

## Incident at Fireworks Display Wicksteed Park, Kettering November 2005

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## Caveats

- ♦ Any opinions expressed by the speaker are his own and do not necessarily represent the views of Kettering Borough Council

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## Fireworks Display Operators

- ♦ Have you got one based in your area?
- ♦ Do you visit them? Do they talk to you?
- ♦ Kimbolton – HSE explosives, TS

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## Fireworks Displays

- ♦ Do you inspect:
  - Documentation?
  - The site – before / during?
  - The display company details/history/etc.
- ♦ What are you looking for?
- ♦ Do you know what you're looking at?
- ♦ Display Staff Training
- ♦ Don't take things for granted!

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## Fireworks Display Guidance

- ♦ HSG 123  
Working Together  
on Firework Displays



- ♦ BPA guidance

<http://www.bpa-fmg.org.uk/bpa2007/wp-content/uploads/bpa-display-guide.pdf>

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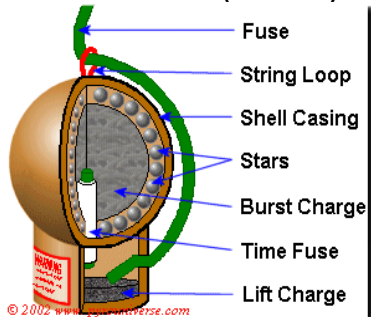
## Fireworks (Shells)



© 2001 How Staff Works

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## Fireworks (shells)



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## The Mortar Rack



© HSE Books

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## The Mortar Rack



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## The Site

- ♦ Wicksteed Park, Kettering
- ♦ Natural amphitheatre
- ♦ In excess of 10000 people on site
- ♦ Site used for a number of years
- ♦ Safety distance launch site to crowd 120m + (considerably in excess of guidance = >50m)

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## The Display

- ♦ Display Provider – Kimbolton Fireworks Ltd
- ♦ Known Worldwide
- ♦ Hand over of Hong Kong to China display
- ♦ Portsmouth 200 display
- ♦ As well as local displays like Wicksteed Park.

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## The Display

- ♦ Can be hand fired or computerised
- ♦ Wicksteed fully computerised with documented systems
  - Launch times
  - Type of firework
  - Location in rack

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## What happened

- Evening of Saturday November 5 2005
- Public event – numerous witnesses
- Video recording
- Mobile phones
- 12 people injured, 1 seriously, 1 major.
- SOCO after the accident

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## The Display



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## The Display



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## Scene of the Incident



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## Scene of the Incident



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## Scene of the Incident



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## Scene of the Incident



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## Mortar Tubes



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## The Injuries

- Believed firework did not burst properly
- Mainly minor burns and smoke inhalation
- Some more serious burns from stars
- Major injury to one boy in close proximity to detonation of firework

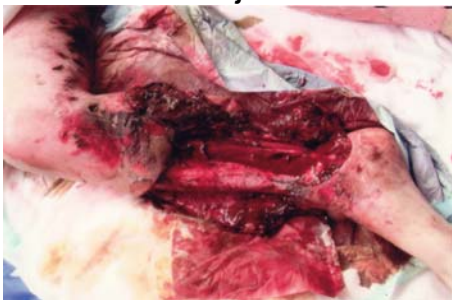
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## The Injuries



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## The Injuries



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## The Investigation



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## The Investigation

- ♦ Remnants of display to HSL
- ♦ Video of display and KFL display documents to HSL
- ♦ Kimbolton cooperative throughout – arranged supply of relevant shells and mortar tubes for comparison tests.

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## HSL Reconstruction



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## HSL Reconstruction



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## Canadian Explosives Research laboratory



**Canada**  
Natural Resources Canada / Ressources naturelles Canada

**Canada**

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## Findings

- ♦ Failed to carry out proper risk assessment
- ♦ Equipment had not been tested to control a known risk
- ♦ Failed to protect health and safety of persons other than their employees

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## Hearing

- ♦ Guilty pleas
- ♦ Reg 3 MHSW Regs 1999 - £3000
- ♦ Sec 3 HASWA 1974 - £15000
- ♦ £35000 costs (HSL costs approx £80k alone)

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## Conclusion

- Mortar racks - in house designs
- Testing of equipment
- Use of mortar tubes - frequency
- Other mitigation measures
- Training
- Access to H & S advice