



# Outdoor sporting venues risk review

## Adair Lewis examines large-loss data on fires that have occurred at outdoor sporting venues and offers advice on minimising risks

**O**UTDOOR SPORTING venues take many forms and can involve gatherings of thousands of people. Even though the events themselves may be held in the open air, covered facilities will also be provided for catering, hospitality, press and other services. There will almost always be grandstands, and for major events the permanent facilities may be supplemented by temporary structures to provide additional refreshment outlets, seating and toilets.

While fire risk assessments should be undertaken for all outdoor sporting venues that form a workplace in compliance with the Regulatory Reform (Fire Safety) Regulations 2005 or equivalent legislation in Scotland and Northern Ireland, special attention should be paid and a review of the risk assessment should be carried out prior to any event that has involved augmentation of the permanent facilities.

The most important element is ensuring that escape routes are not compromised by obstructions, such as inappropriately located refreshment vans, so that large numbers of people are able to move away from a fire without delay. At the same time, clear access must be available for firefighting vehicles and personnel – in 50% of the major fires where the fire and rescue service reported problems, access was a significant issue. In some cases it may be possible to arrange fire service access via gates away from the competitors' entrances, public car

parks and other busy routes onto the site. In all cases, close liaison should be maintained with the fire and rescue service during the planning of the event, as this also has the benefit of checking water supplies for firefighting – a problem that also featured in 50% of the cases where problems were encountered by the fire service.

In the statistics of major fires being started deliberately, there are no instances perhaps because the large number of people present may result in virtually all parts of the site being under constant observation. However, only 40% of fires are recorded as being accidental, with 60% being of unknown origin. The fact that 50% of the fires occur between the hours of midnight and 6am raises a serious question mark over the zero deliberate fire statistic and highlights the need for further efforts to investigate these incidents.

It is perhaps surprising when considering events that are held outdoors that financial losses in the case of major fires is so high. Estimates show this to average in the region of £1,300 per square metre of damage.

### Fire hazards

There are numerous fire hazards associated with outdoor sporting events, which include:

- large numbers of people who may have a disability or may be unfamiliar with the venue
- the behaviour of people who may be under the influence of alcohol
- the presence of valuable animals, such as race horses or prize cattle
- electrical fire hazards from poorly maintained generators, floodlights, and temporary installations and equipment
- temporary kitchens and mobile cooking facilities
- grassland and undergrowth fires caused accidentally (such as from barbecues) or by deliberate ignition
- grandstands that may be constructed from timber with plastic seats

**Sector Main Category: Sport****Sub Category: Other outdoor sporting venue**

Sport fires account for 3.9% of all large-loss fires.

Other outdoor sporting venue fires account for 0.2% of all large-loss fires and 8.5% of all Sport fires.

Causation	Accidental	Deliberate	Unknown
Sport	41.4%	37.9%	20.7%
Other outdoor sporting venue	40.0%	0.0%	60.0%

Time of fire	Midnight - 6am	6am - Midday	Midday - 6pm	6pm - Midnight
Sport	31.5%	22.2%	20.4%	25.9%
Other outdoor sporting venue	50.0%	25.0%	0.0%	25.0%

Impedances	Access	Acetylene	Inadequate Water Supply	Resources
Sport	55.6%	0.0%	22.2%	22.2%
Other outdoor sporting venue	50.0%	0.0%	50.0%	0.0%

4 Sport fires of 59 had impedances, 0 of these had more than one impedance.

1 Other outdoor sporting venue fires of 5 had impedances, 0 of these had more than one impedance.

- pavilions and covered areas formed of marquees or other temporary or tented structures
- temporary retail outlets with large quantities of stock
- large accumulations of litter and other combustible waste materials

## Addressing the problems

Despite the statistics, give careful consideration to the likelihood of deliberate fire raising at the time of the fire risk assessment. Suitable security measures should be implemented that are proportionate to the risk and based on the findings of the risk assessment. In many cases, security staff at gates, VIP areas and mobile patrols will serve to deter arsonists, as well as maintaining a secure and safe venue.

Review the fire risk assessment prior to major events that may attract unusually large numbers of spectators and whenever temporary facilities are provided. Check there are an adequate number of fire exits of suitable width from marquees, tents and temporary structures.

When setting up the site, avoid hot work wherever possible. Where there is no practicable alternative to the use of compressed gases, minimise the time that gas cylinders are held on site.

To eliminate potential sources of ignition, competent engineers should be engaged to install and maintain temporary plant and equipment in accordance with the manufacturers' instructions. Keep suitable records of maintenance and servicing of permanent facilities.

Earth all electrical circuits in accordance with the requirements of BS 7671 (the IET Wiring Regulations). All extraneous conducting materials should also be bonded and earthed. The bonding and earthing of permanent installations should be subject to a programme of inspection and testing, as determined by a risk assessment. The results should be recorded.

Ensure that electrical installations are designed, installed and (in the case of permanent installations) periodically tested by a competent electrician, in accordance with the current edition of BS 7671. Inspections in permanent buildings should be carried out on a risk assessed basis, as recommended in the Periodic Inspection Report.

Provide portable electrical equipment that is suitable for its intended use (especially where it might be used outdoors), and arrange for the items to be inspected and tested at least in accordance with HS(G) 107 and/or the IET Code of Practice for in-service inspection and testing of electrical equipment.

Cooking should be undertaken in kitchens or purpose built catering facilities equipped for this purpose.

Prior to major events, cut down and dispose of undergrowth – don't treat it with proprietary chlorate based weedkillers or pile it up to resemble a bonfire.

Empty waste bins, and collect and remove litter regularly throughout the event so as not to allow it to accumulate as fuel for a deliberate or accidental fire.

A means of giving warning of fire should be established. Permanent buildings at sporting venues need to have a formal automatic fire detection and alarm installation designed to an appropriate category, as defined in BS 5839-1. In small or temporary facilities, the fire risk assessment may indicate that manually actuated sounders may be suitable, provided the alarm is clearly audible above background noises in all parts of the structure and can be readily identified as being the fire alarm.

Have an effective emergency plan in place to ensure the resilience of the venue and the welfare of its visitors. One way of approaching this is to complete the ROBUST business continuity and incident management planning software available free from <https://robust.riscauthority.co.uk/> ■

*These statistics are based on information supplied by loss adjusters to the FPA on a voluntary basis and not all insurers conducting business in the UK contribute to this dataset. They represent only sums paid out where the total loss is in excess of £100k and are deficient of losses under £100k, deductibles, underinsurance, uninsured, self-insured and captively insured components, which may be significant. In a year, total losses captured typically account for 50% of the ABI declared annual fire loss figure – which is similarly deficient of the same components (except the £100k threshold).*