Trialling the re-use of used EEE from Leeds City Council HWRCs

Background

Leeds City Council (LCC) has been working in close partnership with its WEEE producer compliance scheme (PCS), WeeeLink, to establish better systems for managing used EEE. A formal segregation system for used EEE was originally established in April 2012. The process applies across all nine of LCC's HWRC sites. The items targeted include: Large domestic appliances and white goods; fridges; Dyson vacuums and display equipment. These are collected, tested and re-sold via a partnership with five charities. LCC engaged in a WRAP funded trial to further enhance this system by:

- Capturing detailed monitoring data to understand the quantities, types, and working condition of used EEE deposited at HWRCs;
- Establishing whether its segregation systems could be improved to increase the quantities of working items sent to the charities;
- Extending the collection systems to include IT equipment and small mixed EEE items.

Key findings

- Based on monitoring and PAT testing of all items entering a single HWRC over a 7 day week, up to **42%** of used EEE was deemed to have re-sale potential.
- An estimated **17,000 items** that could potentially be re-used are instead being recycled at just one of LCC's HWRCs in Leeds each year.
- LCC was able to capture nearly 200 items at two sites over two months. 60 of these were resold at a value of **£1,500**.
- Accessing the full range of potentially re-usable items requires investment in resourcing **meet-and-greet**.

"The trial has helped us to quantify the EEE re-use potential at our sites and understand how to adapt our systems to exploit this opportunity."

Janice Frost, Waste Strategy Office, Leeds City Council

Trial Description

The trial involved three key stages:

1. Independent monitoring of used EEE entering a selected site over one week.
This involved one week of intercepting all householders depositing used EEE at LCC's Pudsey site in order to determine the types of appliances being deposited and their re-use potential. This provided LCC with detailed baseline data to facilitate informed decision making for future approaches to managing used EEE arisings at its HWRCs.

2. PAT testing of all equipment identified as having re-use potential over the one week trial period.
PAT testing was carried out at Pudsey HWRC to determine what items had the greatest re-use potential. This enabled LCC to determine if there were additional products, particularly from the small mixed EEE category that could be targeted through the existing re-use programme.

3. Based on the outcome of tasks 1 and 2, the systems at 2 HWRCs were reviewed, adapted and monitored.
Changes to the existing systems were based on the outcomes of stages 1 and 2. This involved targeting additional IT equipment, display equipment and small mixed used EEE items (such as garden, DIY, consumer electronics, and small kitchen items etc.) in order to generate additional income and volume.

Two sites were engaged, Pudsey and Meanwood Road. The existing system of segregation was reviewed and adapted, with site staff and the re-use collection charities engaged to try and raise awareness of the opportunity with site users. The additional service offering was then monitored over a 2 month period.

Trial Scope

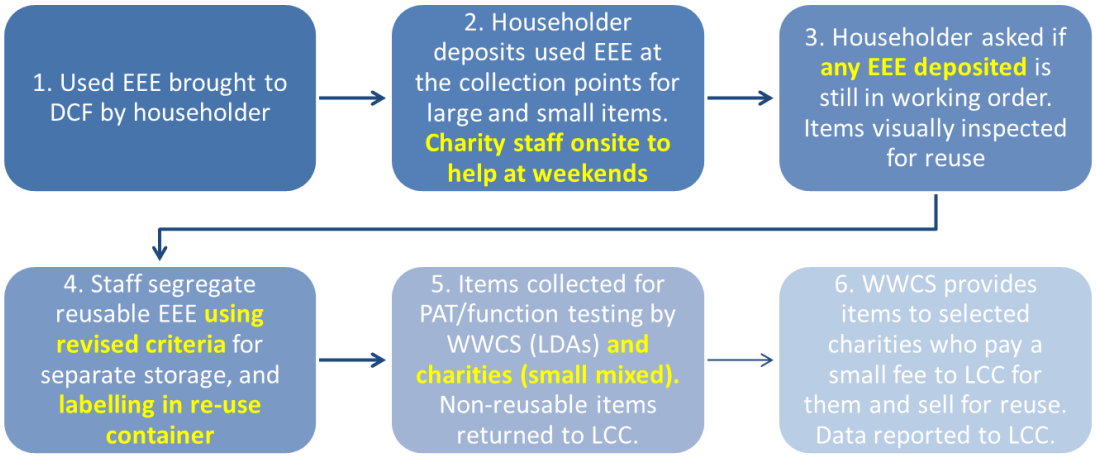
The independent monitoring of used EEE entering LCC's Pudsey site was carried out over a 7 day week in mid-May 2013. Pudsey was chosen for being representative of an average HWRC within Leeds and having sufficient space and staff to accommodate monitoring. A clear process was established including intercepting site users, capturing data on incoming EEE, visually assessing items, PAT testing, logging, labelling, and storing for collection.

Based on the findings from the week's monitoring, the systems at 2 HWRCs were reviewed, adapted and monitored. The two sites chosen were Pudsey and Meanwood Road.

The two sites are both busy, with each hosting a container for the re-use of bric-a-brac and furniture. Emmaus Leeds services the Meanwood Road site and Safe Haven services the Pudsey site re-use container. A revised process was established at both, with the new elements shown in yellow in the flow diagram below.

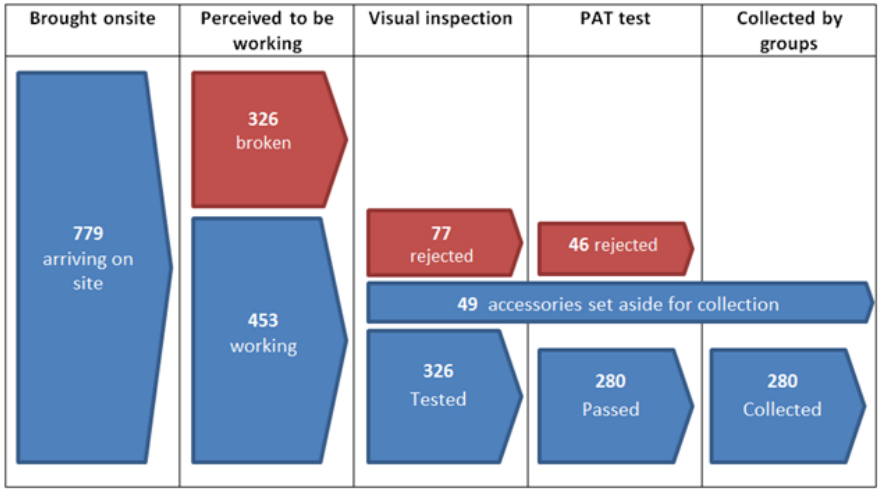
The approach was designed to minimise any additional burden on site staff and resources. The revised process included the presence of a member of staff from each of the re-use charities at each site at weekends.

Stage	Procedure
1	Monitor positioned at entrance to intercept householder as entering site
2	Householder asked what EEE items are being dropped off and if re-usable
3	Information recorded in a data capture form
4	Householder advised where to drop off the EEE if in working order
5	Items received on-site and checked by PAT tester
6	Items PAT tested and results recorded on data capture sheet
7	Items passing are stored for re-use collection by charities
8	Items failing are deposited in the recycling containers



Trial Tonnages

In total 779 items were brought on site during the 7 day monitoring at Pudsey and the fate of these items is illustrated below:



Of the 453 items identified as 'still working' by site users, 77 were immediately rejected upon visual inspection because they were clearly not re-saleable. There were 49 items that could not be PAT tested as they formed accessories to electronic equipment. These were set aside as they were still in good working order. PAT testing was then carried out on 326 items. Of these, 46 items failed and 280 passed. The 280 items passing the test, along with the 49 accessories (329 items in total) were then stored securely in the shipping container. The charities split the items between them to take away for further function testing and re-sale.

In total, the maximum potential for EEE re-use at the Pudsey site, based on the monitoring and testing, was 42%. However, this was based on having a team of three people intercepting every site user. The system was rolled out to two sites over a period of 2 months, but without the additional personnel in place to intercept site users at the same rate. Instead, existing site staff incorporated this into their roles and the re-use charities posted a member of staff on each site to help out at weekends. The results over the two month period are summarised below:

Category	Total items collected	Total items re-used	Re-sale value (£)
LDAs	43	23	990
Dysons	3	2	60
TVs	32	11	220
Small mixed EEE	86	25	273
IT	30	0	0
TOTAL	**194**	**60**	**1,543**

Category	Re-use success rate (%)
LDAs	54
Dysons	67
TVs	34
Small mixed EEE	29
IT	0
Average	**31**

The rate of re-usability for items taken off site for testing varied across the range of products collected, with LDAs and Dysons the highest.

Challenges and considerations

- Strong relationships - An important factor to consider is the contracted PCS for WEEE. In this case, the working partnership balances commercial compliance with innovative re-use activities.
- Demand - Leeds has a well-established cluster of third sector re-use organisations operating in the area delivering re-use services and the re-sale of used EEE. There is therefore a ready-made source of demand which is not the case for all Local Authorities.
- Existing systems - LCC and the charities had already established a system for segregating and collecting furniture and bric-a-brac. This made it much easier to capture additional items such as used EEE.
- Terminology - Communication with site users is a major factor in promoting any newly established drop-off point for used EEE re-use. The terminology used is highly significant. The words 'repair' and 'charity' communicated the principle of re-use more effectively than the word 're-use' itself, which was often taken to mean recycling.
- Monitoring - The extended monitoring of the trials proved that without the additional on-site resource to 'meet-and-greet', capture rates were significantly reduced. Councils might consider a short-term investment in meet-and-greet over a 2 to 3 month period in order to introduce and establish such re-use systems.

Conclusions and Recommendations

LCC will review the re-use system for LDAs, Dysons and display equipment. Given the existing systems in place, it would not be a significant undertaking in terms of cost or resource for LCC to continue to roll-out the broader collection of used EEE for re-use, by first of all targeting its highest-performing sites.

The additional income generated is sufficient to cover the additional activity, if the system is kept simple and the additional items continue to benefit the charities that LCC is working with in the area. If this is successful, the system could be extended to the other medium-performing sites. LCC must now consider how to continue to communicate and promote this activity in partnership with the charities it is working with.

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