

WR1204

Household Waste Prevention

Evidence Review:

L3 m3-6 (T) – Attitudes and Behaviours

Bulky Waste and Reuse

A report for Defra's
Waste and Resources Evidence Programme

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L3 m3-6 (T) Attitudes and behaviour Bulky waste and reuse

This paper is concerned with **consumer attitudes and behaviours** with respect to product reuse, through donation, selling or purchase via external channels. The evidence summarised here provides consumer insight on:

- The extent to which re-use behaviours are practised
- Socio-demographic variations in reuse behaviours
- The extent of bulky household waste for re-use
- Motivations for reuse behaviour
- Barriers to reuse behaviours – donation and the purchase of second hand goods
- Opportunities and barriers to progressing waste prevention through reuse, including practical lessons

The paper provides a specific focus on consumers to complement the evidence synthesis on the reuse sector in module [L2 m4/1](#) and the related summary in the Executive Report ([L1 m1](#)). The following modules all contain further commentary, information or data on reuse activity, and flag related consumer behaviour topic papers:

L1 m1 Executive report	L2 m3 Consumers – engaging L2 m4/1 Reuse and the third sector	L3 m3/1 (D) Extent to which waste prevention behaviours are practised L3 m3/2 (D) Motivations & barriers L3 m3/3 (D) Impacts of public campaigns and interventions L3 m5/2 (D) International Review L3 m7/1 (D) Stakeholder views on waste prevention L3 m3/4 (T) Attitudes & behaviour – food waste L3 m3/6 (T) Attitudes & behaviour – reuse L3 m3/7 (T) Attitudes & behaviour – everyday actions around the home
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(D) denotes a briefing paper providing more background detail; (T) indicates a short focused topic briefing

1.1 Context and evidence reviewed

Three different kinds of reuse were characterised on the basis of the evidence review:

- **Public reuse** – donation, exchange, selling or purchase of bulky goods or textiles (see also [L2 m4/1](#))
- **Private reuse** - everyday domestic behaviours such as carrier bag reuse or reusing plastic pots (see [L2 m3](#) and [L3 m3/1 \(D\)](#))
- **Service-supported private reuse** - where the review focused mainly on refillable packaging (see [L2 m2](#))

The evidence summarised in this paper covers ‘**public reuse**’ - what is normally seen as bulky waste, WEEE and textiles from a waste management perspective, as well as second hand retail in its various forms. Few studies have examined the consumer dimension of reuse as a central focus. Three are included here:

- A survey of 466 households in three areas in England (Curran & Williams, 2007; Curran et al, 2007);
- A street survey of 997 consumers in eastern England (Association of Charity Shops (ACS), 2006);
- A literature review of attitudes and behaviour to remanufactured, repaired and reused products (Watson, for the Centre for Remanufacturing and Reuse, 2008).

Other information has been gleaned from studies where reuse is part of a wider investigation of waste prevention behaviours (including WREP projects Dorset County Council et al, 2007, WR0116; Hampshire County Council and Brook Lyndhurst, 2008, WR0117; and Tucker and Douglas, 2007, WR0112) and academic papers (e.g. Barr et al, 2005; Barr, 2007).

Beyond the existing evidence, initial consumer research is underway for WRAP to inform their strategy on reuse.

1.2 Topline summary of findings

An estimated half to two-thirds of households dispose of bulky waste each year, mostly to HWRCs. Council collections achieve an estimated 2% reuse rate and HWRCs¹ 3% while channels such as charity shops can achieve 80%+. Around 500,000 tonnes of bulky, WEEE and textiles is estimated to be reused each year in England².

Beyond passing goods to family and friends, charity shops are the most used channel, with 86% having bought or donated from them, and 20%-50% using other channels (including reuse organisations and private sale/purchase) (ACS, 2006).

Middle class households are more likely to donate, lower income households to buy, though there is a secondary market of 'trendy' or anti-consumerist purchasers who tend to be more affluent.

Key motivations for donating are to support the charity and ensure further life for old things (an 'ethic of care'). Main motivations for purchase are to support a charity and save money on purchases. Environmental motives are rarely mentioned explicitly.

Many barriers to reuse behaviour were identified in the literature including: low visibility of reuse as either a behaviour or a channel for disposal; hoarding of goods making them obsolete before they can be donated; incorrect perception of the quality needed by the reuse sector; and service issues around customer care, trust and warranties. On the purchase side, the main deterrent is a stigma around second hand goods, which can take several different forms.

Opportunities for increasing consumer reuse behaviour include promotional activity (though few reuse-focused campaigns have run so there is little evidence of outcomes) and better integration of the collection infrastructure to make it a more transparent and effective system for donors/consumers to use. Some authors would like to see large scale and sustained public-facing promotion of reuse. Other, non-consumer, opportunities include maximising carbon benefits and (potentially) expanding export markets, though evidence on both is currently limited.

1.3 Key findings

The extent to which reuse behaviours are practised

Between a half and two-thirds of households dispose of bulky waste each year. Donation tends to be infrequent and driven by cyclical events (e.g. spring clean, Christmas) or 'clear outs' (Alexander and Reno, 2008; ACS, 2006).

¹ Household Waste Recycling Centres

² This estimate is pieced together from various sources and *excludes recycling*. WRAP have confirmed it is likely to be of a similar order of magnitude to the estimate from their more detailed work on the size and character of the reuse sector, which is currently underway to inform their strategy on reuse.

Giving items to friends and family is the most common public reuse behaviour (82% of respondents, ACS), though is lower for pure bulky waste (20%, Curran et al). A consistent pattern is observed across all studies, showing that more households say they *donate* bulky goods, WEEE or textiles than the number saying that they *buy* second-hand goods. Commercial retail channels are different, where there are slightly more buyers than sellers (ACS).

According to the ACS survey (2006):

- Charity shops are the most used outlet – 86% have either bought or donated in this way; 62% have both donated and bought;
- Furniture Reuse Organisations (FROs) are used by 30% to 40% (depending whether they are a donor or purchaser), and 20% to 50% use commercial second hand channels;
- Of the on-line options, 36% have sold on eBay and 46% purchased via the site.
- In addition, Phillips (2009) estimates that Freecycle in the UK has ~1 million members.

Buying second hand is done by up to 70% of people, with charity shops the most used option and FROs and commercial second hand shops the least (ACS). The evidence revealed little about product preferences or how much an average second hand shopper buys in a year.

Socio-demographic variations in reuse behaviours

Donation on the one hand, and purchase/receipt of goods on the other, is generally not done by the same people and follows a fairly predictable pattern:

- Donations are more likely from middle class households
- Purchase is more likely from lower income households

A small number of studies (e.g. Watson, 2008; Arold & Koring, 2008, LCRN, 2008) suggest that such bald generalisations are not always appropriate, however. More affluent consumers, for example, may seek out retro, vintage or car boot sales for reasons that include fun, an anti-consumerist ethic, or expression of self-identity (through uniqueness of purchases and/or access to otherwise unaffordable status goods). There were hints in the literature (but no firm evidence) that this type of second hand consumption is growing.

The user profile of new reuse channels – Freecycle and eBay – is biased towards middle class and professional households (ACS, 2006). Those selling clothes (largely through car boot sales and eBay) are more likely to be from Defra's Sideline Supporters, Cautious Participants and Stalled Starters segments (Fisher et al for Defra, 2008).

Extent of bulky household waste for re-use

Current estimates suggest that bulky waste is 5% of the total household waste stream. It is estimated that three-quarters of (collected) bulky waste by mass is managed by WCAs or WDAs (Curran et al, 2007).

Various estimates (including the forthcoming WRAP work) suggest that around 500,000 tonnes of bulky goods and textiles enters reuse channels in England each year³. This includes 269,000 tonnes of bulky waste (Curran & Williams, 2007), of which around 90,000 tonnes is collected through FROs (FRN, undated). The remainder is textiles. LCRN suggest a slightly different breakdown, saying that a typical tonne of "reuse" (not defined) comprises 30% textiles, 22.5% appliance and 47.5% furniture (LCRN, 2008).

³ See footnote 2 signposting to current WRAP work on sizing the sector.

Reuse rates vary substantially by channel. Whereas charity shops (LCRN, 2008) and charity collections (Curran & Williams, 2007) may achieve 80% - 85% reuse, local authorities' bulky waste collections achieve only 2% reuse, and HWRCs 3% (Curran & Williams, 2007).

Motivations for reuse behaviour

Two principal motivations for donation/selling behaviours are identified across the literature:

- *Charity* – wanting to support local charities or less fortunate people (especially for clothing);
- *Realising the perceived value of a product that is unwanted rather than worn out* – either the belief that something that still has a use should stay in use (an 'ethic of care' (Watson, 2008)), or obtaining financial value for oneself (through selling).

None of the studies reviewed showed a strong link between public reuse behaviours and positive environmental attitudes.

The principal motivations for purchasing second hand goods are to support a charity and to save money on purchases, with a secondary customer base of 'trendy' or anti-consumerist purchasers. Arold and Koring (2008) note that second hand retail is a more normalised activity in some other European countries, including those with a strong environmental sensibility in public opinion.

Barriers to reuse behaviours - donation

The following were all identified in the literature. It is not possible to rank them in order of importance as many were derived from qualitative research:

- Reuse does not have a distinct identity or meaning for consumers;
- Low visibility of reuse channels and lack of knowledge about options for donation or purchase;
- Lack of knowledge that items can be donated for reuse;
- Liking the act of wasting (Defra's Honestly Disengaged Segment for clothing (Fisher et al, 2008)); not having an 'ethic of care' for products;
- Convenience of donating, including time and effort to make donations;
- System interactions, including a possibly negative effect of having kerbside recycling for other goods;
- Trust, both in the collection organisation and products for sale (e.g. a need for quality assurance, warranties);
- Perception of the quality required by reuse channels, being either too high (which deters donation) or too low (leading to rejections and subsequent consumer confusion);
- Service dissatisfaction – being put off by bulky/reuse collection arrangements, for example:
 - the time wait between asking for a pick up and when collection occurs
 - bookable collection slots that are whole days rather than given times
 - the charge made for collection being considered to be too high
- Changes in the quality and durability of products which affect supply into the system and resale value (both absolutely and relative to equivalent new products), caused by:
 - Fast fashion – items made to wear for only a few occasions
 - Flat pack furniture – which tends to reduce sturdiness and durability

- Hoarding, which can:
 - make goods functionally/technologically obsolete by the time they are released
 - hamper efforts to model material flows through the economy and the benefits from reuse

Barriers to reuse behaviours – purchase of second hand goods

The principal barriers to second hand purchase are the premium status accorded to new goods (or 'virginity value' (Brook Lyndhurst, 2007, WR0104) and a general dislike or stigma attached to second hand goods. Perceptions which underpin second hand stigma include:

- Goods will be unattractive or old fashioned
- Embarrassment
- Rejection of a self-identity as 'needy' – given the common association of charity shops with poverty and thrift
- 'Contamination' by others where the item has been intimate contact with a donor (e.g. mattresses, underwear, but also reported more generally for clothing (Fisher et al, 2008))
- Lack of warranty on re-sold or refurbished products

1.4 Opportunities for progressing waste prevention

Promotional activities

There is little evidence on the impact of promotional activities, either on consumer behaviour or tonnage diversion. Reuse has most often been promoted by local authorities as part of an overall waste prevention campaign, so it is difficult to isolate the impacts of the reuse component separately. Worcestershire has shown that integrated consumer promotion and working with the third sector (including payment of reuse credits) can have a measurable impact on reuse (Salisbury, 2008). Results from two of the WREP studies (Dorset, WR0116 and Hampshire, WR0177) suggest that donation behaviours can be increased through focused campaigns, including information on where to find reuse organisations, but the evidence is only partial.

Warranties

Introducing extended warranties for second hand goods was identified as an opportunity in two sources (Eunomia et al, WR0103; Arold & Koring, 2008) (see also [L2 M5 Policy measures – encouraging](#)).

Collection infrastructure

Authors indicate that a significant increase in reuse could be achieved by means of a more integrated collection infrastructure and market stimulus (see [L2 m4/1](#) for further discussion). Reviews of European practice show that the UK has a unique reuse infrastructure and that other models – including more supply-side integration with government support and front-facing retail – can engage consumers effectively (Arold & Koring, 2008). None of the reuse studies reviewed allowed for future shifts in waste composition and any associated need for more reuse capacity (as in AEA et al, 2007, WR0107 and Brook Lyndhurst, 2007, WR0104 which predict high growth in textiles and household goods).

Export markets

One study (Arold & Koring, 2008) identifies the growth of second hand consumer markets in eastern Europe (including for WEEE) which are currently supplied by near-neighbour western European countries. None of the studies reviewed looked at the potential for UK bulky/WEEE reuse exports (though export markets have been considered in other Defra research on textiles as part of the sustainable clothing road map and action plan (Defra, 2009)).

Carbon benefits

Various authors point to the carbon saving potential of reuse, especially from textiles. LCRN estimates a carbon dioxide saving of 4.2 tonnes per tonne of furniture or appliances reused, and 19 tonnes per tonne of reused textiles (using Defra conversion factors in Waste Strategy 2007).

1.5 Barriers to progressing waste prevention

Two key structural barriers relating to consumers and reuse were evident:

- Lack of a large scale, and sustained, consumer campaign to increase the visibility and recognition of reuse, and to popularise second hand purchase;
- Lack of a co-ordinated collection infrastructure that effectively joins up (and rewards) third sector organisations with local authority bulky waste collections, and thereby the majority of households (this issue is covered further [L2 m4/1](#)).

Some authors also pointed to gaps in data and research on reuse, particularly with respect to:

- Consumer aspects and how these relate to the reuse system and infrastructure;
- Standardised quantification and characterisation of the whole reuse system (third sector and other channels) but this is currently being addressed by WRAP.

1.6 Researchers' recommendations

Recommendations from authors of the studies reviewed relate to the barriers identified above:

- That there should be a large scale consumer facing reuse campaign and that reuse should be targeted as a different activity from recycling;
- That the biggest scope for increasing reuse is in local authorities improving their bulky waste management procedures and working in partnership with other organisations.

Specific recommendations for running consumer facing campaigns were made in the ACS study, including targeting the infrequency of donation and purchase.

1.7 Practical issues and lessons

The evidence reviewed revealed a large number of barriers to engaging households in public reuse behaviours, both on donation and purchase sides of the equation.

Some of the barriers can be solved practically – for example through better co-ordination and higher visibility of both collection and sales channels for reuse. Some barriers will be much more difficult to resolve, since they relate to consumer identity and the prevailing norm that new is better.

Any consumer campaign aimed at promoting reuse will have to tread a very careful line to ensure it is perceived as informative and interesting. Watson (2008) in particular commented on the difficulty of moving reuse into the mainstream when – at least at the consumer end – reuse is currently practised by those at either end of the mainstream, the poor and the affluent avant garde.

Customer service (including quality assurance and warranties) was also flagged in several contexts and any further development of consumer engagement with the reuse sector will need to take this into account.

Finally, the evidence itself, and observations from some authors, suggests that more needs to be known about consumer attitudes to public reuse behaviours at a more detailed, and practical rather than theoretical, level. The fact that there are only a few substantial studies on consumer attitudes underlines this argument. Perhaps there is a need to run a similar study to the Defra sustainable clothing research (Fisher et al, 2008) for WEEE and for furniture reuse?

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Basis of this report

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