

Preventing fires at waste sites

Steps and checks you can take to reduce the risk of fire October 2013

There have recently been a number of large and extensive fires at waste sites. Some fires are taking days or even weeks to extinguish and the costs associated with tackling the fire and subsequent clean up can be huge. This note provides you with information on the common causes of fires with a general checklist of actions that can be taken to reduce risks

Some of the common causes of fires at waste sites

Arson/vandalism	storage of incompatible materials	ignition of flammable vapours
naked flames/smoking	incidents related to welding and cutting	electrical faults/heating faults/equipment failures
self heating of waste that has been stockpiled for too long	neighbouring site activities	explosions where dusty material has built up in a confined space

If you store combustible wastes on your site (for example: wood, paper, plastic, textiles, WEEE, ELVs, tyres) do you know the fire risks? You can check by answering the following questions about your site:



Do you have an up-to-date accident and emergency plan with a fire response plan?

Does it reflect current activities and waste types on site?

Is it easily accessible if a fire breaks out?

Are your staff familiar with the plan and what to do if a fire breaks out on site?

Your fire response plan should be clear about:

- what steps you can take to prevent a fire at your site
- the risks and effects if there was a fire
- how you can minimise those risks
- the options for tackling the fire and limiting its spread
- the options for managing fire water
- the location of any flammable/dangerous substances, for example solvents, aerosols, gas cylinders and how to isolate them
- the location of sensitive receptors (including: schools, hospitals, rivers, conservation areas) and how to protect them

Below are some points you can use to identify fire risks at your site. There are also some general suggestions to help prevent or minimise the impacts of fire at your site. It isn't a detailed list because the waste types you handle and store on site will have specific risks. **If you are unsure of the fire risk your site poses or you need specific advice - contact your local fire and rescue service (FRS).**

<p>What are the potential sources of ignition on your site? Is your site secure to minimise arson attacks?</p>	<p>Keep sources of ignition (for example: heating pipes, light bulbs, space heaters machinery) at least 6 metres from waste. Some recent fires have been fires caused by sparks from metal loading buckets setting fire to paper and plastic. Do you need to consider fitting polypropylene/rubber strips on loader buckets to stop sparks?</p>
<p>Do you know what your fire fighting options are?</p>	<p>Where is the nearest water supply? Are there any fire breaks or physical fire barriers on site to prevent fire spreading? Can fire water be contained?</p>
<p>Do you have any fire detection and suppression systems in place?</p>	<p>For example do you have smoke detectors/sprinklers/drenches/heat probes?</p>
<p>Who and what could be impacted by a fire on your site?</p>	<p>Think about any rivers, water abstractions, schools, hospitals, housing estates, rail and road routes, power supplies, sporting venues.</p>
<p>What types of combustible materials are stored at your site? How much? Where is it located?</p>	<p>If a fire breaks out can waste types be easily segregated to prevent the fire spreading? Can gas cylinders or highly flammable wastes be moved and isolated.</p>
<p>Do you know the risks from the wastes and combustible materials stored on your site?</p>	<p>Where are gas bottles and flammable liquids stored? Do you store wastes like aerosols in cages? This can prevent them exploding and propelling across the site potentially spreading the fire or injuring fire fighters.</p>
<p>How much separation is there between stacks/stockpiles/ buildings/boundary fences and so on?</p>	<p>Ensure stockpiles are spaced so that there are adequate firebreaks to prevent fire spreading. Is the distance between the stockpiles sufficient to allow access to all areas of the waste for fire fighting? You may need to agree the size of the firebreak with the FRS because different waste types and stack dimensions will affect this distance.</p>
<p>How do you manage the waste to minimise storage time? How big are stacks/stockpiles?</p>	<p>Storing combustible waste in stockpiles for long periods can result in the centre of the pile heating up and catching fire. This has been the cause of a number of recent fires. Larger stacks and stockpiles are more likely to self heat and smoulder if stored over long periods. You can use a temperature probe to check the temperature in the centre of stockpiles. This will allow you to take steps to prevent a fire breaking out. Storing waste in several separate smaller stockpiles with fire breaks reduces the fire risk.</p>
<p>Does the waste consist of large items, large lumps, or piles of fines/chips/shred? How is the waste stored? Is it stockpiled, baled, loose or is it in a building?</p>	<p>Large items and waste consisting of lumps are likely to result in intense short lived fires. Fines and baled waste will smoulder causing smoke and nuisance for a longer periods of time. How waste is stored can affect how the fire can be tackled. For example waste bales that are bound with wire cannot be broken open easily to tackle the fire. This means it takes longer to put the fire out and the fire smoulders for longer periods of time causing disruption and nuisance.</p>

