



National Operational Guidance

Section Introduction



NFCC
Fire Central
Programme Office

Developed and maintained by the NFCC



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Introduction

UK fire and rescue services attend around 300 significant fires in waste sites each year. Fires occur at waste sites that are permitted or licensed by environmental agencies, that have an exemption from the relevant environmental agency, and also at waste sites that operate illegally.

Many waste sites are managed by professional operators, which strictly adhere to regulations and good practice in controlling hazards on site. However, other sites are managed badly or are illegal and have little regard for regulations or health and safety. Hazards at illegal sites may present an even greater risk to firefighters, as there may not be enough information on the content of the waste stored on site, or good operating practices may not be followed.

This guidance provides recommended good practice for dealing with hazards associated with waste fires. It takes lessons from many incidents and offers tactical advice and strategic considerations. It offers a range of control measures that can be used at waste fires.

This guidance should be read in conjunction with other guidance, in particular National Operational Guidance: [Environmental protection](#) and the [Environment Agency and DCLG Environmental handbook](#). Where other guidance has details that are appropriate and relevant to the subject matter being discussed, this will be identified and signposted in this guidance.

Fires in waste sites are often difficult to extinguish, needing a lot of resources for long periods, and can have serious effects on public health, the environment, safety to firefighters and local communities. Impacts may be short term or long term, including:

- Public health impacts on responders and communities
- The public being evacuated or sheltering in place
- Environmental impacts
- Pollution of surface and groundwater
- Road closures
- High demand on fire and rescue services and other agency resources
- Large-scale financial losses and disruption

This guidance applies to waste fires that require more than one jet. It applies to fires at waste sites, renewable energy facilities and other sites where waste is handled, stored or transported as part of a wider operation.

The Waste Industry Safety and Health (WISH) forum code of practice on [Reducing fire risk at waste management sites](#) applies to sites storing more than 50m³ of waste. This is approximately the size



of a full double garage. The types of waste commonly encountered are:

- Paper, cardboard, plastics, wood and wood products
- Rubber (natural or synthetic), including whole, shredded or crumbed tyres
- Component waste, such as from vehicle dismantling
- Refuse derived fuels (RDF), solid recovered fuels (SRF) and similar fuels
- [Waste electrical and electronic equipment \(WEEE\)](#), containing combustible materials

Waste is generally considered hazardous if it (or the material or substances it contains) is harmful to humans or the environment. Examples of hazardous waste include:

- Asbestos
- Chemicals, such as brake fluid or print toner
- Batteries
- Solvents
- Pesticides
- Oils
- Equipment containing ozone depleting substances, such as fridges
- Hazardous waste containers

When dealing with waste fires, the fire and rescue service incident commander will have the ultimate say in how the incident will be managed and the strategy that will be used to bring the incident to a satisfactory conclusion.

However, there are often a number of conflicting views, pressures or powers from interested parties such as the public, the site operator, insurance companies, public health agencies, environment agencies and local authorities.

These conflicting views can be difficult to manage and can place the incident commander under considerable pressure to find a solution that fits the differing priorities from different organisations.

The hazards identified in this guidance focus on hazards to people (public and responding agencies) and hazards to the environment. This guidance identifies control measures that can help to reduce or remove the risk to people and the environment resulting from these types of fires.

Where appropriate, this guidance will direct the reader to other areas of guidance where the hazard and/or control measures are covered.

The following waste sites have been considered in developing this guidance; these sites may hold a permit, or have an exemption, from the relevant environmental agency or may be illegal sites.

Landfill



Landfill activities involve the development of land so that waste can be deposited in an environmentally safe manner. The waste is usually deposited in separate cells, which are filled with compacted waste materials, progressively covered and then sealed with a permanent cap. The waste handled may be inert, non-hazardous or hazardous, depending on the type of landfill or permit held.

Biodegradable materials degrade to release landfill gas, which is mainly composed of methane and carbon dioxide. Increasingly, this landfill gas is being collected for combustion and energy conversion.

Waste decomposing and water passing through the waste give rise to leachate - a mixture of organic degradation products, liquid wastes and rainwater. Leachate is extremely variable in composition, depending on the nature of the waste in the landfill, the landfill design and so on. Leachate is collected in a network of pipes, removed from the landfill and treated.

Thermal treatment

Thermal treatment technologies include incineration (energy from waste plants) and advanced conversion technologies such as anaerobic digestion, gasification and pyrolysis. These technologies use a variety of processes to convert waste into energy and/or by-product fuels to be used in associated power generation activities.

Note: The term 'waste' is generally considered to mean unwanted products for disposal, recycling or recovery. However, in advanced conversion sites (anaerobic digestion sites), some material used is grown exclusively for the process and is therefore not a waste product. For the purpose of this guidance the term 'waste' is used generically to describe all material.

Civic amenity sites

Civic amenity sites are controlled areas where the public can dispose of household waste. The waste accepted varies from site to site, but typically includes bulky household items and material for recycling. Civic amenity sites often also collect hazardous, explosive and flammable materials.

Transfer stations

Transfer stations are facilities where waste or recyclable materials from separate collection vehicles are combined into loads to be transported to waste treatment or disposal facilities. The waste or recyclable material may be compacted or bulked before transportation.

Waste treatment sites or facilities

These facilities collect and hold large quantities of waste received from transfer stations, to support the process of turning waste into a new substance or product. These sites would include, for



example, end of life vehicle (ELV) sites.



Relevant legislation for fire and rescue services

Many pieces of legislation have an impact on fire and rescue services as they pursue their fundamental duties, including:

- [Fire and Rescue Services Act 2004](#)
- [Civil Contingencies Act 2004](#)
- [Civil Contingencies Act 2004 \(Contingency Planning\) \(Amendment\) Regulations 2011](#)
- [Dangerous Substances and Explosive Atmospheres Regulations 2002](#)
- <http://www.legislation.gov.uk/ukxi/1997/1713/contents/made>[The Confined Spaces Regulations 1997](#)
- <http://www.legislation.gov.uk/ukxi/2005/735/contents/made>[The Work at Height Regulations 2005](#)
- <http://www.legislation.gov.uk/ukpga/1984/60/contents>[Police and Criminal Evidence Act 1984](#)
- [The Environmental Permitting \(England and Wales\) Regulations 2010](#)
- [The Environmental Damage \(Prevention and Remediation\) \(England\) Regulations 2015](#)
- [Water Act 2003](#)
- [Regulatory Reform \(Fire Safety\) Order 2005](#)

Fire and rescue services should also consider whether they need to refer to local acts for the storage of waste in their area.



Risk management plan

Each fire and rescue authority must develop their strategic direction through their risk management plan. To determine the extent of their firefighting capability, strategic managers will consider their statutory duties and the foreseeable risk within their area.

Work to identify risk and prepare operational plans should be carried out with all stakeholders in mind, including local emergency planning groups and the fire and rescue service's risk



management plan.



Responsibility of fire and rescue services

Fire and rescue services are responsible, under legislation and regulations, for developing policies and procedures and to provide information, instruction, training and supervision to their personnel about foreseeable hazards and the control measures used to reduce the risks arising from those hazards.

This guidance sets out to provide fire and rescue services with sufficient knowledge about the potential hazards their personnel could encounter when attending incidents. Fire and rescue services should ensure their policies, procedures and training cover all of the hazards and control measures contained within this guidance.