

Composition and re-use potential of household bulky WEEE in the UK

WRAP has undertaken research on the composition of bulky waste in terms of item type and re-use potential, in order to identify the barriers to and opportunities for the re-use of bulky items across the UK. Items disposed of via local authority kerbside bulky waste collections (BWC) and at Household Waste and Recycling Centres (HWRCs) were included in the research.

The research recorded all bulky waste by analysing call centre logs for bulky waste kerbside collections, compositional analysis of kerbside collected bulky waste for re-use potential and surveying individuals depositing bulky items at HWRC's. Bulky waste items included WRAP's priority materials of WEEE, textiles and furniture.

Figure 1: Estimated tonnes of main WEEE items within bulky waste, UK 2010/11 (tonnes)

Item summary	HWRC national estimate	BWC national estimate	Total national estimate
Television	92,415	9,980	102,395
Fridge freezer	8,954	19,529	28,483
Washing machine	13,375	14,310	27,685
Microwave	17,143	1,840	18,983
All other WEEE items	Not Calculated	Not Calculated	132,000

How much WEEE is there in bulky waste?

Around 19% of all bulky waste disposed of in the UK is WEEE. This is equivalent of 310,000 tonnes.

What are the main WEEE products within bulky waste?

Within the kerbside bulky waste collections, fridge-freezers, washing machines and cookers were the items most commonly set out for collection followed by televisions, freezers and fridges.

40% of WEEE items collected at HWRCs comprised of televisions. Microwaves, washing machines, cookers and fridge-freezers are also frequently disposed of at HWRCs.

90% of televisions taken to HWRCs are cathode ray tube (CRT) televisions. One quarter of all televisions disposed have a screen 14 inches or less (portable

televisions). Almost 20% of all televisions are more than 32 inch CRTs.

How much could be re-used?

Over 40% of WEEE items collected at HWRCs were visually assessed as being suitable for re-use. Adding in those items that were assessed as suitable for re-use following minor repair, the figure rises to more than 60%.

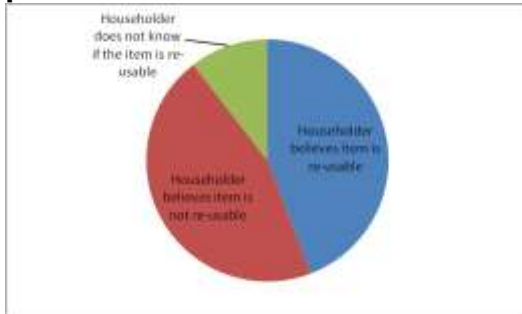
WRAP previously conducted research into the potential for re-use of WEEE collected at HWRCs^[1]. This research included testing of items and suggests that 49% of large WEEE collected at HWRCs is able to be re-used immediately or following viable repair and refurbishment. This is less than that stated above. The difference therefore between the previous WRAP research (where 49% of large WEEE was identified as re-usable) and data collected during this study (64%) is

[1] www.wrap.org.uk/downloads/WRAP_WEEE_HWRC_summary_report.7bc803d8.11560.pdf

likely to be a result of a visual rather than physical assessment of the items.

Householders were asked for their opinion on the re-use potential of their WEEE and 44% was deemed to be re-usable as shown in Figure 2.

Figure 2: Householder opinion of re-use potential of their WEEE items



Over 20% of WEEE items collected at the kerbside were visually assessed as being suitable for re-use.

What are the opportunities?

The main opportunities are within the large domestic appliance and cooling appliance categories. These items arise frequently at HWRCs and BWC and result in large tonnage.

Whilst large numbers of televisions are arising at HWRCs, the vast majority are CRT. When the digital switchover is complete and the number of CRT televisions in use declines, it is unclear whether (flat screen) televisions will continue to arise in such high numbers.

Are there any demographic differences?

Differences were not evident based on geographic location. More ACORN^[2] Category 1 households ("Wealthy Achievers") were found to set out WEEE for collection at the kerbside and take WEEE to HWRCs than other household types.

Are there any differences between WEEE taken to a HWRC and set out for a BWC?

The type of WEEE items collected at HWRCs is different to those collected at the kerbside.

Figure 3: Commonly disposed of WEEE items

BWC	HWRC
Fridge-freezers	Televisions
Washing-machines	Microwaves
Cookers	Washing-machines
Televisions	Cookers
Freezers	Fridge-freezers
Fridges	

Whilst 40% of WEEE items collected at HWRCs are televisions, the diversity of items taken to the HWRC is much larger than collected at the kerbside. 44 different items make up the 10% 'Other WEEE' category.

[2] ACORN (acronym for A Classification Of Residential Neighbourhoods) is a geo-demographic information system categorising some United Kingdom postcodes into various types.

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