

16. waste management



Please note: The information contained in this chapter sets out good practice that should be considered by event organisers. However, it is industry guidance and does not necessarily cover everything that organisers need to consider for a particular event.

key points:

- **Failure to effectively manage waste at events presents direct and indirect risks to the health and safety of employees and those attending**
- **Event organisers should continuously monitor the build-up of any waste (especially combustible materials) during the event and take necessary measures to remove it**
- **Plan for the storage, handling and transport of general waste and sewage**
- **Event organisers should assess the risks associated with generation, storage, handling and transport of waste, and take appropriate precautions**
- **Ensure that contractors appointed to handle, remove and dispose of waste are competent**
- **Contractors should assess and manage the risks associated with their activities**
- **Event organisers and contractors may have duties under environmental protection legislation enforced by the Environment Agency and Scottish Environment Protection Agency**

16.1 Workers, the food and merchandising outlets, and the audience at most events will generate large quantities of waste materials. This chapter seeks to help organisers assess and manage risks associated with waste accumulation, collection and disposal.

16.2 Failure to properly manage waste may result in a risk to the health of workers handling waste, a risk of fire, compromise emergency escape routes and present health risks to those at the event.

legislation

16.3 Event organisers have a duty under the Health and Safety at Work etc Act 1974 (HSWA) to ensure, as far as is reasonably practicable, to safeguard the health and safety of their employees and others involved in the handling, storage, transport and disposal of waste.

Consider referencing:

- <http://www.hse.gov.uk/event-safety/handling-waste.htm> and <http://www.hse.gov.uk/pubns/waste15.pdf>

planning

16.4 Organisers should carefully plan for managing waste on site, whether they take primary control for waste management or engage the services of a contractor. Effective planning will involve discussions between organisers, site owners, including landowners, local authorities and contractors.

16.5 If contractors are engaged to handle, store or transport waste, they should be provided with sufficient information to ensure this is done properly including:

- audience size
- numbers of toilets
- number of food outlets and similar facilities
- site plans
- site rules for transport movements
- range of likely types of waste to be managed

16.6 There is specific legislation on waste management aimed at protecting the public and the environment. The Environment Agency (EA) in England and Wales and the Scottish Environment Protection Agency (SEPA) in Scotland enforce this. Further guidance can be obtained from the EA, SEPA or a competent waste contractor.

- <http://www.environment-agency.gov.uk/business/topics/waste/default.aspx>
- <http://www.sepa.org.uk/waste.aspx>

types of waste at an event

16.7 Types of waste generated include the following:

- liquid waste, i.e. sewage from sanitary facilities and food outlets
- waste water from toilets, showers and hand-washing basins
- sanitary/medical waste, including sanitary towels and tampons, at toilet facilities; syringes, needles and bandages from First Aid posts and nappies from changing rooms
- organic waste, such as catering waste, leftover food from concessions, cooking oil and residues, and liquid food waste
- grounds maintenance waste
- metal waste, e.g. construction/demolition materials
- residual waste, such as food and drink-contaminated packaging, unrecyclable materials, composite packaging, cigarettes, paper tissue, etc
- clothing and textiles
- recyclable waste, such as paper and cardboard packaging, glass, metal packaging (cans), plastic bottles
- human waste products (vomit, urine and faeces) either at toilet facilities or deposited on site in or outside of receptacles
- animal waste, primarily faeces but also clippings, feathers, and animal bedding which is usually contaminated with urine and faeces
- hazardous and special waste, e.g. fireworks and pyrotechnics
- batteries, fluorescent tubes
- gas cylinders, broken equipment, unused paints, diesel/fuels

hazards posed by waste

16.8 There are a number of hazards associated with poor management of waste:

- accumulations of waste blocking emergency access or escape routes hamper movement around the site, as well as presenting tripping hazards to the audience
- fire hazards when waste is accidentally or purposely ignited
- vehicle movements associated with the collection of waste materials

16.9 Other waste-specific hazards include:

- injury to workers during handling of waste on site, e.g. needle stick injuries, back strains due to manual handling, and possible infection by pathogens, including Tetanus and Leptospirosis, E-Coli and Salmonella
- the misuse of waste by the audience, e.g. throwing bottles and cans which is a public order matter covered by the Public Order Act and enforced by the police
- waste attracting insects and vermin, and the consequent risks to health
- risk of fire/explosion from gas cylinders



assessing risk and putting controls in place

16.10 Event organisers and/or their contractors must assess the risks posed by waste hazards and take action to control them. To assist in this, the remainder of this chapter highlights points to consider.

the collection and handling of waste on site

16.11 The method of collections and safe handling of waste on site will depend on a number of factors, including the type and volume of waste expected, plus how, when and where it will be collected and then finally removed.

16.12 Waste and the type of waste products will not be generated evenly across the venue or site. The build-up of waste will vary in different areas over time. An organiser/waste contractor will therefore need to manage their workers and equipment to ensure that there are adequate resources directed to the most appropriate areas at the relevant times. Each area of the venue or site may need to be managed differently.

Pay special attention to the following areas:

- entrances and exits
- arenas and stages
- sanitary areas
- animal areas
- first-aid areas and health-care waste
- catering areas
- camping areas

methods of collection

16.13 The collection of waste from the site or arena usually involves a combination of the following:

- the use of sweeper vehicles and vacuum suction vehicles
- vacuum tankers for collection of wastewater temporarily held in smaller tanks, e.g. temporary toilets
- other vehicles, trailers and towing vehicles for transport to waste storage area/collection point
- compaction refuse-collection vehicles
- skip vehicles
- tractor or forklift mounted grabs and forks
- standard HGVs
- workers specifically trained to pick the waste up (litter pickers), and/or empty the receptacles placed around the site or venue

16.14 Consider any special requirements regarding access or height restrictions and storage space for vehicles.

receptacles

16.15 Waste receptacles can be positioned around the perimeter of the venue or site, and they can also be located within the venue or site or other areas as appropriate. Great care must be exercised in choice, size and location of receptacles. Wheeled containers or similar receptacles are versatile, as they can be obtained in a variety of sizes and are equipped with lids. They can be positioned easily and manoeuvred as required. Also consider providing tamper-proof sharps bins.

16.16 Steel drums are difficult to manoeuvre and empty when full, so assess their use. Skips can also be used but again their positioning requires planning to ensure that there

is suitable access for delivery and collection, especially in wet weather. Generally, position skips in areas separated from the audience. Waste receptacles can be set on fire, so they require regular monitoring.

16.17 Large on-site compactors can be used to reduce the bulk of the refuse. They will need to be plugged into a suitable three-phase electrical supply and a trained operative should be available at all times. Separate front-end-loader containers from the audience for reasons of safety, access for loading, and to prevent un-compactable, hazardous or other inappropriate waste being placed into these units.

recycling

16.18 General waste from events is classed as commercial and industrial waste, to which the pre-treatment regulations (of the Landfill Directive) apply.

- <http://www.environment-agency.gov.uk/business/topics/waste/32122.aspx>

This means if waste is disposed of to landfill, recycling is compulsory. Sorting on site is preferred to sorting after the event due to the poor results that this often provides. The pre-treatment regulations are assumed to have been complied with if waste is disposed of to non-landfill outlets, such as energy from waste. The options for recycling on site include designated recycling containers.

16.19 These can either be small, wheeled containers, which are then collected to allow further sorting of the materials, or they can be larger banks, such as those provided by specialist contractors. The effectiveness of the segregation systems for recycling will be dependent upon the good will of the attendees to the event, and adequate provision of recycling containers that are clearly and unambiguously labelled (preferably with pictograms) and appropriately located. In order to prevent contamination of recyclable waste, the use of material-specific apertures should be considered so no other items can be deposited into the recycling container.

- Consideration should be given to the possibility of composting organic waste on suitable sites.
- Composting of animal wastes may be carried out at suitable facilities on or off site.

handling waste

16.20 Organisers or contractors responsible for handling waste should take appropriate steps to manage the risk of employees sustaining injuries from manual handling operations. Where providing appropriate equipment or systems of work cannot prevent manual-handling risks, an assessment should be carried out that identifies control measures.

Further information on the controlling of these risks can be obtained from <http://www.hse.gov.uk/msd/risk.htm> which also provides tools for assessment. See Chapter 2 of the Purple Guide

16.21 Staff must be competent to handle waste. Organisers and their waste contractors must provide them with suitable and sufficient instructions, training and supervision to allow the work to be carried out safely.

16.22 The Personal Protective Equipment Regulations 1992 also require an employer to ensure that their employees have suitable and sufficient protective clothing and equipment to carry out their tasks. The choice of protective clothing should be based on a risk assessment. Items should be appropriate for the task and fit the wearer.

16.23 Examples of suitable clothing for both contractors and others handling waste may include:

- protective gloves
- protective boots or shoes with metal toe caps
- protective overalls, trousers and jackets
- waterproof clothing
- high-visibility clothing
- protective eye wear

16.24 Those handling waste need access to hot and cold-running water, soap and nail brushes to wash their hands and bodies if they become contaminated. Washing facilities must be available, particularly at the final waste-collection process, and in some circumstances showers will be necessary.



removal of waste from site

16.25 Organisers will have a duty of care under environmental legislation to ensure the safe removal and disposal of waste by registered contractors.

- <http://www.environment-agency.gov.uk/business/topics/waste/default.aspx>
- <http://www.sepa.org.uk/waste.aspx>

16.26 Waste contractors should be given information on the premises or site layout, including location of waste facilities and traffic routes, for removal of waste from site. There may be areas that are subject to a ban on vehicle movements during the event to protect the audience. The sites chosen for the bulk collection of waste must have a suitable access route capable of taking the weight of often very large collection vehicles. These could weigh up to 38 tonnes.

16.27 Contractors should also be given a copy of the site safety rules and information concerning any significant risks highlighted in the event risk assessments.

16.28 It is important for organisers to appoint competent contractors. At the planning stage, organisers can check whether contractors have knowledge and experience of similar events, seek information on previous health and safety performance, and examine their safety policies, risk assessments and methods of working.

Organisers should obtain and keep a collection note in respect of all waste removed from site.

times of collection

16.29 Discuss with the waste removal contractor/s the strategy for collection of the waste for the whole duration of the event, including pre and post-event collections. Different collection methods may need to be planned for each of these phases.

18. sanitation



Please note: The information contained in this chapter sets out good practice that should be considered by event organisers. However, it is industry guidance and does not necessarily cover everything that organisers need to consider for a particular event.

key points:

- **Event organisers must provide suitable and sufficient sanitary and welfare facilities for workers at an event**
- **Responsible organisers will provide appropriate sanitary and welfare facilities for the audience**
- **Provision of welfare facilities for the audience has positive benefits in controlling health risks and contributing to audience wellbeing and behaviour**
- **Licensing legislation enforced by Local Authorities may require provision of sanitary and welfare facilities for those attending**

18.1 As part of event planning, organisers will need to consider welfare and sanitary provision for workers. In terms of protecting public health, organisers will also have to think about welfare and sanitary provision for those expected to attend the event.

legislation

18.2 The Workplace (Health, Safety, and Welfare) Regulations 1992 require that suitable and sufficient toilets and welfare facilities must be provided for employees at workplaces.

18.3 It is likely that separate facilities will have to be provided for food handlers (catering staff) under public entertainment licensing. For further information, see Regulation (EC) No 852/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs.

18.4 There is no direct legal requirement under the Health and Safety at Work etc Act 1974 (HSWA) to provide toilets and wash facilities for non-employees. Similarly, health and safety law does not prescribe numbers and types of toilets and wash facilities for use by an audience. However, supply of adequate toilet and washing facilities is important in the prevention of health risks. Lack of sufficient provision may also result in crowd disorder.

18.5 The Equality Act 2010 will apply with regard to sanitary accommodation for people with special needs. <https://www.gov.uk/equality-act-2010-guidance>

18.6 The provision of a healthy drinking-water supply for the audience is primarily governed by legislation enforced by the Drinking Water Inspectorate (DWI). See Chapter 21 - Food, Drink and Water

18.7 In all circumstances, the scale of welfare facilities required will depend on the nature of the event, worker and audience profile, and the type of venue.

welfare for workers

18.8 Guidance on welfare facilities for workers, including the number and type of toilets and wash facilities, is in the accompanying code of practice to the Workplace (Health, Safety, and Welfare) Regulations

1992. <http://www.legislation.gov.uk/ukxi/1992/3004/contents/made>

Further guidance on the provision of welfare facilities during construction work is in the Health and Safety Executives (HSE) Construction Information Sheet 59 and BS 6465-1:2006. <http://www.hse.gov.uk/pubns/cis59.pdf>

welfare for the audience

18.9 Consider the number and type of toilets and washing facilities as part of an assessment of needs. Key factors to take into account include: audience size and demographics, e.g. provision of suitable facilities for children, elderly or disabled and wheelchair users attending, who may take longer to use a facility

- duration of the event
- location of the event and type of venue, e.g. a stadium or greenfield site.
- type of facilities available, e.g. cubicles or urinals

- frequency of emptying temporary toilets
- access to mains services temporary or otherwise
- perceived audience food and fluid consumption
- requirements during intervals and breaks in performance when use may peak
- requirements for campsites
- weather conditions and temperature
- plus any other factors relevant to the event

18.10 Ground conditions must be considered for allowing vehicle access to both public and workers sanitation points. By nature, tanker lorries are large and very heavy when full, but are imperative where facilities are not connected to mains water or drainage.

18.11 By examining the factors above, it should be possible to determine what level of facilities will be required to reduce the likelihood of excessive queuing. Rapid and constant use of facilities can lead to overcrowding, possible disorder and unhealthy conditions.



temporary toilets

18.12 There are a number of different types of temporary toilets available for hire, from cubicles to urinals. The risk assessment should help to identify the type of temporary toilets suitable for the event.

18.13 Consider the perceived peak usage of any toilet units and the time taken for cisterns to fill. Rapid and constant use of any toilet can cause the bowls to become unsanitary and prone to blockages.

18.14 Temporary mains units can be used if a sewer, drain, septic tank, or cesspool is available, provided an adequate water supply and sufficient water pressure are available. Recirculating self-contained units are not reliant on the availability of drains or water services.

18.15 Single self-contained portable units are versatile but are limited to a maximum number of uses before requiring servicing/emptying. Trenches and latrines may be appropriate for some events. Advice should be sought from the Environment Agency, or Scottish Environmental Protection Agency, and Local Authority regarding the suitability of trenches and latrines for each event, and for any local guidelines ensuring safe and hygienic use.

- <http://www.environment-agency.gov.uk/>
- <http://www.sepa.org.uk/>

18.16 Wherever non-mains units are used, provision for safe and hygienic waste removal should be arranged with holding-tank facilities, if required.

NB: See The Purple Guides [Chapter 16](#) on Waste Management for further details.

number of temporary toilets for the audience

18.17 Organisers need to know the audience size and likely male to female ratio when determining the number of toilets required for an event. When there is insufficient information to assess this ratio, a split of male to female 50:50 should be assumed.

18.18 With regards to numbers, event organisers have used the information shown in Table 1 to inform their decision-making process. However, an event-specific assessment of needs will determine whether additional or a different balance of facilities is required, for example, an organisation may decide to provide female and male urinals in addition to the traditional cubicles for greater speed of use and a reduction in the length of queues.

18.19 Events where campsites are provided have differing requirements on ratios of urinals and WCs. Table 1 takes this into account.

18.20 A number of events are now using urinals for both males and females. Female urinals can increase throughput and reduce queuing at temporary toilets but have not yet gained widespread public approval. Organisers may wish to consider these where the age and profile of the audience makes it appropriate to include them. However, care should be taken to ensure that there are an adequate number of traditional female WCs to cover those who do not find these systems acceptable.

The table below provides guidance on sanitation provision at a variety of event types and is based on practical experience. Consideration should also be given to the legal and safe disposal of effluent.

	Female Toilets	Male Toilets
For events with a gate time of less than 6-hours duration opening	1 per 100	1 per 500, plus 1 urinal per 150
For events with a gate opening time of 6 hours or more, but with little or no alcohol or food served	1 per 85	1 per 425, plus 1 urinal per 125
For events with a gate opening time of 6 hours or more, with alcohol and food served in quantity	1 per 75	1 per 400, plus 1 urinal per 100
For campsites at major events, swapping the emphasis from urinal to WCs for males	1 per 75	1 per 150, plus 1 urinal per 250

Table 1: Guide to provision of toilet facilities

18.21 Further guidance on sanitary installations can be found in [BS64651:2006 Sanitary installations. Code of practice for the design of sanitary facilities and scales of provision of sanitary and associated appliances.](#)