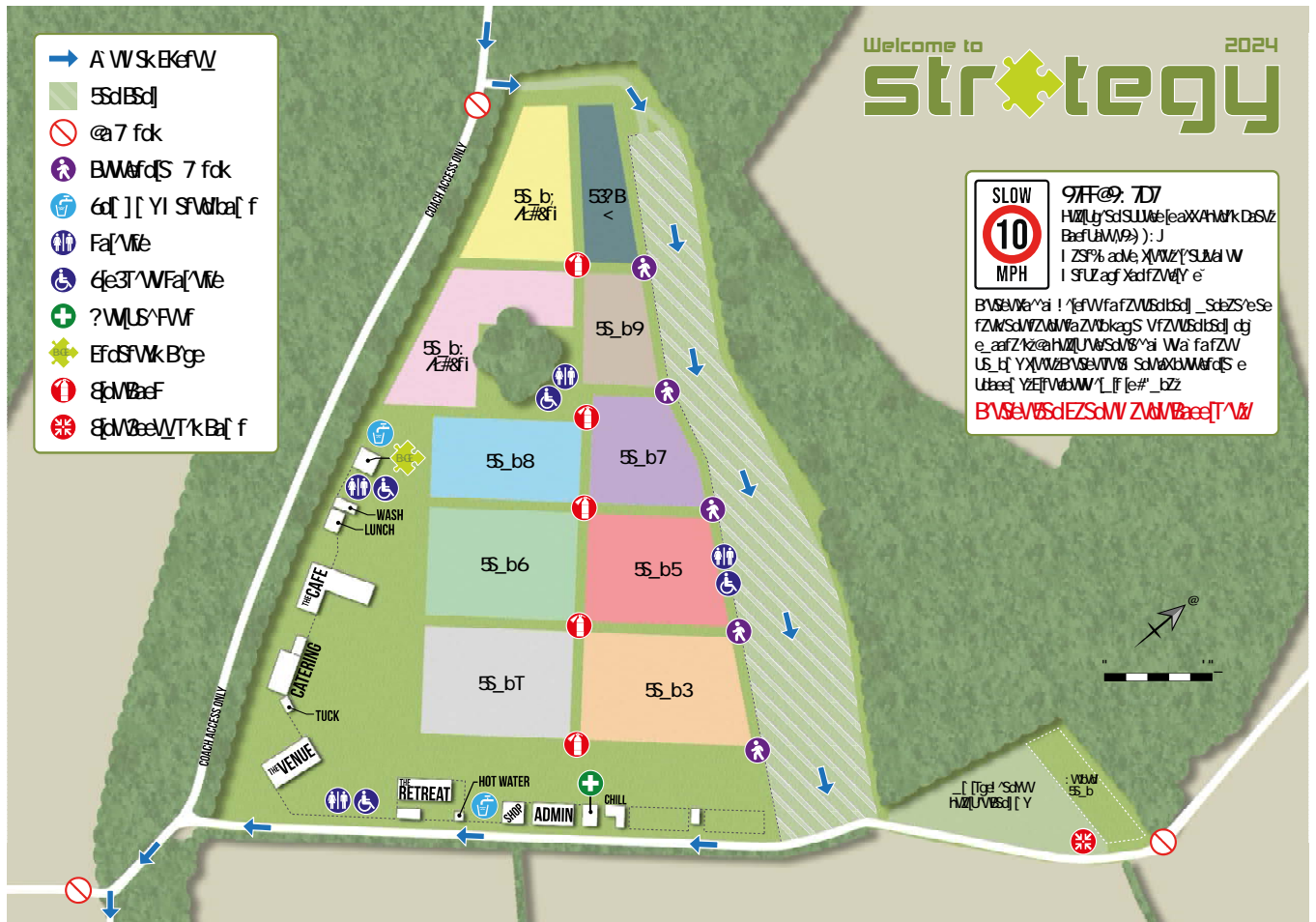
Pyro + Breakout Board (provided by twilight fireworks)

Blue + Arris Fencing (provided by site as normal)

POSITION A - 1 crew person will remain at position A and pause traffic during countdown /ignition

POSTION B – 1 pwsk will remain by tuck tent with a visual of the general area + eyeline with the stage.

## ACCESS TO SITE



## SPECIAL CONSIDERATIONS AND RESTRICTIONS

Sourced specific pyro for event.

(Pyro is T2 Pyrotechnic with parameters C-0 and D-0, thus meaning zero debris)

If at any time after the display any material is found that could be a firework, do not handle or remove it. Please call Jamie Davies on 07399415554 immediately. The item(s) will be assessed, made safe and removed.

## Fireworks or Pyrotechnics, guide on similarity and differences

# HAZARD TYPE

Hazard type (HT) is central to both the safety provisions and the licensing requirements.

Hazard type defines and describes the nature of the hazard arising from an explosive in manufacture and storage conditions.

Hazard type	Definition(regulation 2 ER2014)	Explanation
Hazard Type 1	An explosive which, as a result of, or as a result of any effect of, the conditions of its storage or process of manufacture has a mass explosion hazard	a mass explosion is one in which the entire body of explosives explodes as one
Hazard Type 2	An explosive which, as a result of, or as a result of any effect of, the conditions of its storage or process of manufacture has a serious projectile hazard but does not have a mass explosion hazard	
Hazard Type 3	An explosive which, as a result of, or as a result of any effect of, the conditions of its storage or process of manufacture has a fire hazard and either a minor blast hazard or a minor projection hazard, or both, but does not have a mass explosion hazard	ie those explosives which give rise to considerable radiant heat or which burn to produce a minor blast or projection hazard
Hazard Type 4	an explosive which, as a result of, or as a result of any effect of, the conditions of its storage or process of manufacture has a fire or slight explosion hazard, or both, with only local effect	ie those explosives which present only a low hazard in the event of ignition or initiation, where no significant blast or projection of fragments of appreciable size or range is expected

Hazard type represents the potential behaviour of the explosives in the form in which they are manufactured or stored. This means that explosives do not have inherent hazard types that can be automatically ascribed without consideration. Hazard type will be dependant on:

- the quantity of explosives
- the types of explosives
- the loading density
- packaging (if any) or containment
- the presence of barriers or other controls that will prevent rapid communication of an event between explosives;
- orientation
- how an event involving the explosives might progress or degrade any controls

How explosives of different hazard type can affect their surroundings can also depend on the orientation

of any packaging, additional confinement or building that they are in.

## Determination of hazard type

For those explosives being kept as packaged for carriage, and that have been classified, there will generally be a direct correlation between the UN hazard division (HD) assigned them on classification for transport and the hazard type (HT) they should be allocated for storage, ie:

- UN HD 1.1 = HT 1
- UN HD 1.2 = HT 2
- UN HD 1.3 = HT 3
- UN HD 1.4 = HT 4

Classification is the process employed to assign a hazard division for the purposes of adr. For fireworks this will be class 1 and subdivisions 1, 2, 3, 4. This gives rise to the 1.1g, 1.2g, 1.3g or 1.4g. The un default table shows the limits that apply to various fireworks <http://www.hse.gov.uk/explosives/classification/un-default-scheme-fireworks.htm>

The category of a firework is determined by powder content, weight and bore size this is determined during testing to the relevant standard.

## PYROTECHNICS V FIREWORKS

Although to a casual observer, the effects may be the same, if you recall the London 2012 Olympic opening and closing ceremonies, whilst the media talk about the fireworks, they devices would have been pyrotechnics. Shooting fireworks over a stadium full of people would have resulted in a cascade of paper and unburnt debris.

The difference between outdoor fireworks and close proximity pyrotechnics is the way they are designed and made. These types of pyrotechnics are manufactured to more stringent standards to ensure extremely accurate and consistent results for height and intensity. These devices offer non-toxic, nearly odourless and very little smoke. The effects are precise and predictable and have little to no “fall-out” (paper or other debris) where they are discharged.

Some different types of Indoor or close proximity Firework Effects are:

**Gerbs** – Pyrotechnic fountains that can have durations from one-second to thirty seconds. They can be various heights from 2 ft to 20 ft. They come in many colours.

**Pyrotechnic Waterfalls** – These devices use gerbs (fountains) turned upside down to create a pyrotechnic wall of falling stars simulating a waterfall.

**Flame “Cannons”** – Pyrotechnic or Propane flame projectors give an added dimension to your display or special event. These flame units are often seen at both sporting events and musical performances.

**Stadium Mines** – a close formed cluster of pellets that rise without a burst at the top

**Stage / Stadium Comets** – single rising star possibly with a tail but again no bang as it gets to its maximum height.

**Flares** – ground based colour flame or smoke effects

Why would we choose pyrotechnics – in the main they are UK manufactured to very careful standards, offer a predictable effect height and size, with almost no debris to fall after the unit has performed. This is desirable for close proximity effects to performer or audience where even a cat 2 retail firework with its 8m safety distance would present a risk.

Sometimes Cat 2 fireworks are also appropriate if their design and nature will allow them to be used as suited for the space because they have a complete combustion nature although not manufactured as pyrotechnics because they have a larger mass market appeal despite the limited nature of the effect. Items like ground strobes which just emit a series of bright flashes and 8mm candle effects with tailed comets would fall within the context.



## CHOOSING EFFECTS

Fireworks by their nature have a projectile and explosion risk, the size, layout, prevailing wind, actual wind and additional hazards are all considered before choosing effects to include. The goal is to have the effect perform and its debris if appropriate fall safely to earth. Additional concern is to ensure malfunctioning items will have enough space to fail safely and their performance (stated on the item label) will keep the projectile and hot fall out within the exclusion zone.

As in the sample below, the manufacturer determines that the safe working distance as part of their CE testing regime – we will normally aim to exceed these distances by 50%

The choice and use of a specific effect are a combination of manufacturer information and training under PWSK as well as testing and use of the specific effect prior to the event. Often, we will take an unknow effect and incorporate it into a bigger show to better ascertain its effective range and characteristics.



### Operating instructions

Minimum safety distance to be determined by user according to the supplied product data.

Article to be used in accordance with written instructions and national regulations.

For outdoor use only.

Avoid overhead obstructions. Do not fire near tall buildings, trees, pylons or similar.

Remove fuse cover. Place battery upright in soft ground or other non-flammable material, e.g. sand, or use other method of support. Ensure battery will not fall over.

Remove orange fuse cover, (if applicable), Standing sideways light fuse at its outermost end (or use other remote ignition system) and retire immediately at least 10 metres..

Spectators must be at least 50m away

Ensure suitable PPE is worn when lighting fireworks.

Store in a cool and dry environment

Ensure waste disposal is carried out according to the national regulations.

Manufacturer & Importer: Celtic Fireworks Ltd, Providence Hill, Narberth, Dyfed, SA67 8RF, UK  
www.celticfireworks.co.uk

Pyrotechnics will tend to be smaller and the material safety sheet determines the safe use

## PRODUCT DATA SHEET

(To be used in conjunction with the Wells Fireworks Safe Use Sheet)

### STAGE GERB - 'Jet type'

**EFFECT**

Emits a quick jet of silver sparks. The approximate height and duration is given on the label - The sparks produced are normally white and the label will state if different.

HSE Reference: XI/5015/195/6      Serial No 00505      CAD Title: 1/4 by and 1/2 by Gerb

**Strictly for Professional Use ONLY**  
(Wells products must not be supplied to or used by a member of the general public or any person under 18)

**Product NEC not exceeding 5g**

**SAFETY FIRST**

- ◆ Jets project a column of hot sparks and gas to a considerable distance. They also produce smoke and hot gas but almost no noise.
- ◆ Allow an absolute **MINIMUM** Safety Distance of 3m from, (and do not fire over the top of), any persons, scenery or flammable objects\*.
- ◆ Jets can be fired at any angle from vertical to horizontal\*. However firing at an angle other than vertically upwards will affect the height/distance of a Jet. If you wish to fire at any other angle than this please phone Wells Fireworks for further advice.
- ◆ Ensure an adequate height clearance. Typically allow a safety factor of x1.5 the products stated height, (increase this to x2 times or more for smaller effects). \*
- ◆ Never use Jets in a confined space or in an area with poor ventilation. \*
- ◆ Always test a sample of the Jets to be used to confirm suitability to the job and the venue. \*
- ◆ Ensure the Jets are secured firmly. (However avoid undue pressure or force as this may damage it).
- ◆ Only use a professional firing system which can be isolated whilst rigging the Jets.
- ◆ Do not stick any form of covering over the top of a Jet.

**STORAGE**

- ◆ Jets should be stored in a Secure, Cool, Dry place. Ensure you have a licence if appropriate.
- ◆ Access to the store should only be available to the operator or other approved persons.
- ◆ For Storage purposes these products are UN:0432 1:4S (If still packed as when received).

**DISPOSAL**

- ◆ In the unlikely event of a misfire always check the firing system first and try to fire again when safe to do so.
- ◆ If after this it is felt the effect is at fault it should be left until safe before removal. Repack and clearly label failed product.
- ◆ Any failed product should be returned to Wells - (After arranging to do so with the Factory).

**TRANSPORT**

- ◆ The Proper Shipping name for these products is 'ARTICLES PYROTECHNIC for technical purposes'
- ◆ For Transport purposes these products are UN:0432 1:4S (If packed as when received)
- ◆ Purchasers are reminded of their duties to comply with the Carriage Of Explosives Regulations (1991) and the Packaging of Explosives for Carriage Regulations (1991)

## A NOTE ON RISK ASSESSMENTS

The assessment of risk is critical in the management of good health and safety.

However, it must always be clear the differences between RISK and HAZARD.

RISK	HAZARD
The likelihood of something happening, and THEN it's consequences	The consequences of something happening <b>however unlikely</b> it is to happen

All explosives are potentially hazardous . The role of the company is to minimise the likelihood of an event occurring and mitigate the consequences of an event if it does happen.

Risk assessments rate both the hazard and the likelihood of an event happening on a scale of 0-6. The actual numbers are not important (except for consistency) – the assessment of relative and acceptable risk is important.

HAZARDS (Potential Severity Rating – PSR)	
0	Nothing of consequence
1	Minor injuries to one person
2	Minor injuries to more than one person
3	Major injuries to one person
4	Major injuries to more than one person
5	One fatality
6	More than one fatality

LIKELIHOOD (Probability Frequency Rating – PFR)	
0	Impossible
1	Occurs very rarely – improbable
2	Occurs rarely
3	Occurs
4	Likely to happen
5	Very likely to happen
6	Certain to happen

The RISK is then assessed by multiplying the LIKELIHOOD by the HAZARD (Likelihood PFR x Hazard PSR). It is often beneficial to apply this calculation to both the USER and those AFFECTED by the risk, and to obtain an overall ranking.

	LIKELIHOOD						
	PFR						
H A Z A R D P R S O N	0	1	2	3	4	5	6
	1	1	2	3	4	5	6
	2	2	4	6	8	10	12
	3	3	6	9	12	15	18
	4	4	8	12	16	20	24
	5	5	10	15	20	25	30
	6	6	12	18	24	30	36

	UNACCEPTABLE Risk - Measures MUST be taken
	HIGH Risk - Measures should be taken to control and reduce risk
	ACCEPTABLE Risk - Seek advice where necessary
	VERY LOW Risk - Adequately controlled

## A NOTE ON RISK ASSESSMENTS (CONTINUED)

### **What Then?**

Once the risk assessment is complete, each risk is considered on its own, and all risks are considered together, and action is taken to deliver the safest/most controlled display possible combination of site and composition. Key questions are asked after the site inspection, when composing the display, when setting up, when deciding when/what to fire during the display (as conditions can change) and after the display (so as to apply lessons learned).

The key questions are:

1. Is the risk acceptable?
2. If not, how can the process/materials be modified to reduce the risk to acceptable levels?
3. Are procedures identified in the risk assessment being followed?
4. Have the materials/methods changed over time?
5. Does the risk assessment need to be reviewed?

Having identified the potential risks, steps are taken to reduce the risks from the highest ranked operations. A formal risk assessment for each operation may then be drawn up, including the measures taken to reduce the risk or additional precautions deemed necessary to reduce the risk to an acceptable level.

## An Example

<b>ACTIVITY</b>	<b>Hazard</b>	<b>Freq</b>	<b>Total</b>	<b>Hazard</b>	<b>Freq</b>	<b>Total</b>	<b>TOTAL</b>
Collection of fireworks	3	2	6	2	2	4	<b>10</b>
Fusing of fireworks	4	2	8	4	2	8	<b>16</b>
Packing of fireworks	3	2	6	2	2	4	<b>10</b>
Transport of fireworks	5	3	15	5	3	15	<b>30</b>
Rigging at display site	3	2	6	3	2	6	<b>12</b>
Firing display by hand	5	3	15	6	2	12	<b>27</b>
Firing display electrically	4	3	12	6	2	12	<b>24</b>
Clearing up	3	2	6	3	2	6	<b>12</b>
Driving back	5	3	15	5	3	15	<b>30</b>

In this example

- Transportation is the highest risk activity (30). This is not surprising, since the greatest number of people could potentially be close to an incident (traffic).
- Electric firing a display is safer for the OPERATOR; but does not reduce the risk for the AUDIENCE.
- Fusing operations are also high risk.

Event: STRATEGY OPENING WALKOUT	<b>RISK ASSESSMENT</b> Page 1						Date: 22/06/24		
Site: S&E 2024							Prep: JAMIE D		
Date Created: 19/05/24									
Hazard and Effect	Initial Risk					Action to Minimise Risk	Managed Risk		
	Locale	To Whom	Hazard Index	Likelihood Index	Risk Product		Hazard Index	Likelihood Index	Risk Product
Crowd access to site leading to premature ignition (e.g. smoking)	Display site	Operator/ Public	4	5	20	Adequate stewarding/barriers prior to work	4	1	4
Mass explosion of entire holding in storage leading to onsite risk	Store	Operators	6	3	18	Separation of stock into magazines	6	1	6
Transport of fireworks	Vehicle	Optr/Public	6	3	18	Training of driver, road awareness etc.	6	2	12
Inappropriate choice of fireworks for event leading to debris	Display site	Public	6	3	18	Site visit/planning (Testing Pyro)	6	1	6
Wind speed/direction causes debris to fall on crowd/others	Display site	Public	6	3	18	Monitoring of weather and access to forecasts	6	1	6
Unlit debris falling onto crowd	Display site	Public	4	4	16	Provisions made to reduce/cancel show if conditions dictate	2	2	4
Firework discharging prematurely in normal operating condition	Display site	Operator	5	3	15	Operator training. Operators to move away from fireworks once ignited	4	2	8
Mass explosion of entire holding in storage leading to off site fatality etc.	Store	Public	6	2	12	Maintain outside safety distances	4	1	4
Communication from one store to another	Store	Operators/ Public	6	2	<b>12</b>	Establish emergency procedures to evacuate adjacent stores/buildings	4	1	<b>4</b>

Unexpected violent event from ignition in store due to excessive quantity	Store	Operators/ Public	6	2	<b>12</b>	Maintain records and limit quantity in store	4	1	<b>4</b>
Unexpected violent event from ignition in store due to incorrect types	Store	Operators	6	2	<b>12</b>	Good housekeeping, labelling of boxes, clear instructions and monitoring	4	1	<b>4</b>
Unpacking/repacking fireworks within magazine	Store	Operators	6	2	<b>12</b>	Ensure all boxes are free from grit etc. Procedures to be established of damaged	6	1	<b>6</b>
Ignition through poor handling of items/containers	Store	Operators	6	2	<b>12</b>	Clear procedures and monitoring	6	1	<b>6</b>
Ignition through build up of explosive residue in, for instance, hinges	Store	Operators	6	2	<b>12</b>	Good housekeeping, clear instructions and monitoring	6	1	<b>6</b>
Protestor attack leading to compromising safety of store	Store	Public	6	2	<b>12</b>	Adequate security	6	1	<b>6</b>
Premature ignition from smoking/matches etc.	Store/Works	Operators	6	2	<b>12</b>	All sources of ignition banned from working site	1	1	<b>1</b>
Unpacking display at site	Display site	Optr/Public	6	2	<b>12</b>	Good manual handling, monitoring	6	1	<b>6</b>
Final assembly work	Display site	Optr/Public	6	2	<b>12</b>	Training	6	1	<b>6</b>
Hand firing of display	Display site	Operator	6	2	<b>12</b>	Training, adequate fuse lengths etc.	5	1	<b>5</b>
Misfired fireworks	Display site	Optr/Public	6	2	<b>12</b>	Training, cool off period. Crowd control	4	1	<b>4</b>
Firework discharging at unpredictable angle toward crowd (for whatever reason)	Display site	Public	6	2	<b>12</b>	All fireworks supported by sand/ frames pins etc.	6	1	<b>6</b>
Predictable debris landing on firing area during display	Display site	Operator	2	6	<b>12</b>	PPE and training	2	2	<b>4</b>
Manipulation of blackmatch fuse	Display site	Operator	5	2	<b>10</b>	Exposed quantity to be kept to a minimum	4	1	<b>4</b>



Adding delay fuse to existing firework	Display site	Operator	5	2	<b>10</b>	Exposed quantity to be kept to a minimum	4	1	<b>4</b>
Packing of fireworks for transport	Store	Operator	5	2	<b>10</b>	Exposed quantity to be kept to a minimum Approved packaging and methods	4	1	<b>4</b>
Loading vehicle	Vehicle	Operator	5	2	<b>10</b>	Good manual handling, monitoring etc.	3	1	<b>3</b>
Collapse of stack of fireworks in vehicle leading to ignition	Vehicle	Operator	5	2	<b>10</b>	Good manual handling, monitoring etc.	3	1	<b>3</b>
Premature ignition of fireworks while loading vehicle due to poor handling	Vehicle	Operator	5	2	<b>10</b>	Good manual handling, monitoring etc.	3	1	<b>3</b>
Handling of fireworks	Display site	Operator	5	2	<b>10</b>	Training. Keep quantity to a minimum	5	1	<b>5</b>
Accidental ignition during loading/unloading into stores	Store	Operators	6	1	<b>6</b>	Restrict numbers of personnel and "open containers" at any on point in time	5	1	<b>5</b>
Manual handling of equipment	Display site	Operator	3	2	<b>6</b>	Training	3	1	<b>3</b>
Lit debris falling onto crowd	Display site	Public	6	1	<b>6</b>	Provisions made to reduce/cancel show if conditions dictate in accordance with Shellcalc Data and site specific information	6	1	<b>6</b>

**TWILIGHT FIREWORKS DISPLAYS - EMERGENCY PROCEDURES 20<sup>TH</sup> March 2024**

		<b>ACTION</b>	<b>RESPONSIBILITY</b>
<b>1</b>	Forecast Rain	<ul style="list-style-type: none"> <li>Minimal effect on safety or functioning of display, some effects that cannot be waterproofed without affecting adversely safety or performance will be substituted.</li> </ul>	
<b>2</b>	Forecast at 12.00 2 days prior is wind $\geq$ Force 8	<ul style="list-style-type: none"> <li>Consider cancellation of entire display.</li> <li>Public communication put on standby.</li> </ul>	TWILIGHT FIREWORKS
<b>3</b>	Forecast at 14.00 on 2 days prior is wind $\geq$ Force 8	<ul style="list-style-type: none"> <li>Propose cancellation of display.</li> <li>Communicate to public cancellation.</li> <li>Prevent people travelling to viewing areas.</li> </ul>	TWILIGHT FIREWORKS
<b>4</b>	Forecast at 16.00 on 2 days prior is wind $\geq$ Force 8	<ul style="list-style-type: none"> <li>Strongly propose cancellation of display.</li> <li>Communicate to public cancellation.</li> <li>Prevent people travelling to viewing areas.</li> <li>Arrangements in place for transportation of fireworks back to store/make safe</li> </ul>	TWILIGHT FIREWORKS
<b>5</b>	Wind at 17.00 on 2 days prior is $\geq$ Force 8	<ul style="list-style-type: none"> <li>Display cancelled. Arrangements made to transport fireworks back to store.</li> </ul>	TWILIGHT FIREWORKS
<b>6</b>	Wind at 17.00 on 2 days prior is $\geq$ Force 7	<ul style="list-style-type: none"> <li>Propose cancellation of display.</li> </ul>	TWILIGHT FIREWORKS
<b>7</b>	Wind at 12.00 on 2 days prior is $\geq$ Force 6	<ul style="list-style-type: none"> <li>Evaluate fallout at site with possible suspension of display.</li> </ul>	TWILIGHT FIREWORKS
<b>8</b>	Wind at 15.00 on show day is $\geq$ Force 6	<ul style="list-style-type: none"> <li>Evaluate fallout at site with possible suspension of display or removal of larger calibre fireworks.</li> </ul>	TWILIGHT FIREWORKS
<b>9</b>	Wind at 16.00 on show day is $\geq$ Force 5	<ul style="list-style-type: none"> <li>Evaluate fallout at site with possible suspension of display or removal of larger calibre fireworks.</li> </ul>	TWILIGHT FIREWORKS
<b>10</b>	Wind at 17.00 on show day is $\leq$ Force 4	<ul style="list-style-type: none"> <li>Display proceeds as planned.</li> </ul>	TWILIGHT FIREWORKS

<b>11</b>	Wind during display is > Force 7 and debris falling down in populated crowd area	<ul style="list-style-type: none"> <li>• Suspension of display dependent on wind direction.</li> </ul>	TWILIGHT FIREWORKS
<b>12</b>	Wind during display is > force 6 and debris falling down in populated crowd area	<ul style="list-style-type: none"> <li>• Evaluate fallout at site with possible suspension of display depending on wind direction.</li> </ul>	TWILIGHT FIREWORKS
<b>13</b>	Wind during display is > force 5 and debris falling down in populated crowd area	<ul style="list-style-type: none"> <li>• Evaluate fallout at site with possible suspension of display or removal of larger calibre fireworks depending on wind direction.</li> </ul>	TWILIGHT FIREWORKS
<b>15</b>	Fireworks disruption on site during display	<ul style="list-style-type: none"> <li>• Consider suspension of display.</li> </ul>	TWILIGHT FIREWORKS
<b>16</b>	Fire at site	<ul style="list-style-type: none"> <li>• Consider suspension of display.</li> </ul>	TWILIGHT FIREWORKS
<b>17</b>	Person injured at display site	<ul style="list-style-type: none"> <li>• Suspend display.</li> <li>• Assess and call emergency services, as necessary.</li> </ul>	TWILIGHT FIREWORKS
<b>18</b>	Report of debris falling on populated crowd area by Stewards, Police etc.	<ul style="list-style-type: none"> <li>• Suspension of display.</li> <li>• Assess and call emergency services if necessary.</li> </ul>	TWILIGHT FIREWORKS/ Event Org
<b>19</b>	Non firework related incident requiring emergency access in specified zone	<ul style="list-style-type: none"> <li>• Consider suspension of display.</li> <li>• Assess and call emergency services if necessary.</li> </ul>	TWILIGHT FIREWORKS/ Event Org

## LIAISON AND CONTACTS

### For Event:

Name: Tony Hanks

Phone: +44 7572 496781

Email: Strategy@s-e.org.uk

### For Twilight Fireworks

Twilight Fireworks – Jamie Davies

Mobile: 07399 415554

Email: info@twilightfireworks.com

### Other useful contacts:

Organisation	Contact Name	Contact Number
Fire	Emergency Services	999
Ambulance	Emergency Services	999
Insurance	Insurance Experts	
Civil Aviation Authority	NA – max height 20m AMTL	
Coast Guard	NA	
Other:		

## **ABOUT US**

We are an insured firework display company based in South Gloucestershire, operating across the Cotswolds, Cheltenham and Central Gloucestershire.

We are insured for every event we carry out regardless of whether its private. We do not retail.

Our services include:

- Display design
- Safety survey: site and risk assessment
- Sourcing & purchasing
- Pre-event planning
- Co-ordination 'on the night'
- Display set-up & firing
- Post-event support (including clean-up)

We can also provide music.



## **METHOD STATEMENT**

### **PROFESSIONAL DISPLAYS**

Twilight Fireworks takes all reasonable steps in complying with the Health & Safety at Work Act 1974 and all other legislation made under the Act to ensure the health, safety and welfare of its employees, spectators, property and the general public.

It is the opinion of the company that all reasonable foreseeable hazards associated with the setting up and firing of professional displays have been addressed and adequately controlled, and in doing so have taken all reasonable practicable steps to ensure the health, safety and welfare of its own personnel, spectators, the general public and property.

Twilight Fireworks has set out a clear procedure that is followed when planning and setting up a display to minimise the risk of injury and damage, this procedure is as follows:

1. All potential display sites are visited by a member of the display team, at which time a risk assessment is carried out, and the following checks are made:
2. To ensure that the site as indicated by the client, is suitable to fire the type and size of display required.
3. To ensure that a safe distance between the 'firing area' and the spectator area can be maintained. The minimum distance required for Aerial fireworks and outdoor pyrotechnic devices is thirty metres. Indoor and Stage pyrotechnics may be used in close proximity to the spectators, providing the minimum distance as specified by the manufacturer is multiplied by a factor of 1.5 to comply with Twilight Fireworks' safety rules.
4. To ensure a 'drop zone' can be established to the back and sides of the firing site, this zone must be free from vehicles, buildings and the general public.
5. To ensure that the 'firing site' is clear of overhead obstructions e.g. power cables, trees etc., as well as for other potential hazards such as fuel storage tanks.
6. To ascertain the proximity of hospitals, nursing homes etc.
7. To ensure the adequate provision of fire fighting equipment.
8. To liaise and arrange with the Client/Organiser with regard to the provision of crowd barriers and stewarding of the display.

## GENERAL SAFETY RULES

1. Once the display is set up it is never left unattended.
2. Smoking in the 'firing area' is strictly prohibited.
3. Only authorised personnel are allowed access to the 'firing area'.
4. Crowd spillage into any designated safety area during the display will result in the display being stopped. Electronic Firing will normally result in a maximum 30 second stop from initiation.
5. If the pyrotechnician in charge of the display is not completely satisfied with any safety issue in respect of the event e.g. crowd control, safety zones or adverse weather conditions, he or she has the complete backing of the company to take one or both of the following actions:
  - a. Withhold any fireworks, which due to the safety concerns may put persons or property at risk.
  - b. Stop, or refuse to fire the display, until such time as the safety issues have been resolved. In the event that a safety issue cannot be reasonable resolved to the senior pyrotechnician's satisfaction, the display will be cancelled and cleared away.
6. The Client/Organiser is advised that the crowd should be adequately controlled at the event and tape and/or barriers should physically mark the crowd line stipulated by Twilight Fireworks.
- 7.
8. It is advised that the following organisations should be notified of the display:
  - a. The local Fire Brigade
  - b. The local Police
  - c. Coast Guard (where the display is visible to shipping)
  - d. Local aerodromes (where the site is within 3 miles)
  - e. Air Traffic Control (if the site is within 7 miles of an Airport)
  - f. Local Harbour Authority (if applicable)
  - g. The local Council is Event licensing is required
  - h. Neighbouring landowners, especially livestock owners.
  - i. Nearby Hospitals, Nursing homes etc (if noise may cause concern)

Responsibility for notifications can be negotiated with Twilight Fireworks.



## **CoSHH REGULATIONS**

A risk assessment under the Control of Substances Hazardous to Health Regulations (CoSHH) 1988 concluded that the only risk to health for operators, spectators and the general public was the possibility of burns, no other types of hazard were identified.

The risk of burns is controlled by the procedure adopted in the setting up and firing of displays (see General Safety Rules).

### **Manual Handling Operations Regulations 1992**

A risk assessment for each display if adhered strictly to the regulations is necessary as each venue is unique and different regarding the potential risks presented, however, to carry out an assessment at each display is impractical and therefore a generic assessment was carried out. The result being a policy that is followed by all display personnel to minimise the main risks identified.

1. Vehicular access is an important consideration.
2. The vehicle to be loaded or unloaded is to park as near to the set up area as possible to minimise the carry distance.
3. Mechanical aids e.g. carts are to be used wherever possible, however it is not always feasible to use such aids due to adverse access or terrain.
4. Where heavy or unwieldy loads have to be moved, two or more personnel must move them.
5. At the discretion of the pyrotechnician in charge, any operation that is considered unsafe may be stopped until an alternative can be arranged.
6. All company personnel are trained in good manual handling techniques.

### **Electricity at Work Regulations 1989**

1. All the electrical equipment used in the display area is battery operated.
2. All cables, plugs and extensions are visually inspected each time they are used, if faults are found they are either repaired by qualified personnel, or not used until such time as they can be repaired.
3. Competent personnel test all electrical equipment and accessories annually.  
A record of all tests is maintained and kept at our main office.

# INSURANCE COVER NOTE

Leisure & Entertainment Combined Insurance



## Evidence of Insurance

Date 26 September 2023

### To Whom It May Concern

We confirm the following details of the current policy and that the premium has been paid.

#### Policyholder

Mr James E W Davies T/a Twilight Fireworks

#### Activities

- ✓ Category F1, F2 and F3 Firework Displays
- ✓ Category F4 Firework Displays
- ✗ Manufacture or assembly
- ✗ Sale of fireworks from retail premises
- ✗ Sale of fireworks by mail order
- ✗ Wholesale supply of fireworks to the trade, including category 4 material
- ✗ Sale of glow novelties at display
- ✗ Direct importation of display or sales stock
- ✗ Bonfire lighting &/or building
- ✗ Alter, process or treat fireworks, other than just for firing
- ✓ OUTDOOR stage pyro and effects
- ✓ INDOOR fireworks and/or INDOOR pyro and/or effects
- ✗ Other activities

#### Public & Products Liabilities

Insurer	Hiscox Insurance Company Ltd
Policy ID	8334651
Period of Insurance	08/10/2023 to 07/10/2024
Limit of Indemnity	£5,000,000

#### Employers Liability

Insurer	Hiscox Insurance Company Ltd
Policy ID	8334651
Period of Insurance	08/10/2023 to 07/10/2024
Limit of Indemnity	£10,000,000

This letter is an indication that a policy exists but is not a cover note, certificate or policy document and does not therefore provide indemnity to the recipient or modify the contract of insurance between the policyholder and underwriters. Further, the policy is subject to specific terms and conditions that are not detailed above and should the policy be cancelled, avoided, assigned or changed during the above period of insurance, neither Insurance Experts Ltd nor the underwriters are under any obligation to inform the holder of this letter.

Please do not hesitate to contact us to verify the authenticity of this evidence.

Yours faithfully

## A NOTE ON TRAINING



The British Pyrotechnists Association (BPA) is the trade body that represents the majority of professional firework display companies in the United Kingdom. The Association is committed to maintaining high standards amongst its members, whose activities include the manufacture, importation, sale, transportation, training and use of display fireworks both by members of the public and professionals.

As a central representative body the British Pyrotechnists Association encourages the highest standards with respect to safety, on-site practice and performance of fireworks displays by its members and members of the general public. The Association is a central source of information on all questions relating to the display industry and is responsible for maintaining close liaison with the appropriate authorities on all matters concerning the manufacture, storage, transportation and exhibition of display fireworks. It also considers, makes recommendations, or takes other necessary action on all related aspects of UK and European legislation governing professional fireworks and related products.

Members of the Association sit on a number of Health and Safety Executive and Local Government enforcement committees, along with European committees concerned with the harmonisation of fireworks related legislation throughout the European Community.

The BPA also operates the BPA Firers examinations, a training and examination scheme aimed at ensuring the highest standards of firework display safety. This training programme has been accredited by City & Guilds as meeting its quality assurance criteria, and is the only UK accredited qualification in this field.

*Please note – that the holding of a BPA qualification does not make the holder a member of the BPA itself – BPA membership is for **professional display companies** only.*

**The BPA strongly advises anyone looking for a professional firework display or pyrotechnic event to use one of its members, and to ensure that all personnel rigging and firing the display are accredited by the BPA.**

## VERIFIED PERSONS WITH SPECIALIST KNOWLEDGE

### Crew List

Jamie Davies – BPA Accredited Firer

Holly B – Firer

Elliot H – Crew Member

