

Adapting to climate change

The waste industry

Case study 1: Improved site management can help the waste sector adapt to climate change

Adapting to climate change often requires changes to existing strategies and practices, rather than the creation of new ones. One of the effects of climate change is likely to be the exacerbation of problems that occur on waste management sites under normal changeable weather conditions. This suggests that prompt and effective management of identified problems at an early stage could make sites more resilient to the impacts of climate change.

Our climate is changing and no matter what action we take to reduce emissions of greenhouse gases, some degree of change is now inevitable. As our climate changes, it is likely that winters in the UK will become warmer and wetter while summers are expected to become hotter and drier.



The frequency and severity of extreme events such as severe storms and heat waves is likely to increase, sea levels will continue to rise and coastal erosion may accelerate.

Impacts on the sector

There is some evidence that extreme weather events are impacting upon the management and operation of waste management facilities, however in most cases the causal link cannot be proven using available data. However, well-managed waste facilities appear better able to cope with extreme weather events. Poor site management practices, even within permit requirements, can lead to problems in the event of extreme weather.



Examples identified by Environment Agency research (2008) include:

- Where on-site drainage is not well maintained, or tracks become rutted, heavy rainfall can overwhelm or bypass drainage systems during storms and can lead to contaminated water flowing off site.
- Failure to maintain leachate pumps and levels could result in pump failure during periods of high rainfall when leachate is temporarily elevated.
- Poorly maintained netting and similar waste containment methods are unlikely to withstand sustained or intense winds, resulting in more blown litter.

Responding to the Challenge

Higher magnitude and longer term impacts require a strategic approach (see case study 3), but the examples above show that there are many things that can be done as part of good routine site management and operation that will improve the resilience of a facility to an extreme event when it occurs.

Operators need to understand their sites' increasing vulnerability to climate-related risks and that good on-site management can minimise the chances of non-compliances or pollution incidents



It is particularly important to emphasise that issues not necessarily contrary to permit conditions may result in a pollution incident should a severe weather event occur. This should be tackled through awareness-raising and industry training.

We should consider aspects of site operation and management that could be affected by climate change and, where necessary, include advice on increasing resilience in guidance for environment officers.

References

Environment Agency, 2008. The Impact of Climate change on Waste Regulation, Science Report – SC030305/SR.