

WR1204

Household Waste Prevention Evidence Review: L2 m4-1 – Re-Use and the Third Sector

A report for Defra's
Waste and Resources Evidence Programme

October 2009

This research was commissioned and funded by Defra. The views expressed reflect the research findings and the authors' interpretation. The inclusion of or reference to any particular policy in this report should not be taken to imply that it has, or will be, endorsed by Defra

Table of Contents

| | | |
|-----|---|---|
| 1.1 | Coverage of the review | 1 |
| 1.2 | Size of the reuse sector | 2 |
| 1.3 | Size and character of third sector involvement in a 'reuse economy' | 3 |
| 1.4 | Contribution of the third sector to household waste prevention | 4 |
| 1.5 | Barriers to effectiveness and growth | 5 |
| 1.6 | Success factors and opportunities | 7 |
| 1.7 | Discussion - policy implications/issues | 8 |
| 1.8 | Bibliography | 8 |

© Brook Lyndhurst 2009

This report has been produced by Brook Lyndhurst Ltd under/as part of a contract placed by Defra. Any views expressed in it are not necessarily those of Defra. Brook Lyndhurst warrants that all reasonable skill and care has been used in preparing this report. Notwithstanding this warranty, Brook Lyndhurst shall not be under any liability for loss of profit, business, revenues or any special indirect or consequential damage of any nature whatsoever or loss of anticipated saving or for any increased costs sustained by the client or his or her servants or agents arising in any way whether directly or indirectly as a result of reliance on this report or of any error or defect in this report.

L2 m4/1

Reuse and the third sector - *enabling* households to take action

This paper summarises the evidence on reuse activity in England and the contribution of third sector organisations in the reuse sector, under the following headings:

- Coverage of the review
- Size of the reuse sector
- Scale of reuse in England
- Size and character of third sector involvement in a reuse economy
- Contribution of the third sector to household waste prevention
- Barriers to effectiveness and growth
- Success factors and opportunities
- Discussion – policy implications and issues

Related modules are:

| | |
|-----------------------------------|---|
| L2 m1 Technical report, section 4 | L3 m3/1 (D) Extent to which waste prevention behaviours are practised |
| L2 m5 Policy measures | L3 m3/2 (D) Motivations and barriers |
| | L3 m3/7 (T) Attitudes & behaviour – reuse |
| | L3 m5/2 (D) International review |
| | L3 m7/1 (D) Stakeholder views on waste prevention |

(D) denotes a briefing paper providing more background detail; (T) indicates a short focused topic briefing

1.1 Coverage of the review

A full consideration of reuse activity would also require detailed review of eco-design, remanufacturing and product lifespan. It was agreed to exclude these from the scope of the review because they are being covered in detail elsewhere, for example through Defra's sustainable products division¹, the ESRC network on product lifespans², and the Centre for Reuse and Remanufacturing³. We have drawn on these sources where they are relevant to reuse.

Three large scale WREP projects investigated the role of third sector organisations in waste management (Brook Lyndhurst & LDA, 2007, WR0501; Hines et al, 2008, WR0506; Resources for Change et al, 2008, WR0506), examining the character of these organisations, their contribution to recycling and reuse, use of and need for support, wider social benefits and methods for quantifying these. A further project (Open University, 2008, WR0211) investigated the current role and potential of the community composting sector. This study was included because of its third sector focus even though composting cannot strictly be considered reuse (since the input is 'recycled'); commercial composting was excluded from the review.

While the review here is interested specifically in reuse activities, none of the WREP sources identifies it separately from recycling operations, so that much of the commentary below relates to the role of third sector organisations as a whole. Estimates for the size of the reuse sector have been derived from non-WREP sources.

¹ <http://www.defra.gov.uk/environment/consumerprod/>

² <http://extra.shu.ac.uk/productlife/>

³ <http://www.remanufacturing.org.uk/index.lasso?-session=RemanSession:5B680B9007d6d0A69FqVI287D4D1>

Other major sources drawn upon were a study of the reuse infrastructure in London (LCRN, 2008) and evaluations of the Big Lottery Transforming Waste programme and CRED (ERM 2007; CAG Consultants, 2008), as well as various other stakeholder sources (e.g. FRN, WRAP, Defra, and local authority campaigns included in the main evidence review) and academic papers (especially, Curran et al, 2007).

1.2 Size of the reuse sector

Weak and piecemeal data

Data are a significant barrier to estimating the total size of the reuse sector, and the role of third sector organisations within it. Reuse tends not to have a separate identity in much of the literature. In published estimates it is often treated as recycling, or not identified separately. Estimates often exist for different parts of the reuse sector but do not always agree or make sense when put into the context of other parts of the system. A complete picture of a UK 'reuse economy' - which includes all of third sector reuse, local authority bulky collections and commercial second hand activity, all potential supply into the system, and robust reuse rates (in total or for different reuse channels) - cannot be derived from the present evidence. Authors generally find it easier to quantify the reuse of large household items but data on small items (especially WEEE) are hard to capture and there is very little data for commercial channels (as opposed to third sector or local authority sources).

In response to the data gap at national level, WRAP are currently investigating the size and character of reuse activity to inform their future strategy related to reuse. The LCRN study (LCRN, 2008) for the GLA also shows how a robust picture can be derived for third sector reuse activity, separate from recycling, at regional level.

Scale of reuse in England

The present evidence suggests that around half to two-thirds of households in England dispose of bulky waste each year (including WEEE), mostly to HWRCs. Around 500,000 tonnes of bulky, WEEE and textiles is reused each year in England, of which around half is textiles⁴. Estimates do not include the amount reused through private sale – second hand shops, eBay or car boot sales. The latter may be used by 36% to 46% of the public, depending on whether they are selling or buying (ACS, 2006). In addition, donation site Freecycle is growing fast in the UK and is estimated to have around 1 million members (Phillips, 2009).

In aggregate, the evidence does not show how much bulky, WEEE and textiles is reused, though in London less than 10% of reusable items are captured for reuse by third sector organisations (LCRN, 2008). Council collections achieve an estimated 2% reuse rate and HWRCs 2-3%, while channels such as charity shops can achieve 80%+ (Curran et al, 2007; LCRN, 2008). Third sector collections in London achieved a 68% reuse rate of *items* collected in 2006/7 (LCRN, 2008).

From a materials point of view, 16% of clothing is recovered (Defra, 2009), and LCRN (2008) suggest that 60% to 80% of clothing donated is reusable. Reliable figures are not given for other streams. LCRN say that a "typical tonne of reuse" (not defined) comprises 30% textiles, 22.5% appliances and 47.5% furniture (LCRN, 2008). Darby and Obara (2004) suggest that most small electrical appliances go straight to landfill (including in domestic bins) because there is no consumer recognition that these items should be reused/recycled, and that they often rejected from reuse collections.

⁴ This is pieced together from various sources and excludes recycling. It comprises 270,000 tonnes bulky reuse (Curran et al, 2007) and ~230,000 tonnes clothing/textiles. There is no reliable source of data on textiles and estimates disagree. The estimate given for textiles is based on various figures quoted in the literature and should not be taken as definitive. WRAP have confirmed that our estimate of 500,000 tonnes **reused** (excluding recycling) is likely to be of a similar order of magnitude to that being developed in their research.

Authors disagree about the potential for further reuse, with estimates ranging from ~15%-30% of all bulky waste, but the difficulty of estimating a 'reusability' fraction of bulky and WEEE is commonly flagged. This is being addressed in the WRAP study. Textiles recycling and reuse are also covered in Defra's work on a sustainable clothing road map⁵.

1.3 Size and character of third sector involvement in a 'reuse economy'

In characterising third sector involvement in the waste sector, the three WREP studies all cite a 2005 report for Defra which estimated that 800-1200 such organisations were undertaking recycling and/or reuse activities (In House Policy Consultancy, 2005). LCRN (2008) identify 693 third sector establishments (mainly charity shops) specifically providing reuse services. ACS (2006) say there are 7500 charity shops in the UK.

All studies agree that third sector reuse and recycling activity is characterised by a large number of small operations and a handful of large, professionally run, social enterprises plus nationally co-ordinated charity shops. Many are undertaking waste activities principally in order to generate turnover to support their charitable or social objectives (see especially LCRN, 2008), and their operational models are driven by this perspective. One study (Hines et al, 2008, WR0506) developed a typology which characterised organisations and argued that different models require different kinds of support in order to enhance their activities and grow.

The Open University study (2008, WR0211) estimates there are 170 community composting sites in the UK. The character of the sector is very similar to that of reuse: 28 sites accounted for 93% of all material composted; a majority (60%) were doing composting to further their social objectives while 40% were primarily motivated by composting.

A new phenomenon is the number of Freecycle groups and members, with latest estimates suggesting 1 million members (Phillips, 2009).

Practice in other European countries

The RREUSE network in Europe (the federation of social firms active in reuse and recycling) collects 700,000 tonnes of material a year (figures are not given for reuse separately) (L3 m5/2 (D)). A review of reuse activity across Europe (Arold & Koring, 2008 – see also (L3 m5/2 (D))) identifies different national models from the one existing in the UK, in particular, reuse sectors that have a large share of commercial activity, including happy co-existence between third sector and commercial reuse organisations. Some have well developed, and visible, second hand retail – for example, Salvation Army and Red Cross department stores in Finland, or franchised commercial outlets in Belgium.

Belgium (Flanders in particular⁶) is a particularly interesting example which has especially well integrated local authority and third sector working, together with a range of commercial retail franchises that offer well recognised consumer branding (Arold & Koring, 2008; Vandenbussche, undated⁷).

⁵ <http://www.defra.gov.uk/environment/consumerprod/products/clothing.htm>

⁶ Flanders has a population of some 6 million. For purposes of comparison, this is slightly smaller than London.

⁷ Vandenbussche (undated) Reuse in Flanders: Introduction in the Flemish reuse sector. Accessed at: <http://www.eeb.org/events/Bart%20Vandenbussche.pdf>

Case study box: Reuse in Flanders – key aspects of the reuse economy

(Derived from Arold & Koring, 2008; Vandebussche, undated; L3 m5/2 (D) pg 28). Further information on waste management in Flanders at <http://www.ovam.be/jahia/Jahia/pid/1010?lang=en>

Integration with local authority services - strategic agreements between local authorities and reuse organisations, including sourcing from local authority collection centres (accounting for 24% of the reuse tonnage); reuse payments from local authorities; employment subsidies through social policies.

Policy support at federal level – including a reuse target of 5kg per inhabitant, special treatment in waste management licensing (some exemptions for reuse); reduced landfill tax on the collected portion that cannot be reused; an annual grant of 903,000 Euro for start-ups, investment, and quality improvement in reuse organisations; a grant to the sector network to professionalise the sector; and reduced VAT for reuse (from 21% to 6%).

Consumer support - branding of collection sites and retail stores; quality management labelling for organisations working in reuse; product guarantees communicated through product labelling; quality management accreditation for organisations; and consumer campaigns.



1.4 Contribution of the third sector to household waste prevention

Tonnage

An aggregate total specifically for third sector reuse was not identified in the literature reviewed. All of the estimates available include recycling which put the combined reused/recycled total at an imprecise 500,000 tonnes a year, but possibly ranging from 362,000 to 798,000 tonnes. Projects supported by the Big Lottery Transforming Waste programme (ERM, 2007) “recycled” (including reuse) 41,200 tonnes of appliances, household equipment and furniture.

Charity shops recycle/reuse some 250,000 tonnes of textiles a year and reuse charities divert 90,000 tonnes (FRN, undated)⁸ (though not all of this is necessarily reused). According to actual measurement of reuse separately from recycling, in London 693 third sector establishments (mostly charity shops) divert at least 3,800 tonnes to reuse (LCRN, 2008). This ranges from 0.1 kg tonne to 3.7 kg per household/yr across the 33 individual boroughs. The 170 community composting sites composted 21,500 tonnes of material in 2007 (Open University, 2008, WR0211).

Reuse in Flanders amounted to 40,700 tonnes in 2006, or 6.75 kg per inhabitant (Vandebussche, undated). Shop sales achieved 20.9 million Euros in 2006.

No reliable evidence was identified on tonnage reused through commercial and private second hand channels, or on Freecycle, though indicative estimates derived from figures quoted in various sources suggest anywhere between 8kg and 25kg per Freecycle member per year.

Social benefits

Social benefits are the primary driver for many, if not a majority, of third sector organisations. They underpin the case such organisations (and many authors) make for financial support from government. Principal benefits are employment for disadvantaged workers and provision of low cost or free household goods to low income families, or income for charitable works. FRN estimates that reuse charities have

⁸ Reuse organisations in Scotland diverted 13,600 tonnes of household goods from landfill in 2008. Figures are not given separately for proportions reused and recycled (CRNS, 2008, Furniture Mapping Report).

helped 750,000 low income households; both they and LCRN (2008) suggest that demand from low income households is well above the present capacity of third sector reuse organisations to meet it.

In Flanders, 2.7 million customers used the reuse shops in 2006 (though the source does not profile the customers); reuse activities employed 2,850 people, 70% of whom were low skilled or long term unemployed (Vandenbussche, undated).

One study (Resources for Change et al, 2008, WR0506) attempted to calculate the Social Return on Investment of community waste organisations (and a sample of private contractors for comparison) with limited success. The authors found that accessing reliable data undermined the calculations but they did provide an indicative figure of £0.50 to £5.89 in social, economic and environment benefits per £1 of public money invested. They caution that these figures should be treated as indicative because of data limitations and the small sample size.

Carbon and wider resource benefits

The LCRN London study (2008) developed carbon benefit assessments⁹ which show a carbon saving of 4.2 tonnes per tonne of furniture or appliances reused, and 19 tonnes per tonne of reused textiles. Open University (2008, WR0211) calculated that the 21,500 tonnes composted at community compost sites in 2007 approximated 1,850 CO₂ equivalent saved compared to landfill¹⁰.

Questions could be raised about lifecycle impacts of reuse (or indeed any other measure to extend product life) if it prolongs the use of energy inefficient products. One source (Oko Institut, 2005, cited by Vanderbusche) suggests that reuse of a washing machine is preferred on environmental grounds if it is less than 20 years old (10 years on energy-only grounds). We did not investigate this issue in detail and it should be noted that the WRAP study is further investigating the carbon implications of reuse in the UK context.

1.5 Barriers to effectiveness and growth

Reuse organisations

All of the WREP studies on this topic identified data issues as a barrier to proper understanding of the sector and its contribution to national waste strategy. Reasons why data are so weak include the fact that the organisations within the 'sector' often do not see themselves as waste entities – because of their social orientation – so do not have a strong driver to collect or report tonnage information.

Much of the literature reviewed was concerned with the growth potential of third sector waste organisations and their support needs. Key barriers cited were¹¹:

- *Funding* – a tendency for many organisations to rely heavily on grants rather than income (especially small organisations) and the expiry of key third sector programmes, such as CRED.
- *Capacity, skills and governance* – including a tendency to be inward looking, tactical rather than strategic in outlook, sometimes weak in adapting to the operational change required by growth, lack of business planning skills or an enterprise culture. It can also relate to lack of workforce skills (e.g. repair).

⁹ Which they say have provisional approval from policy officers at Defra and WRAP. LCRN carbon calculations depend on DEFRA embodied carbon data in T28 Annexe A Waste Strategy 2007, p71

¹⁰ Uses Defra carbon data – see footnote 4 for reference signpost.

¹¹ It should be noted that these studies completed before Defra's Third Sector Strategy was announced and the set up of the WRAP-led REconomy capacity building initiative supported by Defra. See <http://www.defra.gov.uk/corporate/how-do-we-work/third-sector/strategy/documents/Defra-Third-Sector-Strategy-1108.pdf>

- *Uncertainty caused by delays and changes in implementation of the WEEE directive* – though the directive and expected revisions are now generally seen as providing a key driver for growth of the reuse sector.
- *Decline in the quality of supply of material into the reuse sector* – arising from the rise of 'fast fashion' and cheap, short-life products. LCRN (2008) also highlight the reluctance of reuse organisations to take material from HWRCs because of the higher damage rate than from direct collections.
- *Logistics* - especially storage capacity (which can lead to reusable items being turned down when donors make an enquiry) and finding affordable premises. LCRN (2008) noted the latter as a likely reason for less reuse provision in north London than south.
- *Perverse incentives caused by relative pricing of waste treatment options* – an argument that reuse is "chronically undervalued" (LCRN, 2008).
- *Lack of a consistent approach to reuse across local authorities* - in general, and to reuse organisations specifically, including the payment (or not) of reuse credits.
- *Lack of co-ordination within local authorities* - between waste services (which deal with the supply side of reuse) and social services (who could improve access to the demand side by providing reuse 'clients').
- *Lack of visibility of reuse activity* – either of organisations that do it, or retail channels, which means that donating may not come to mind when households are disposing reusable items (ACS, 2006; LCRN, 2008; Curran & Williams, 2007).
- *Stigma around second hand purchase* – which in the UK tends to have a thrift or poverty identity that is off-putting to consumers (ACS, 2006; Watson, 2008), although some authors have identified new consumers seeking to express alternative identities, either anti-consumerist or retro-chic (Watson, 2008; Arold & Koring, 2008; LCRN; 2008).
- *The impact of a shift towards integrated waste management contracts* – which can exclude smaller organisations from being able to compete. Some authors noted, however, that this trend had encouraged organisations into specialist niches that are not commercial at present but have potential for growth (e.g. some types of WEEE).

Community composting (Open University, 2008, WR0211)

Three-quarters of community composting groups surveyed had experienced problems in setting up or undertaking activities. Organisations tended to share many of the same obstacles as third sector reuse organisations - including funding, capacity, competition from large waste management companies and, in some cases, lack of support from local authorities (though, more positively, one-third receive financial support from their LA). They also experienced specific barriers related to the materials they are dealing with, including:

- Thresholds and conditions for exemptions in the Animal By Products Regulations (ABPR), which the authors of the WREP report recommend should be reviewed;
- Waste management licensing (costs and restrictions);
- Planning regulations; and
- Concern about the impact of the PAS100 composting standard on smaller sites which may not be able to achieve accreditation.

1.6 Success factors and opportunities

Aspects in which third sector recycling/reuse organisations are considered distinctive (according to the WREP studies) revolve around:

- Ability to be innovative, to develop and trial creative solutions at an early stage of adoption or market development;
- Providing services in niches that would otherwise not be served by local authorities or mainstream companies;
- Ability to leverage additional resources that would otherwise have to be paid for, especially the contribution of volunteers;
- Having strong ties to local communities which, it is argued, provides for greater trust and engagement than private companies, including in educational activities. This community dimension was especially noted in relation to community composting in rural areas.

These attributes are not exclusive to organisations operating in the waste sector and they are commonly reported in other studies of community sector activity¹².

The success factors for these kinds of organisations are the flip side of the barriers. They include in particular:

- *Funding support* - all of the now large waste social enterprises received some form of financial support in the past (Hines et al , 2008). LCRN (2008) ran a scenario for an enterprise with seven staff and estimate that initial investment and development costs before the enterprise reaches financial sustainability may be in the order of £480,000. Organisations may also need (higher) employment subsidy or similar support for their employment objectives from other stakeholders who use third sector organisations for job placements.
- *Co-ordination with local authority activities* – most often through service level agreements. Some authors cite this as a key barrier where it is not seen (e.g. Curran et al, 2007); LCRN (2008) shows a correlation between levels of reuse activities and boroughs which have service agreements with reuse organisations. There are also some useful case studies of partnership working (e.g. Bulky Matters, widely cited including in Defra’s Third Sector Strategy (2008); Worcestershire Waste Challenge Team (Salisbury (2008) – see case study box). Meanwhile, WRAP is investigating how the enabling landscape can be improved to encourage greater joint working across all reuse stakeholders so as to enhance the role the third sector can play.

Case study box: co-ordinated working with the third sector in Worcestershire

As part of a wider waste prevention campaign, Worcestershire ran a reuse initiative, involving a mix of campaign activities, promotion of Freecycle, swap shops and public events, and close working with local third sector organisations. This includes payment of reuse credits and a time limited ring-fenced annual fund for community reuse organisations, as well as business planning support.

Authors are generally optimistic about opportunities and growth for reuse activities involving third sector organisations. The WEEE directive in particular is generally seen as providing further impetus for reuse¹³. The new national indicators for local authorities¹⁴ (with the inclusion of reuse) are also expected to

¹² See, for example, Defra’s Environmental Action Fund evaluation at http://randd.defra.gov.uk/Document.aspx?Document=EV02004_7822_EXE.pdf

¹³ Though CRNS in Scotland notes that the WEEE directive is having an adverse effect on reuse organisations there. CRNS, 2008, Furniture Mapping Report

¹⁴ <http://www.communities.gov.uk/publications/localgovernment/finalnationalindicators>

support growing interest from local authorities in targeting reuse as a means for landfill diversion. Payment of reuse credits by local authorities is an area where some would still like to see more action.

1.7 Discussion - policy implications/issues

Piecemeal and historic data remains a barrier to fully understanding the opportunities available from reuse, either through reducing waste from landfill or its contribution to the UK economy. Part of the problem may reside in the historic image of reuse (and the concern of many of its practitioners) as being concerned with charity or thrift – and therefore not of mainstream concern.

The current WRAP study will provide an up-to-date snapshot of reuse through third sector and local authority channels but processes may need to be found which ensure that timely data continues to be collected on a consistent basis for the whole reuse sector. One option would be through joint working on data through the third sector network organisations (Resources for Change et al, 2008, WR0506), who are already leading the way (e.g. LCRN carbon estimates; FRN standard weights); but this means that large parts of the potential reuse sector remain separately monitored (e.g. local authority bulky waste), or not covered at all (e.g. commercial reuse). This on-going data gap on the size and performance of the *whole sector* will need to be addressed if the UK is serious about developing an economy designed for reuse.

While the third sector is clearly an important contributor to a reuse economy, the evidence shows that there is considerable scope to increase reuse rates more widely, especially from bulky waste that currently flows through council channels (either household collections or HWRCs). The consensus in the literature is that two aspects in particular require further attention:

- greater integration between local authority and third sector operations in order to capture a higher proportion of household bulky waste for reuse;
- and continuing access to start up and business development support for third sector organisations (which is happening through the Defra supported WRAP REalliance Third Sector Capacity Building Programme).

In addition to direct financial support, other sorts of financial incentives are mentioned in the literature as ways forward, including service contracts with local authorities that provide security of income to small reuse organisations, a consistent approach to the payment of reuse credits across local authorities, and (from international experience) differential VAT rates for reused products.

None of this action on the supply side of the reuse market will be worthwhile unless there are equal developments on the demand side. The two sides of the equation tend to be treated as separate entities in the literature and there is an urgent need to consider both in tandem (Watson, 2008). Negative consumer attitudes to second hand goods have been identified as a barrier to the development and broadening of the demand side and more consumer research is required which investigates how these barriers can be overcome, in which markets, for which kinds of product, and with which kinds of messaging support.

1.8 Bibliography

ACS (Association of Charity Shops) (2006) An analysis into public perception and current reuse behaviour conducted in the East of England.

AEA Energy and Environment, The Future Foundation and The Social Marketing Practice (2006) Modelling the Impact of Lifestyle Changes on Household Waste Arisings. Summary report. WR0107.

- AEA Energy and Environment and The Future Foundation (2007) Modelling the Impact of Lifestyle Changes on Household Waste Arisings – Additional Research. WR0107.
- Arold, H and Koring, C (2008) New Vocational Ways and Qualifications for Professionalisation in the Second-Hand Sector. European report: An Investigation and Analysis of the Second-Hand Sector in Europe.
- Brook Lyndhurst for the London Development Agency (2007) Replicating Success: Social Enterprises & the Waste Sector in London. Defra WR0501.
- CAG Consultants, in association with Eunomia Research and Consulting (2008) Appraisal of the CRED Programme.
- Cooper, T. (2005) Slower Consumption Reflections on Product Life Spans and the “Throwaway Society”. *Journal of Industrial Ecology*, Volume 9, Number 1-2, pp 51-57.
- Cooper, T and Myers, K. (2000) Prospects for Household Appliances, Executive Summary. Curran, A. and Williams, I.D. (2007) Maximising the Recovery of Household Bulky Waste in England. *Proceedings: Sardinia 2007, Eleventh International Waste Management and Landfill Symposium*.
- Curran, A., Williams, I.D. and Heaven, S. (2007) Management of household bulky waste in England. *Resources, Conservation and Recycling* 51 78–92.
- Darby, L. and Obara, L. (2004) Household recycling behaviour and attitudes towards the disposal of small electrical and electronic equipment. *Resources Conservation and Recycling* 44 (2005) 17–35.
- Defra (2008) Third Sector Strategy. Defra, London.
- Defra (2009) Sustainable Clothing Action Plan. Defra, London.
- ERM (Environmental Resources Management) (2007) Evaluation of the Big Lottery’s Transforming Waste Programme. For the Big Lottery Fund.
- Eunomia Research and Consulting, The Environment Council, Öko-Institut, TNO and Atlantic Consulting (2007) Household Waste Prevention Policy Side Research Programme. Defra WR0103.
- Fisher, T, Cooper, T, Woodward, S, Hiller A and Goworek H, (2008) Public Understanding of Sustainable Clothing: A report to the Department for Environment, Food and Rural Affairs. Defra, London.
- FRN (undated) Live Long and Prosper – The value of re-use in Britain.
- Hines, F., Morley, A., Frater, L., Cartwright, S. and Chandrashekar, S. (The ESRC Centre for Business Relationships, Accountability, Sustainability and Society, Cardiff University) (2008a) Social Enterprises and Sustainable Waste and Resource Management: Evaluating Impacts, Capacities and Opportunities. WR0502.
- Hines, F., Morley, A., Frater, L., Cartwright, S. and Chandrashekar, S. (The ESRC Centre for Business Relationships, Accountability, Sustainability and Society, Cardiff University) (2008b) Social Enterprises and Sustainable Waste and Resource Management: Evaluating Impacts, Capacities and Opportunities. Annex 1: Data Analysis. WR0502.
- Hines, F., Morley, A., Frater, L., Cartwright, S. and Chandrashekar, S. (The ESRC Centre for Business Relationships, Accountability, Sustainability and Society, Cardiff University) (2008c) Social Enterprises and Sustainable Waste and Resource Management: Evaluating Impacts, Capacities and Opportunities. Annex 5: Typology: General Thesis and Selecting Case Studies. WR0502
- Hines, F., Morley, A., Frater, L., Cartwright, S. and Chandrashekar, S. (The ESRC Centre for Business Relationships, Accountability, Sustainability and Society, Cardiff University) (2008d) Social Enterprises and Sustainable Waste and Resource Management: Evaluating Impacts, Capacities and Opportunities. Annex 7: Literature Review. WR0502.
- Huysentruyt, M. and Read, D. (2008) How do people value extended warranties? : Evidence from two field surveys.
- LCRN and London Remade Solutions (London Community Recycling Network for the Greater London Authority) (2008), Third Sector Reuse Capacity in London. .
- Open University (2008), Unlocking the potential of community composting. WR0211. Resources for Change, The New Economics Foundation, Resource Futures and Community Environment

- Associates (2008a) The Benefits of Third Sector Involvement in Local Authority Waste Management. SID5 Technical report. WR0506.
- Phillips, P. (2009) A report to East Midlands Regional Assembly on the role of Freecycle in regional MSW practice.
- Resources for Change, The New Economics Foundation, Resource Futures and Community Environment Associates (2008b) The Benefits of Third Sector Involvement in Local Authority Waste Management. Final report. WR0506.
- Resources for Change, The New Economics Foundation, Resource Futures and Community Environment Associates (2008c) The Benefits of Third Sector Involvement in Local Authority Waste Management. Annex 4: Case Study and Economic Analysis. WR0506.
- Salisbury, V. (2008) Performance Evaluation of the Waste Challenge Team. For Worcestershire County Council and Herefordshire Council [Unpublished].
- Tucker, P. and Douglas, P. (Environmental Technology Group, University of Paisley) (2006a) Understanding Household Waste Prevention Behaviour. Technical Report No. 1: A Critical Review of the Literature. Defra WR0112.
- Tucker, P. and Douglas, P. (Environmental Technology Group, University of Paisley) (2006b) Understanding Household Waste Prevention Behaviour. Technical Report No. 2: Results of the Household Attitude/Behaviour Survey. Defra WR0112.
- Vandenbussche, B. (undated) Reuse in Flanders - Introduction in the Flemish reuse sector. Unpublished.
- Watson, M. (2008) A Review of the Literature and Research on Public Attitudes, Perceptions and Behaviour Relating to Remanufactured, Repaired and Reused Products. Report for the Centre for Remanufacturing and Reuse, University of Sheffield.
- Widdicombe, H. and Peake, L. (2008) The Rise of Reuse. Resource 43, September/October 2008.
- Williams, N., Croker, M, & Barrett, D. (In House Policy Consultancy)(2005) for ODPM, DfT & Defra. Review of the Voluntary and Community Waste Sector in England.

Basis of this report

The material in this paper is derived from a large scale evidence review of household waste prevention conducted by Brook Lyndhurst, the Social Marketing Practice and the Resource Recovery Forum for Defra's Waste and Resources Evidence Programme.