EVENT SAFETY GUIDE

Introduction

These guidelines aim to help those who organise events so that the event runs safely. The event organiser has prime responsibility for protecting the health, safety and welfare of everyone working at, or attending, the event.

The guidelines bring together information needed by event organisers, their contractors and employees to help them satisfy the requirements of the Health and Safety at work etc act 1974 (HSW Act) and associated regulations.

Planning and Management

In order to protect the health, safety and welfare of people attending an event, health and safety has to be managed. It is of fundamental importance to appreciate that planning for effective health and safety management should start at the same time as the planning for all other aspects of the proposed event.

To provide a comprehensive overview to all these planning aspects it may be helpful to produce an event safety management plan. The constituents of an event safety management plan could include the following:

- The event **risk assessment.**
- The event **safety policy statement** detailing the organisation chart and levels of safety responsibility.
- The **site safety plan** detailing the site safety rules, site crew managers and safety co-ordinator, structural safety calculations and drawings.
- The **crowd management plan** detailing the numbers and types of stewards, methods of working, chains of command.
- The **transport management plan** detailing the parking arrangements, highway management issues and transport arrangements.
- The **emergency plan** detailing action to be taken by designated people in the event of a major incident or contingency.
- The **first aid plan** detailing procedures for administering first aid on site and arrangements with local hospitals.
- Details of the event including venue design, structures, audience profile and capacity, duration, food, toilets, refuse, water, fire precautions, first aid, special effects, access and exits, music levels etc.

The above is not intended as a comprehensive list of requirements or responsibilities and the event organiser must satisfy themselves and other professionals in involved in event management that all matters have been considered and acted upon as necessary. Sole responsibility for the event remains at all times with the event organiser.

The Event Risk Assessment

The purpose of a risk assessment is to identify hazards which could cause harm, assess the risks which may arise from those hazards and decide on suitable measures to eliminate, or control, the risks. A risk assessment for the build-up, event and breakdown, can only be carried out once information has been received from the contractors, other companies and self-employed people who will be working on the site. It will also be necessary to visit the site or venue to identify specific hazards.

A *hazard* is anything which has the potential to cause harm to people. This could be a dangerous property of an item or a substance, a condition, a situation or an activity.

Risk is the likelihood that the harm from a hazard is realized and the extent of it. In a risk assessment, risk should reflect both the likelihood that harm will occur and its severity.

Hazards associated with the assembly of large numbers of people may vary according to the nature of the event and these hazards should be similarly assessed in terms of risk. The previous history of the performers, amusement providers and the audience that they attract can provide valuable information. The overall event risk assessment will then indicate areas where risks need to be reduced to acceptable levels.

There are five steps which need to be taken to assess the risk associated with staging the event.

Step 1	Identify the hazards associated with activities contributing to the event, where the activities are carried out and how the activities are to be undertaken
Step 2	Identify those people who may be harmed and how
Step 3	Identify existing precautions, e.g. venue design, operational procedures or existing "safe systems of work"
Step 4	Evaluate the risks
Step 5	Decide what further actions may be required, e.g. improvement in venue design, safe systems of work, etc

The risk assessment findings will need to be recorded and a system developed to ensure that the risk assessment is reviewed and, if necessary, revised.

Further helpful information on how to carry out a risk assessment can be found in the documents *Research to develop a methodology for the assessment of risks to crowd safety in public venues,* HSE books ISBN 0 7176 1663 0, and in *Five steps to risk assessment* HSE books ISBN 0 7176 0904 9*.*

Venue and site design

The general principal behind venue design is to provide an arena in which the audience can enjoy the entertainment in a safe and comfortable atmosphere. The requirement for certain safety provisions, the type, number and specification of facilities and services will depend on the type of event and the outcome of the risk assessment.

The final design of a site will be dependent on the nature of the entertainment, location, size and duration of the event. It will also need to take account of the existing geographical, topographical and environmental infrastructure.

Site suitability assessment

It is important to visit the venue or site to carry out a preliminary assessment to determine suitability. The main areas for consideration are available space for audience, temporary structures, stage facilities, parking and rendezvous points. You may already have a proposed capacity in mind, together with some ideas of the concept of the entertainment. Rough calculations of the available space are useful at this stage.

Site Plans

A site plan should be produced taking into account: -

- Venue capacity/occupant capacity
- Exit requirements
- Venue access
- Entrances
- Sight lines
- Seating arrangements
- Slopes
- Observation points
- First Aid Ambulance requirements
- Public and stewarding positions
- Site workers
- Hospitality area
- Noise considerations
- Catering and merchandising
- Perimeter fencing
- Signage
- Welfare facilities
- Excess visitors

Fire safety

The organiser must ensure suitable and sufficient means of escape in case of fire for all people present. People should be able to walk to safety along a clearly recognisable route by their own unaided efforts regardless of where a fire may break out at the venue. However, for some people with disabilities it will be difficult, if not impossible, to make their way to a place of safety without the assistance of others.

When evacuation is necessary, people often try to leave the way they entered. If this is not possible (perhaps because of the position of the fire or smoke), they need to be able to turn away from the fire and find an alternative route to a place of safety. However, the audience may underestimate the risk or be reluctant to use exits they are unfamiliar with. It is essential to train stewards to recognise this fact and to ensure that the audience leaves promptly in respect to the safety requirements.

The event organizer must consult the local Fire Division and act on their advice and requirements as necessary. Routine and adhoc inspections of the event may be commissioned without notice to the event organizer

Major incident planning (emergency planning)

The consequences of a major incident at an event could be catastrophic and it is necessary to plan for such an occurrence. A major incident will normally require a multi-agency approach in which the event organiser, police, NHS, including the ambulance service, fire authority, local authority, local emergency planning officer, stewards, and first aiders, may play a part. It is therefore important that there is a clear demarcation of duties and those responsibilities are agreed and understood at the event planning stage. Agreed procedures should be issued in writing to all relevant parties. A full report may be required to be submitted to the London Borough of Bromley and any other party that has reasonable grounds to require the written report.

Minor emergencies or incidents that do not require the intervention of the emergency services, NHS, or local authority will need to be dealt with by developing suitable contingency plans. It is important to appreciate that a minor incident could have the potential to develop into a major incident if not properly planned for and managed. Event organisers should therefore develop contingency plans to deal with minor incidents along with their major incident plans. Major incident plans should be developed in conjunction with the emergency services.
The event risk assessment will be a good starting point for any major incident plan. This will help you focus on areas that will need to be considered.

Communication

Effective communication is of prime importance if an event is to run smoothly and safely. Communication requirements of all the organisations involved in the event (assessed individually or jointly) need to be examined thoroughly. This includes examining the general and operational management of the event, handling routine health, safety and welfare information and communicating effectively in the event of a major incident. There are two main perspectives.

- Inter-professional
- Public information and communication

Crowd management

Many factors in the design and planning of the event, will have a bearing on crowd management, such as:

- Stewarding
- Design of the venue to allow good entry and exit for crowd movement within the venue;
- Audience capacity;
- Provision of adequate facilities for refreshments, sanitary requirements, etc;
- Clear effective means of communication with the audience.

Stewarding guidelines

The main responsibilities of stewards are crowd management. They are also there to assist the police and other emergency services if necessary. Apart from the specialist workers provided for the protection of the performers, the use of separate teams for security and stewarding should not be considered without consultation between all interested parties. The roles of these two groups are closely inter-linked and lack of communication can lead to ineffective crowd management.

Deployment of numbers of stewards

The risk assessment will help you to establish the number of stewards necessary to manage the audience safely. When preparing your risk assessment for crowd management, carry out a comprehensive survey to assess the various parts of the site and consider the size and profile of the audience.

Basing stewarding numbers on the risk assessment rather than on a precise mathematical formula will allow a full account to be taken of all relevant
circumstances, including previous experience. To manage the audience, locate stewards at key points. These include barriers, gangways, entrances and exits at Car Parks.

An example of some of the matters to be considered for the risk assessment include:

- Previous experience of specific behavior associated with this type of event
- Traffic movements, and car parking arrangements
- Stalls, rides, or other attractions at the event
- Uneven ground, the presence of obstacles, etc, within or around site, affecting flow rates
- Length of perimeter fencing
- Type of stage barrier and any secondary barriers
- Provision of seating

Further information regarding risk assessments for crowd management can be found in the document *Research to develop a methodology for the assessment of risks to crowd safety in public venues.*

Organisation of stewards

There has to be an established chain of command. Consider appointing a chief steward to be responsible for the effective management of all stewarding contractors at the event. (This could be a role of the safety co-ordinator.) The arrangements will depend on the nature and size of the event and venue but may include:

- A chief steward
- A number of senior supervisors, responsible for specific tasks, who report directly to the chief steward: and
- A number of supervisors who report direct to a senior supervisor and who are normally in charge of six to ten stewards.

Ensure that stewards receive a written statement of their duties, a checklist (if this is appropriate), and a plan showing key features. Brief stewards before the event, particularly about communicating with supervisors and others in the event of a major incident.

Conduct of stewards

All stewards need to be fit to carry out their allocated duties, have some previous relevant experience (casual as oppose to professional full time staff), and be aged 18 or over. While on duty they should concentrate only on their duties and not on the performances at the event. Ensure that stewards understand that they should:

- Not leave their place without permission;
- Not consume or be under the influence of alcohol or other drugs; and
- Remain calm and be courteous towards all members of the audience.

All stewards should wear distinctive clothing, such as tabards and be individually identifiable by means of a number, which is clearly visible. Stewards must be allocated with a reliable means of communication with the Control room, their colleagues or other individuals engaged in the management of the event.

Competency of stewards

Duties and competencies of the stewards include:

- Understanding their general responsibilities towards the health and safety of all categories of audience (including those with special needs and children), other stewards, event workers, and themselves;
- Carrying out pre-event safety checks;
- Being familiar with the layout of the site and able to assist the audience by giving information about the available facilities including first aid, toilet, water, welfare and facilities for people with special needs, etc;
- Staffing entrances, exits and other strategic points, e.g. exit doors or gates which are not continuously secured in the open position while the event is in progress;

- Controlling or directing the audience who are entering or leaving the event, to help achieve an even flow of people into and from the various parts of the site;
- Controlling and monitoring traffic movement and parking arrangements;
- Recognising crowd conditions to ensure the safe dispersal of audience and the prevention of overcrowding;
- Assisting in the safe operation of the event by keeping gangways and exits clear at all times and preventing standing on seats or furniture;
- Investigating any disturbances or incidents;
- Ensuring that combustible refuse does not accumulate;
- Responding to emergencies (such as the early stages of a fire), raising the alarm and taking the necessary action;
- Being familiar with the arrangements for evacuating the audience, including coded messages and undertaking specific duties in an emergency;
- Communicating with the incident control centre in the event of an emergency.

Stewards training

Ensure that all stewards are trained so that they can carry out their duties effectively. The level of training will depend on the type of functions to be performed. Keep a record of the training and instruction provided, including the:

- Date of the instruction or exercise;
- Duration;
- Name of the person giving the instruction;
- Name of the person(s) receiving the instructions; and
- Nature of the instruction or training.

All stewards need to be trained in fire safety matters, emergency evacuation and dealing with incidents such as bomb threats. (The *Guide to safety at sports grounds* provides some further information on the training of stewards working in football stadia.)

Stewards welfare

Stewards will need adequate rest breaks so ensure that arrangements are in place for them to have rest periods at reasonable intervals.
Ensure that stewards are not stationed for long periods near to loud speakers, and make sure that they are provided with ear protection in accordance with the Noise at Work Regulations 1989 (see chapter on *Sound: noise and vibration).*

Transport management

Areas to be considered include:

- Traffic signs and highway department road closures
- Traffic marshalling
- Public transport
- Vehicle parking and management
- Pedestrians
- On-site vehicle management and temporary roadways

It is recommended that for events that generate large traffic movements or that involve the movement of large vehicles, both on and off the site, that a trained and competent steward be appointed to oversee and manage car parking and vehicle movement. Additionally it is recommended for such events that a traffic management system be implemented.
Vehicle access to be restricted and directed through use of fencing, cones and trained / briefed stewards.

All service or vehicles involved in the event delivery that enter the park must drive at no more than 5 mph, and have their hazard lights on.
All service or vehicles involved in the event delivery that are large or have blind spots, must be stewarded by person at rear of vehicle when reversing.

Structures

Many events require the provision of temporary demountable structures, e.g. grandstands, stages, marquees. Managing the hazards connected with these structures is just as important as managing other hazards. This can only be achieved if all those responsible for these structures undertake their duties conscientiously.

The failure of any demountable structure, no matter how small, in a crowded, confined space could have devastating effects. It is therefore essential to design and erect structures to suit the specific intended purpose, and to recognize that the key to safety of these structures is largely in the:

- Choice of appropriate design and materials;
- Correct siting or positioning;
- Proper planning and control of work practices; and
- Careful inspection of the finished product.
- Environmental Health may demand that Building Control are notified and a fee may be levied for the checking and for necessary drawings to assist engineering specification requirements that directly related to the structure unless otherwise provided by the event organizer.

Barriers

Barriers at events serve several different purposes. They can provide physical security as in the case of a high perimeter fence at an outdoor concert, or to control the audience. They may also be used to relieve and prevent the build-up of audience pressures.

Barriers will always be subject to loading and therefore be designed to withstand right angle and parallel loads in line with the probable pressures. Account should be taken of the nature of the loading, e.g. surging. Detailed technical requirements for the various types of barrier referred to in this chapter are given in the book *Temporary demountable structures: Guidance on design, procurement and use.*

Electrical installations and lighting

Electricity can cause death or serious injury to performers, workers or members of the public if the installation is faulty or not properly managed. In many circumstances the electrical supply may be of a temporary nature, but this does not mean that it can be sub-standard or of an inferior quality to a permanent installation. Only a competent electrician should carry out electrical work.

All electrical installations and equipment must comply with the general requirements of the Electricity at Work Regulations 1989.

A temporary safety certificate signed by a qualified electrician must be handed to the London Borough of Bromley on demand.

Planning

Factors to consider when planning the electrical installation include:

- The location of any existing overhead power lines or buried cables;
- The total power requirements for the site;
- Access to a network power supply;
- The use of generators;
- Earthing;
- Positioning of temporary overhead or underground cables;
- The main isolators controlling the electrical supplies;
- The electrical requirements for emergency lighting and exit signs;
- Power supplies for catering equipment, first-aid points, incident control room, CCTV cameras, etc;

Food, Drink and Water

Ensure that the delivery, storage, preparation and sale of food complies with the relevant food safety legislation and where appropriate consideration is given to the advice contained in the relevant guides and codes of practice. This will include mobile catering units, catering stalls and marquees, crew catering outlets, hospitality catering, bars and ice cream vendors, etc.

Contact the local authority environmental health officers (EHOs) for advice on food safety and hygiene. EHOs may wish to carry out an inspection of the catering facilities provided at the event. They may also wish you to provide them with a list of caterers who will be attending the event.

Merchandising and special licensing

It is essential that the merchandising stalls and stands are considered in all aspects of the planning and management of the event.

There are four aspects to merchandising that need to be planned and managed:
- The merchandising facilities which include the structure of the stalls or stands;
- The space requirements;
- The setting up, dismantling and operation of the stall or stand;
- The items for sale as merchandise.

Amusements, attractions and promotional displays

The intention of this chapter is to highlight some areas for consideration when amusements, attractions and displays are incorporated in an event.

If you wish to include amusement activities at your event, it is important to obtain the required safety information about the activity from the operator. This is to ensure the siting and operation of the amusement does not:

- Compromise safety in relation to the overall risk assessment for the event;
- Block the emergency access routes; or
- Cause audience congestion problems.

Some points to consider when incorporating any amusement as part of the overall entertainment include the following:

- Obtain advice about the particular hazards associated with the amusement or attraction from the operator and ask them for copies of their own risk assessment and safety information. Incorporate the information into your overall risk assessment for the event.
- Obtain advice from the relevant enforcement authority (local authority/HSE) about the particular amusement. Local authority officers and HSE inspectors should have up-to-date information concerning hazards that have been reported about a particular amusement or activity.
- Check the competence of the operator. It should be relatively straightforward to check the competence of the operator against information already acquired. Is the operator able to demonstrate compliance with legislation or codes of practice? Does each amusement have a current certificate of thorough examination from an inspection body? What experience have they had in operating the amusement? What safety information can they supply in relation to the amusement?

Inflatable bouncing devices

HSE's *Safe operation of passenger carrying amusement devices: Inflatable bouncing devices* PM76 describes various factors that can contribute to accidents involving inflatable bouncers and the precautions that should be taken to avoid them.

Hazards include being blown over or away by the wind, splitting of the fabric, accidental spilling of users, injury to the users by themselves or by other users, overcrowding, air loss due to blower disconnection, power supply failure and inadequate means of escape in the event of a fire. Each inflatable should be thoroughly examined annually for any deterioration by a competent person or company. Height and age restriction are often necessary for the safe operation of these bouncing devices and such information should be made visible to the audience wishing to take part.

Promotional displays

Companies sponsoring events may wish to advertise their product by way of a promotional display.

It is easy to overlook the effect that some of these displays might have on the safety of the event. Obtain information as to the type of equipment that will be brought on site, its method of erection and particular hazards that the equipment may pose.

Sanitary Facilities

Ensure that the adequate sanitary provision is made for the number of people expected to attend the event, and that consideration is given to location, access, construction, type of temporary facilities, lighting and signage.

Consider the following when determining the minimum provision for safety conveniences:

- The duration of the event;
- Perceived audience food and fluid consumption;
- Requirements for event-related temporary campsites
- Provision of suitable facilities for children, elderly or infirm people attending who may take longer to use a facility.

The table below shows a general guideline for a music event.

For events with gate opening Time of 6 hours or more		For events with a gate opening time of less than 6-hours duration	
Female	Male	Female	Male
1 toilet per 100 females	1 toilet per 500 males, plus 1 urinal per 150 males	1 toilet per 120 females	1 toilet per 600 males, plus 1 urinal per 175 males

Waste Management

The concessionaires and the audience at most events will generate large quantities of waste materials. Waste needs to be managed carefully to minimise the risks associated with its accumulation, collection and final disposal.

Medical, Ambulance and First-Aid Management

It is recognized that medical cover at events can be organised in different ways and that the most appropriate model will vary according to the medical provider and the nature of the event. The following tables set out a method of estimating a reasonable level of resource.

- Use Table 1 to allocate a score based on the nature of the event.

- Use Table 2 to allocate a score based on available history and pre-event intelligence.

- Use Table 3 to take into consideration additional elements, which may have an effect on the likelihood of risk.

- Use table 4 to indicate a suggested resource requirement.

Table 1 Event Nature

(A) Nature of event	Classical performance	2
	Public Exhibition	3
	Pop/rock concert	5
	Dance event	8
	Agricultural/county show	2
	Marine	3
	Motorcycle display	3
	Aviation	3
	Motor sport	4
	State occasions	2
	VIP visits/summit	3
	Music festival	3
	Bonfire/pyrotechnic display	4
	New Year celebrations	7
	Demonstrations/marches/political events	
	Low risk of disorder	2
	Medium risk of disorder	5
	High risk of disorder	7
	Opposing factions involved	9
(B) Venue	Indoor	1
	Stadium	2
	Outdoor in confined location, e.g. park.	2
	Other outdoor, e.g. festival	3
	Widespread public location in streets	4
	Temporary outdoor structures	4
	Includes overnight camping	5
(C) Standing /seated	Seated	
	Mixed	1
	Standing	2
		3
(D) Audience profile	Full mix, in family groups	
	Full mix, not in family groups	2
	Predominately young adults	3
	Predominately children and teenagers	3
	Predominately elderly	4
	Full mix, rival factions	4
		5
Add A+B+C+D	Total score for **Table 1**	

Table 2 Event Intelligence

Item	Details	Score
(E) Past history	Good data, low casualty rate previously (Less than 1%)	-1
	Good data, medium casualty rate previously (1%-2%)	1
	Good data, high casualty rate previously (more than2%)	1
	First event, no data	3
(F) Expected numbers	<1000	1
	<3000	2
	<5000	8
	<10 000	12
	<20 000	16
	<30 000	20
	<40 000	24
	<60 000	28
	<80 000	34
	<100 000	42
	<200 000	50
	<300 000	58
Add E+F	Total score for Table 2	

Note Numbers attending may vary throughout the duration of longer events. Therefore, resource requirements may need to be adjusted accordingly.

Table 3 Sample of Additional Considerations

Item	Details	Score
(G) Expected queuing	Less than 4 hours More than 4 hours More than 12 hours	1 2 3
(H) Time of year (Outdoor events)	Summer Autumn Winter Spring	2 1 2 1
(I) Proximity to definitive care (II) (Nearest suitable A&E Facility)	Less than 30 min by road More than 30 min by road	0 2
(J) Profile of definitive care	Choice of A&E departments Large A&E departments Small A&E departments	1 2 3
(K0) Additional hazards	Carnival Helicopters Motor sport Parachute display Street theatre	1 1 1 1 1
(L) Additional on-site facilities	Suturing X-ray Minor surgery Plastering Psychiatric / GP facilities	-2 -2 -2 -2 -2
Add G+H+I+J+K Subtract L	Total score for Table 3	

Calculation

To calculate the overall score for the event, do the following;

Add the total scores for Tables 1+2+3 above to give an overall score for the event

Table 4 Suggested resources requirement

Use the score from the above calculation to gauge the levels of resource indicated for the event.

The score refers to the suggested resources that should be available on duty at any one time during the event and not the cumulative number of personnel deployed throughout the duration of the event.

Score	Ambulance	First aider	Ambulance personnel	Doctor	Nurse	NHS ambulance manager	Support unit
<20	0	4	0	0	0	0	0
21-25	1	6	2	0	0	Visit	0
26-30	1	8	2	0	0	Visit	0
31-35	2	12	8	1	2	1	0
36-40	3	20	10	2	4	1	0
41-50	4	40	12	3	6	2	1
51-60	4	60	12	4	8	2	1
61-65	5	80	14	5	10	3	1
66-70	6	100	16	6	12	4	2
71-75	10	150	24	9	18	6	3
>75	15+	200+	35+	12+	24+	8+	3

Note: The following is an indication of the resources that may be required to manage an event based an assessment of factors set out in the previous tables. It must be noted that this table, is intended for guidance only. It cannot encompass all situations and is not intended to be prescriptive.

Information and welfare

Information is an essential element in crowd management. Research has shown that when people have difficulty in obtaining information, they may feel unsatisfied, discontented, or even become aggressive. In turn, this may result in people becoming less likely to comply with safety instructions or in the extreme, lead to public order problems.

The sort of information that may be required to be displayed includes:

- Toilets
- Performance areas
- Exits and entrances
- Car parks
- Main roads
- First--aid points
- Emergency services
- Fire points
- Welfare points
- Information points
- Police points
- Lost people's meeting point
- Lost property
- Drinking water.