

THE FIGHT AGAINST WHEELIE BIN FIRES



Chiltern International Fire was approached by Merseyside Fire and Rescue and South Yorkshire Fire and Rescue services and asked to conduct a research project into domestic wheelie bin fires.



This research was commissioned after two separate arson events involving domestic wheelie bins resulted in the deaths of five people, within the localities of the above fire authorities.

In both cases youths are believed to have set fire to wheelie bins that were stored close to the residence and the fire broke through either a window or door and into the building. To understand the dangers of wheelie bin fires Table 1 shows some estimations as to the energy released from the burning of different sized bins.

Bin Volume	Bin Weight	Potential Total Heat Release (not including contents)	Estimated peak energy output*
80 lt.	9.5 Kg	427.5 MJ	0.95Mw
120 lt.	11.3 Kg	508.5 MJ	1.13Mw
240 lt.	15.5 Kg	697.5 MJ	1.55Mw
340 lt.	23 Kg	1035.0 MJ	2.30Mw

* These are provisional estimations based on observed burn rates in preliminary testing.

Six areas were identified as possible sources of statistical data relating specifically to wheelie bin fires:

- Fire Brigades and the Fire Statistics Department of the ODPM
- District Councils – Waste collection – Environmental departments
- Wheelie bin manufacturers
- Insurance companies
- Police – Community Support – Crime Stoppers
- Internet / Media

Findings:

- There were an estimated 29,884 wheelie bin fires in the UK in 2006
- Cost of attending a wheelie bin fire as stated by the ODPM (2005) is £1650
- The estimated total cost for wheelie bin fires in 2006 was £49,308,600. This does not take into account the cost of replacing the bin, the cleaning up or any other damage caused to any adjacent buildings, fences, etc.
- Wheelie bins are now outside 56% of UK households, that is a minimum of 14.5 million wheelie bins. In addition to this many households have additional wheelie bins for paper and green waste recycling
- 29 people were hospitalised due to wheelie bin fires in 2006. In all the cases they suffered from smoke inhalation.
- In the last three years there have been three fatal fires and a total of six deaths due to arson events where wheelie bins were ignited at the front door of a family home.



Increasing the public and government awareness of this issue may encourage bin owners to take better precautions and possibly encourage the government to take improved steps to solving the problem. However it could initially cause greater problems in advertising the fact that HDPE wheelie bins are an easy target.

WE ENCOURAGE ALL FIRE AND RESCUE SERVICES TO ADD WHEELIE BIN FIRES AS A SPECIFIC STOP CODE IN ORDER TO HELP TRACK THIS ESCALATING PROBLEM.

Chiltern International Fire offers a wide range of consultancy and engineering services in relation to fire. Together with the other companies in the TTL Chiltern Group, we operate as an acknowledged centre of excellence in the construction industry.

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