



**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding

# Flares and fireworks in Sports Stadia



**Alan McEntire**  
Risk Reduction Manager  
Staffordshire Fire & Rescue Service





**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding

# What's the problem?





**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding





# Legislation

## Sporting Events (Control of Alcohol etc) Act 1985

- 2A. — (1) A person is guilty of an offence if he has an article or substance to which this section applies in his possession—
- (a) at any time during the period of a designated sporting event when he is in any area of a designated sports ground from which the event may be directly viewed, or
- (b) while entering or trying to enter a designated sports ground at any time during the period of a designated sporting event at the ground.





**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding

# Sporting Events (Control of Alcohol etc) Act 1985

- (3) This section applies to any article or substance whose main purpose is the emission of a flare for purposes of illuminating or signalling (as opposed to igniting or heating) or the emission of smoke or a visible gas; and in particular it applies to distress flares, fog signals, ..., but not to matches, cigarette lighters or heaters
- (4) This section also applies to any article which is a firework
- Penalty - level 3 (£1,000), or 3 months, or both.





**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding

# Safety issues?





**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding

# Safety issues

- Fire
  - Ignition risk
- Visibility
  - Obscured vision for both crowd and stewards
- Panic & Crowd movement
  - Crowd surges
- Injury
  - Full depth burns
  - Smoke inhalation
  - Internal injuries.



- **Guide to Safety at Sports Grounds**

15.10c

## **Flares and fireworks**

Management should adopt and enforce a clear policy prohibiting spectators from bringing flares or fireworks into the sports ground. Indeed this is illegal at many football matches.





**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding

# FLA Guidance

- Football Licensing Authority
  - Guidance on handling flares
  - Issued February 2011





**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding

## Types of device

- Hand held flares
  - Rocket flares
  - Parachute flares
  - Smoke signals
  - Smoke bombs
  - Roman candles
  - Maroons,
- Discharge smoke
  - Emit light & heat
  - Propelled at speed
  - Loud bangs.





**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding

# Handling unused items

- Manufacture & Storage of Explosives Regs 2005
- Registration or Licence
- Local Authority (Trading Standards / EHO) or Fire & Rescue Service
- Protocol with Police for security of evidence
- Fire risk assessment





# Handling unused items

- Suitable storage
- Protect explosives from sources of ignition
  - Suitable container
  - Safe distance
  - No naked lights
- Prevent fire and explosion spreading
  - Separation
  - Containment !!!!
- Avoid unsuitable storage conditions
  - Non-compatible items
  - Away from damp
- Ensure accurate control and record-keeping arrangements.





# Handling discharged items

- Discharge times from 3 to 60 seconds
- Burn temperature in excess of 2,000°C
- Difficult to extinguish
  - Chemical mix includes metal powders and salts
  - Burning metals require special extinguishers
  - Salts contain oxygen which sustains combustion
  - Magnesium reacts with water to produce hydrogen
- Remains hot for considerable time
- Ignition risk even after burn period.





**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding

# Handling discharged items

- Recommended equipment
- Buckets of sand (metal)
- Welder's type gloves
- Eye protection
- Tongues or "litter pickers".





**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding





# Handling discharged items

- Allow to burn out if safe to do so
- Move people away from danger
- Do not use water on flares
- If on floor, clear area and cover with sand
- Once burnt out, use gloves or tongues to place in metal bucket
- Always hold by handle
- Always point to ground and away from people.





# Staffordshire

## Fire and Rescue Service

preventing • protecting • responding





# Key points

- Risk assessment and suitable equipment
- Fixture specific risk assessment
- Medical provision
- Communication with crowd & signage
- Training of key personnel and stewards
- If device discharged move people away from danger
- Beware of ignition risks.





# Key points

- Use suitably trained staff
- Do not use water
- Cover with sand, leave to cool, remove in metal bucket
- Retain as evidence
- CCTV to capture images of perpetrators
- "Duds" to be removed to safe location
- Injuries likely to be severe, ensure medical staff are made aware of cause.





**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding

- Who can we thank for signal flares?
  - Martha Coston of Philadelphia
  - Pyrotechnic Night Signals
  - Patented in 1859

## Useless fact



### **COSTON'S MARINE SIGNALS**

#### **Percussion or Friction**

The only signal recognized by the British Board of Trade in their report, and is used exclusively by the United States Government.

Distress Outfits for lifeboats in compliance with the rules and regulations of the Board of Steamboat Inspectors; friction or percussion.

Fog, Pilot and Distress Signals, all different steamship and yacht club distinguishing signals, friction or percussion, also regulation ship rockets and staves.

#### **WATER LIGHTS**

##### **For Life Buoy, Embarkation or Deck Flares.**

Distinguishing colors arranged and registered.

Send for our pamphlet entitled "Communication at Night on the Road at Sea."

Highest award, Gold Medal and Diploma, Jamestown Exposition, 1907.

Originators and largest manufacturers of marine night signals in the world.

#### **COSTON SIGNAL CO., Inc.**

**7 Water St.**

**New York**

Entrance on Moore St.

Telephone 3454 Broad

Deliveries made by Steam Lighters Day or Night



**Staffordshire**  
**Fire and Rescue Service**  
preventing • protecting • responding



**Thank you**  
**Any questions?**

