

WR1204  
Household Waste Prevention  
Evidence Review:

L3 m3-1 – Extent to which waste prevention  
behaviours are practiced

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

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# L3 m3-1 (D) Extent to which waste prevention behaviours are practised and who practises them

This paper provides detailed data and insight on:

- the extent to which waste prevention behaviours are practised (section 1)
- who practises them (section 2)

It consolidates all the key data found during the evidence review on these two topics and is the basis for the synthesis in L2 m3, the summary findings in the Executive Report L1 m1, and the Executive Summary (L1 m0).

A full bibliography is given in Waste prevention bibliography (L3 m8/2 (D)). Modules providing further insight or detail in relation to consumer practice of waste prevention behaviours are listed below:

L1 m1 Executive Report (section 3)	L2 m1 Technical Report (section 3) L2 m3 Consumers and waste prevention	L3 m3/2 (D) Motivations and barriers L3 m3/3 (D) Impacts of public campaigns and interventions L3 m3/4 (T) Attitudes & behaviour – food waste L3 m3/5 (T) Attitudes & behaviour – home composting L3 m3/7 (T) Attitudes & behaviour – everyday actions around the home L3 m3/6 (T) Attitudes & behaviour – reuse L3 m5/2 (D) International Review <sup>1</sup>
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(D) denotes a briefing paper providing more background detail; (T) indicates a short focused topic briefing

## 1 Extent to which waste prevention behaviours are practised

The following text was developed as an analysis of the evidence base to inform the writing of L2 m3 Consumers - engaging. This section covers the following key headings and ends in two detailed tables outlining the extent to which waste prevention behaviours are practised and the extent to which non-waste prevention behaviours are practised.

- What proportion of the population practises waste prevention behaviours?
- Frequency
- Popularity
- Links and correlations
- Recent trends in waste prevention behaviour
- Willingness to prevent waste

<sup>1</sup> For information on the practice of waste prevention behaviours abroad please refer to this document, bearing in mind that the scope of this paper focused on policy measures.

## 1.1 What proportion of the population practises waste prevention behaviours?

The evidence suggests that the majority of the population are carrying out some (usually small) waste prevention activities (at least part of the time – see discussion on frequency below). A number of surveys have investigated various waste prevention behaviours and the extent to which these are carried out. Table 1 summarises the data reported in the reviewed material. Most of the figures vary widely due to a number of factors, such as:

- Question wording – e.g. 2% of people buying second-hand items comes from a survey which asked specifically about buying “second-hand appliances all the time”, while the 69% comes from a survey which asked about “having bought something in a charity shop”;
- Some behaviours such as buying refillables and private reuse varying depending on the type of item in question; and
- Open vs. closed questions – e.g. some surveys asked respondents directly whether they compost, while others asked them to name any ‘waste prevention behaviours’ they undertake.

For a more detailed break-down of figures see table 5 below for waste prevention behaviours and table 6 for non waste prevention behaviours. Table 7 below presents some results from two projects of from Defra’s Waste and Resources Evidence Programme (WREP) reviewed.

A survey by Tucker (cited in Tucker & Douglas, 2006a, WR0112) found that when people were given a list of waste prevention behaviours and asked which ones they did, the majority claimed to be doing around three of them. Their own work (Tucker & Douglas, 2006a, WR0112) also suggested that people were not practising ‘waste prevention’ as such by carrying out all of the relevant behaviours, but rather undertaking some of them. They conclude that:

- Everyone is different, undertaking different waste prevention activities with different intensities; and
- Waste prevention consists of diverse behaviours which, though related (and associated – see discussion on links and correlations below) are only weakly so (Tucker & Douglas, 2006b, WR0112).

Waste prevention behaviour	Percentage	Sources
Buy refillables	10-60%	Lofthouse & Bhamra, 2006b, WR0113; Tonglet et al., 2004; Tucker & Douglas, 2006a, WR0112
Buy in bulk	<5-60%	Tucker & Douglas, 2006a, WR0112
Buy recycled	20-30%	Barr et al., 2005
Private reuse	30-80%	Andrew Irving Associates, 2005; Barr et al., 2005; Tonglet et al., 2004; Tucker & Douglas, 2006a, WR0112; Defra behaviours survey, 2007
Donate unwanted items	24-82%	ACS, 2006; Tucker & Douglas, 2006a, WR0112; Ipsos MORI 2009
Avoid packaging	10-40%	Barr et al., 2005; Tonglet et al., 2004; Tucker & Douglas, 2006a, WR0112; Defra behaviours survey, 2007
Buy loose fruit or vegetables	10-90%	Tucker & Douglas, 2006a, WR0112; WRAP, 2007b
Buy second-hand	2-69%	ACS, 2006; Watson, 2008
Repair	<5-70%	Tonglet et al., 2004; Tucker & Douglas, 2006a, WR0112; Watson, 2008
Use rechargeable batteries	38-40%	Tonglet et al., 2004; Tucker & Douglas, 2006a, WR0112
Buy long-life products (e.g. light bulbs)	40-47%	Tonglet et al., 2004; Tucker & Douglas, 2006a, WR0112
Use cloth nappies	3% of the population  3-5% (hh with children under 3)	Tucker & Douglas, 2006a, WR0112  Ipsos MORI 2009
Prevent junk mail (unspecified)	<5-33.9%	Tucker & Douglas, 2006a, WR0112; Tucker & Douglas, 2006b, WR0112
Register with MPS	15-16%	Ipsos MORI, 2008a; Tucker & Douglas, 2006a, WR0112
Share appliances	9%	Tonglet et al., 2004
Sell unwanted items	22-40%	ACS, 2006
Compost	14.1-35.3%	Barr et al., 2005; Gray & Toleman, 2006; Parfitt, 2006; Tucker & Douglas, 2006a, WR0112; University of Paisley, 2006b; WRAP, 2007a ; WRAP, 2007b
Use own shopping bag	10%-55%	Andrew Irving Associates, 2005; Barr et al., 2005; Tonglet et al., 2004; Tucker & Douglas, 2006a, WR0112; Ipsos MORI, 2008b; Defra behaviours survey, 2007
Avoid food waste – WRAP committed food waste reducer	14%	Ipsos MORI, 2008b

Table 1 Extent to which waste prevention behaviours are practised

## 1.2 Frequency

There is a body of evidence which suggests that waste prevention behaviours are carried out some of the time rather than all the time. Tucker and Douglas (2006a, WR0112) carried out an extensive literature review which concluded that most people are intermittently involved in waste prevention behaviours. Their own survey of 1,463 householders in Hampshire and East Ayrshire also supported

these findings: respondents were asked to score their intensity of engagement in a number of waste prevention behaviours on a scale from 1 ('never done') to 4 ('done if at all possible'), and the average scores ranged from 1.83 for 'rejecting over-packaged goods' to 3.22 for 'donating to charity'. Between 50 and 60% of the sample (depending on the behaviour) responded "on odd occasions" or "quite often", with a minority selecting the extreme "if at all possible" or "never" (Tucker & Douglas, 2006b, WR0112; Tucker & Douglas, 2007, WR0112). This evidence demonstrates how waste prevention behaviours can fluctuate a great deal for a given individual (Tucker, 2007b, WR0112).

The intermittent nature of participation in waste prevention behaviours is also supported by evidence from other studies:

- Only 12% of those currently composting say that home composting is their only means of disposal for their kitchen and/or garden waste, while the majority also make use of additional disposal routes such as HWRCs and kitchen/garden waste collections; 83% of composters say they compost all year round while a minority do not (Gray & Toleman, 2006; telephone interviews with approximately 20,000 households with access to a garden in England, Scotland and Wales)
- The majority of people claim that they either 'often' or 'always' reuse paper, glass bottles and jars and plastic containers, and wash and reuse dishcloths (Watson, 2008, referencing Barr and Gilg; sample details not quoted)
- 46.5% of people who donate to charity shops, and 46.7% of people who donate to furniture reuse organisations, say they do so once or twice a year (ACS, 2006; high street interviews with a quota sample of 997 people in the East of England)
- 41.0% of people who buy from charity shops, and 47.3% of people who buy from furniture reuse organisations, say they do so once or twice a year (ACS, 2006; high street interviews with a quota sample of 997 people in the East of England)

## Frequency of waste prevention behaviours compared to recycling

Barr (2007) found that waste reduction and reuse behaviours tended to be less consistent than recycling behaviours. Of the respondents to his survey, similar numbers stated that they always recycle, across a number of material categories, while the numbers of people engaging in specific reuse or specific reduction behaviours were much more varied (e.g. many respondents stated that they buy loose fruit and vegetables, while relatively few stated that they use their own bags).

## 1.3 Popularity

A number of researchers have commented on the relative popularity of different waste prevention behaviours. The range of activities considered, however, varies between research projects (e.g. ACS (2006) investigated behaviours involving donating, selling and buying second-hand in detail, while Barr (2007) investigated five reuse and five reduction behaviours). This and the differences in methods used means that it is difficult, if not impossible, to develop a definitive ranking of the popularity of waste prevention behaviours. The rankings discovered by the two reviewed sources which attempted this are presented below.

Tucker and Douglas (2006b, WR0112) found that charity donations and selling unwanted goods were the most popular activities, followed by reuse and purchasing behaviours, while minimising 'new buy' was less popular and rejection of packaging the least popular of all (see table below).

Activity	Average intensity score (scale 1-4)
Donate to charity	3.22
Sell unwanted items	2.99
Use long life light bulbs	2.89
Repair rather than replace	2.89
Reuse leftover food	2.76
Buy loose produce	2.74
Reuse jars and bottles	2.71
Reuse clothes as rags	2.71
Buy Recycled	2.67
Use own shopping bag	2.53
Buy in bulk or refills	2.47
Reuse envelopes/ 2 sides	2.47
Use rechargeable batteries	2.40
Share appliances	2.34
Reuse newspapers	2.32
Buy second hand goods	2.19
Hire rather than buy	1.96
Reject over-packaged goods	1.83

Table 2 Tucker and Douglas (2006b, WR0112) ranking of waste prevention behaviours

Barr (2007) found that private reuse behaviours, repairing things, and buying loose fruit and vegetables (classified as a reduction behaviour) were the most popular of the waste prevention behaviours. In general, reduction behaviours (e.g. using own shopping bag and looking for products with less packaging) were less popular than reuse behaviours. Recycling behaviours were most common (see figure below).

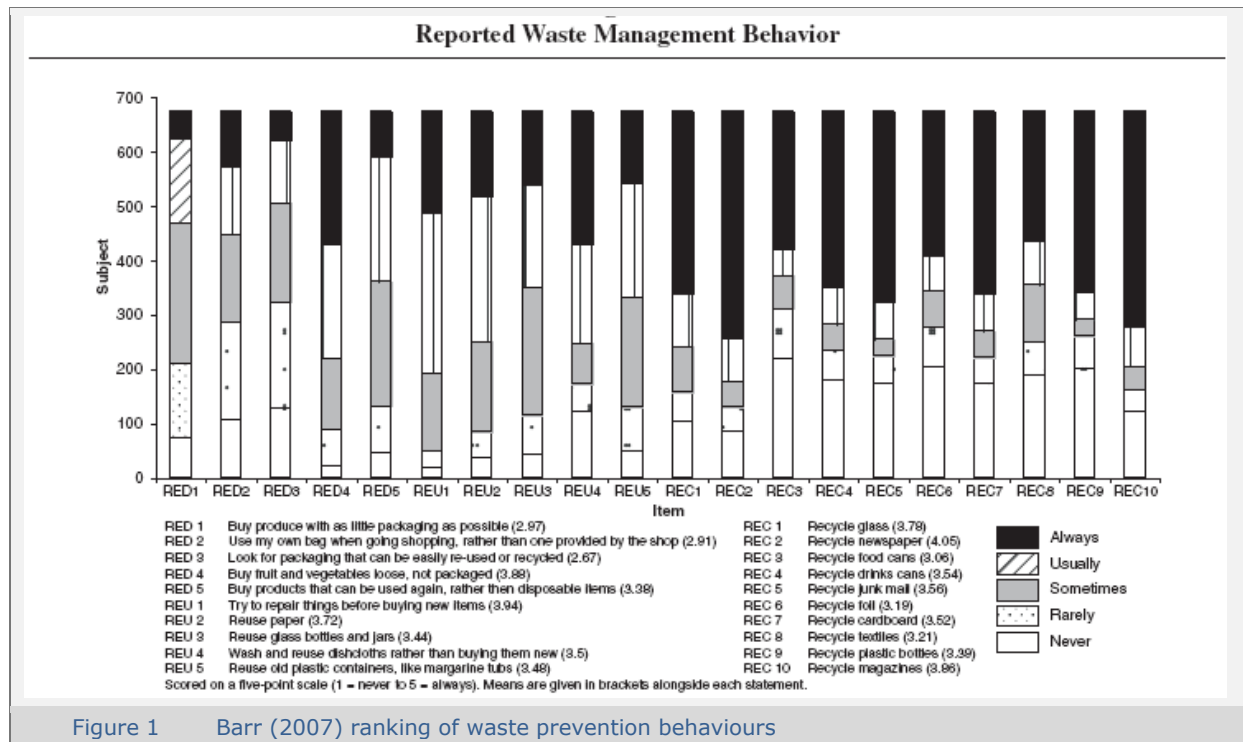


Figure 1 Barr (2007) ranking of waste prevention behaviours

Although these two papers investigated different waste prevention behaviours, those behaviours which were included can be extracted and their rankings compared. These are very similar (see table below) – the only item which does not appear in the same order in both rankings is reusing paper (and this is worded quite differently, with Tucker and Douglas (2006b) referring to reusing envelopes or two sides of paper, and Barr (2007) referring to reusing paper only).

Tucker and Douglas (2006b, WR0112) – ranked by the average scores on the intensity of engagement in behaviour	Barr (2007) – ranked by proportion of respondent stating that they 'always' or 'usually' do this
Repair rather than replace	Try to repair things before buying new items
Buy loose produce	Buy fruit and vegetables loose, not packaged
Reuse jars and bottles	Reuse paper
Use own shopping bag	Reuse glass bottles and jars
Reuse envelopes / two sides of paper	Use my own bag when going shopping, rather than one provided by the shop
Reject over-packaged goods	Buy produce with as little packaging as possible

Table 3 Tucker and Douglas (2006b, WR0112) ranking of waste prevention behaviours



Some of the other patterns in relative popularity of different waste prevention behaviours identified in various pieces of research are:

- Donation behaviours appear popular – research by Barr et al (2005) with a demographically representative sample of 1,265 Devon residents found that respondents were most likely to participate in recycling behaviours, which in this context included donation behaviours, and less likely to participate in reuse and reduction behaviours.
- Composting appears to be fairly rare – Barr et al. (2005) also found that this behaviour was rare in three out of four behavioural clusters identified in the research, and the fourth where composting was common included only a quarter of the sample.
- Repair and reuse behaviours appear more popular than behaviours involving waste minimisation through purchase choices – research by Tonglet et al. (2004) with 191 residents of Brixworth, Northamptonshire, in 2003, found that 55% of respondents were engaged in repair and reuse behaviours, compared to only 40% of respondents being engaged in waste minimisation through purchase choices.
- Textile reuse and recycling are popular behaviours – the literature review carried out by Tucker and Douglas (2006a, WR0112) suggested that this was one of the most commonly practiced forms of waste prevention, including charity donations, giving to family or friends, and re-using old clothes as rags.
- Donation and other 'passing on for reuse' behaviours are popular – the survey by Tucker and Douglas (2007) found that the most popular activities with strongest levels of engagement were to do with passing unwanted items on for reuse (including repairing broken items), for example through charity donations. Activities involving minimising the purchase of new resources – e.g. rejecting over-packaged goods – were much less popular.
- Plastic bags and junk mail are areas where householders feel they can have an influence – Obara (2005) found that householders tended to feel there were some waste streams, including these two, that they had more of an influence over. At the same time, they often lacked information about how to reduce waste from these sources.
- Donation behaviours appear to be more common than receiving items for reuse – as suggested by research carried out by LCRN (2008).
- In terms of buying or receiving items for reuse, Watson (2008) refers to a telephone survey of UK homeowners (sample size not given) which found that 1 in every 7 objects in the average UK home is from a second-hand source
- The same survey also found that family and friends were the most widespread source of second-hand goods (Widdicombe and Peake (2008) also note that reuse often takes place on an informal basis), followed by charity shops and car boot sales, with almost 3% of respondents having picked things out of skips (Watson, 2008)
- The most likely household items to be second-hand were bric-a-brac, ornaments, glassware and crockery, followed by furniture, while electrical items and particularly white goods were the least likely to be second-hand (Watson, 2008)
- Self-dispensing products that people feel most comfortable buying are dry goods; highly ranked liquid products were non-foods (James Ross Consulting et al., 2008)

Overall, then, the evidence appears to be suggesting that the most popular waste prevention behaviours are donating unwanted items for further use, and in general ensuring that unwanted or broken items which still retain some of their value are reused. Although some of the 'small things', such as rejecting junk mail and reducing plastic bag use, appear popular, it seems that people are uncertain as to what they can do about these – and external measures to influence them may in fact be more popular: the research by Obara (2005) also uncovered widespread support for a plastic bag tax as an effective way of reducing waste.

At the other extreme, evidence from Tucker and Douglas (2006b, WR0112) and Barr (2007) suggest that waste prevention behaviours involving minimising the purchase of new items – for example through buying second-hand, hiring or sharing appliances, and avoiding packaging – appear to be much less popular.

Tucker and Douglas (2007) suggest that the relative popularity of different waste prevention behaviours is related to their ease.

Research by the ACS (2006) investigated waste prevention behaviours involving donating, selling and buying second-hand in detail.

- Donating was found to be more popular than buying, when it came to charity shops and furniture reuse organisations:
  - 78% of respondents had donated something to a charity shop, compared to 69% of respondents who had bought something
  - 41% of respondents had donated to a furniture reuse organisation, compared to 30% of respondents who had bought something
- Buying was found to be more popular than selling, when it came to online auctions, car boot sales and second-hand (non-charity) shops:
  - 36% of respondents had sold items through eBay or other online auctions, compared to 46% of respondents who had bought from these sources
  - 40% of the respondents had sold items at a car boot sale, compared to 45% of respondents who had bought something
  - 22% of respondents had sold something to a second hand (non-charity) shop, compared to 31% of respondents had bought something
- In summary, the research concludes that people are more likely to donate (ranging from 41-78% depending on the channel) than to sell (ranging from 22-40% depending on the channel) their unwanted items
- But: they are most likely to give unwanted things to family and friends (82% of respondents had done this)

These research findings suggest that the popularity of behaviours involving donating, selling and buying second-hand may be context-specific. Overall, donating appears to be more popular than buying, which in turn is more popular than selling, although the proportion of people involved in each

of these behaviours varies depending on the reuse channel in question. (There are also questions about frequency of these behaviours, which the research investigated for charity donations and shopping, but not for selling behaviours.)

## Popularity of waste prevention compared to recycling

The evidence suggests that recycling is more common than waste prevention. Tonglet et al. (2004), for example, surveyed 191 residents of Brixworth, Northamptonshire, in 2003, and found that 80% reported recycling on a weekly basis, compared to 40% engaging in waste minimisation through buying behaviours and 55% engaging in repair and reuse behaviours. Barr (2005) similarly found that recycling behaviours were more common than reuse, reduction and composting behaviours.

## 1.4 Links and correlations

Research has suggested that waste prevention behaviours are poorly correlated with other pro-environmental behaviours – and even with recycling. The literature review carried out by Tucker and Douglas (2007, WR0112) found evidence to suggest that waste prevention was either negatively or not at all correlated with kerbside recycling, although their own primary research indicates that it may be positively correlated with bring recycling. The authors suggest that highly motivated recyclers who recycle beyond their kerbside scheme may also be motivated to prevent waste, while less motivated recyclers who only take advantage of the kerbside scheme may also lack the motivation for waste prevention.

Different waste prevention behaviours have, however, been found to be correlated. The survey carried out by the Tucker and Douglas (2006b, WR0112) found that people engaging in specific waste prevention behaviours were slightly more likely (correlation coefficients < 0.2) to also engage in other waste prevention behaviours. The strength of the correlation was generally weak, with the highest correlations found between reuse of paper, newspapers and glass ( $p=0.45$ ). Furthermore, no negative correlations were found – in other words, none of the different waste prevention activities are in conflict with each other, so no trade-offs are made between them.

The strongest correlations were found between behaviours belonging to the same class (the classes were identified through cluster analysis) – that is, between different types of re-use behaviours, between point of purchase decisions, between behaviours involving minimising resource consumption through valorisation and avoiding the purchase of new goods, and between behaviours involving the use of long-life or non-disposable products (Tucker & Douglas, 2007, WR0112). These behavioural classes, however, are not entirely clear-cut – for example, using leftovers falls under both reuse and valorisation (Tucker & Douglas, 2006b, WR0112).

## 1.5 Recent trends in waste prevention behaviour

The evidence suggests that the public have recently become more involved in waste prevention behaviours. For example, Tucker and Douglas (2006b, WR0112) asked their survey respondents whether they had intensified their waste prevention activities in the previous two years, and 80% claimed to have done so. The authors note, however, that the respondent may have been thinking about their recycling behaviour in answering this question, as the results also suggested that respondents tended to consider recycling to be part of waste prevention (Tucker & Douglas, 2007, WR0112).

Some of the reviewed sources also note an increase in the popularity of reuse in recent years.

- A recent report by LCRN (2008) notes that the numbers of items collected and delivered for reuse have seen a steady increase since 2004, while the number of people making use of a reuse collection service has doubled since 2005.
- Similarly, Widdicombe and Peake (2008) observe that reuse "seems to be experiencing something of a boom of late", and postulate that this could be due to increased public awareness of environmental issues or to the credit crunch.

Home composting also appears to be on the increase:

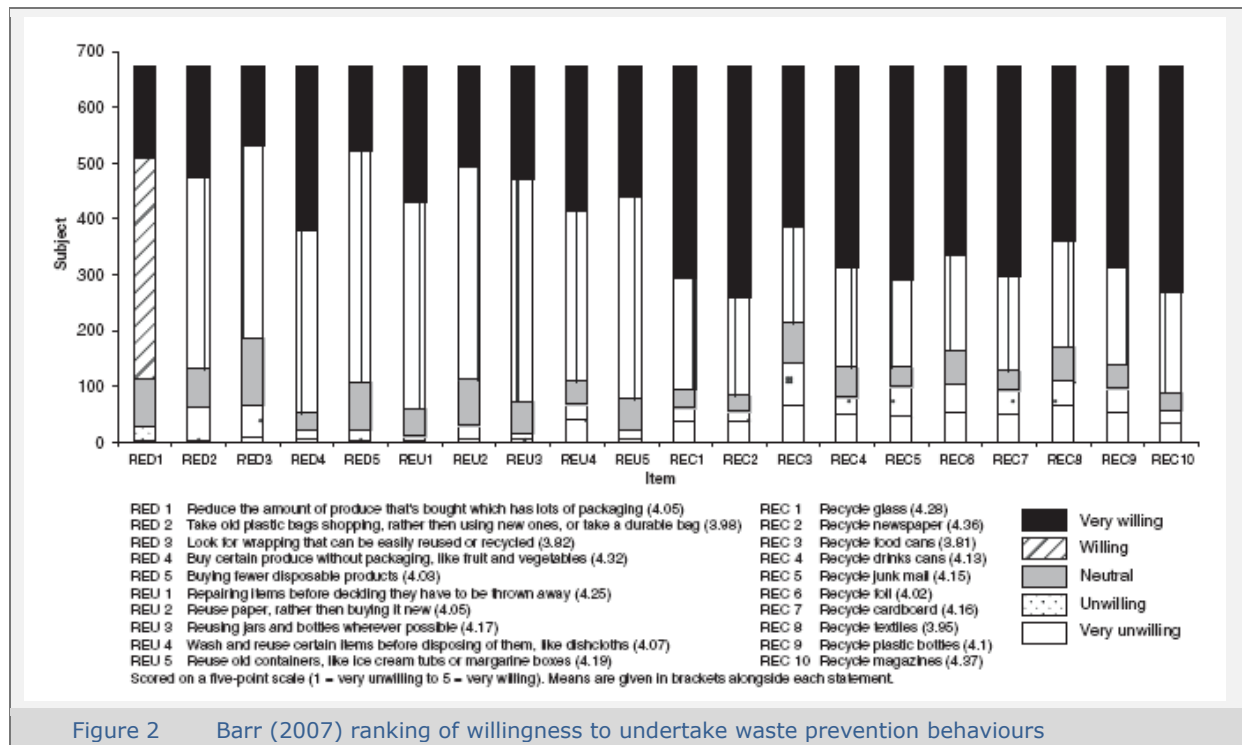
- Surveys of home composting behaviour (Gray & Toleman, 2006), carried out between 1997 and 2005, first in England and Wales and then in Great Britain, found that among households with access to a garden, the proportion who were composting had increased while the proportion who were not composting had decreased (see table 4).

Year	1997	2000	2004	2005
Sample	1,336 (England and Wales)	1,000 (England and Wales)	2,600 (Great Britain)	19,563 (Great Britain)
Composters	29%	34%	33%	34%
Non-composters	63%	66%	54%	57%
Past composters	8%	n/a	13%	9%

Table 4 Increase in home composting behaviour Source: Gray & Toleman, 2006

## 1.6 Willingness to prevent waste

The evidence from Barr's (2007) work suggests that people's willingness to undertake waste prevention behaviours is consistently greater than their actual level of engagement in those behaviours, across a range of behaviours (see figure 2 below and compare to figure 1 showing reported behaviour).



Barr also notes that, interestingly, the patterns of variability observed with respect to reported behaviours also apply to respondents' willingness to undertake these behaviours: willingness to recycle is fairly consistent across different materials, while willingness to undertake specific reduction or reuse behaviours is more varied.

The following evidence also suggests that there is potential for increasing the public's involvement in waste prevention behaviours:

- WRAP surveyed 1,594 individuals (doorstep surveys plus interviews at national and local garden centres) in England, Scotland and Wales in 2007, and found that around 1 in 20 non-composters indicated that they plan to start composting in the near future
- Obara (2005) found that 79% of respondents claimed that they would return bottles and containers to supermarkets (rising to 90% if those responding 'sometimes' are included)
- James Ross Consulting et al. (2008) found that (in a series of four consumer hall tests involving 400 interviews and two focus groups) 59% of respondents rated their interest in buying loose items as 70% or greater

In addition, Tucker and Douglas (2007, WR0112) note that the majority of the respondents to their survey claimed to know how to prevent waste. The authors, however, go on to caution that the

respondents may have been thinking about recycling, which many of them considered to be an element of waste prevention.

Tables 5, 6 and 7, over the following several pages, list all the different figures found in the literature regarding the extent to which waste prevention behaviours and non waste prevention behaviours are practised. It is worth remembering that as mentioned in section 1.1.1 there are a number of limitations to the data presented, due to factors such as question wording used in surveys, unspecific definitions and open versus closed ended questions. Furthermore, a number of the studies reviewed do not specify sample sizes and some of the studies though recent are quite outdated due to the developments in some of the behaviours (e.g. Andrew Irving Associates, 2005, on carrier bags). For a detailed look into the practice of small behaviours around the home see [L3 m3/7 \(T\) Attitudes & behaviour – everyday actions around the home](#).

It is also worth recalling that the evidence review sourced existing robust data: more up-to-date data may be available from local authorities, but this would require primary research to collect and collate such data.

## Detailed data on the extent to which waste prevention behaviours are practised

Waste prevention behaviour	Proportion carrying out the behaviour	Source and sample details
<b>Refillables</b>		
Use refillables (have experience of)	14-26% (depending on type)	Loughborough University, 2008, WR0113 Sample?
Use refillable containers and returnable bottles	10-20%	Tucker & Douglas, 2006a, WR0112 Referring to work by Waste Aware Scotland (2002), no sample details provided
Buy refills	Around 60% (both years)	Tucker & Douglas, 2006a, WR0112 Referring to work by Waste Aware Hertfordshire (2000 and 2004), no sample details provided
Buy goods with a returnable, refundable container	17%	Tonglet et al., 2004 191 questionnaires in Brixworth, Northamptonshire, in 2003
<b>Bulk buying</b>		
Buy in bulk	Around 60% (both years)	Tucker & Douglas, 2006a, WR0112 Referring to work by Waste Aware Hertfordshire (2000 and 2004), no sample details provided
Buy in bulk	<5%	Tucker & Douglas, 2006a, WR0112 Referring to work by Waste Aware Scotland (2002), no sample details provided
Buy in bulk or refills	2.47 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112 Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
<b>Buy recycled</b>		
Usually or always buy recycled products	20-30%	Barr et al., 2005 1,265 questionnaires, a demographically representative sample in four areas of Devon

Buy recycled	2.67 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
Waste prevention behaviour	Proportion carrying out the behaviour	Source and sample details
<b>Private reuse</b>		
Reuse (e.g. carrier bags, containers )	80%	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Scotland (2002), no sample details provided
Reuse bags	Around 80% (both years)	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Hertfordshire (2000 and 2004), no sample details provided
Reuse envelopes	Nearly 30% (both years)	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Hertfordshire (2000 and 2004), no sample details provided
Reuse jars and bottles	2.71 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
Reuse plastic drink bottles	16% Every time 12% Most times	Ipsos MORI 2009 for Scottish Executive  Base 3,054
Reuse plastic food containers	23% Every time 16% Most times	Ipsos MORI 2009 for Scottish Executive  Base 3,054
Reuse glass and plastic containers	Over 55%	Tonglet et al., 2004  191 questionnaires in Brixworth, Northamptonshire, in 2003
Reuse clothes as rags	2.71 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
Reuse envelopes / two sides of paper	2.47 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire



Reuse newspapers	2.32 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
Reuse wrapping paper/gift bags	21% Every time 17% Most times	Ipsos MORI 2009 for Scottish Executive  Base 3,054
<b>Waste prevention behaviour</b>	<b>Proportion carrying out the behaviour</b>	<b>Source and sample details</b>
<b>Private reuse (cont'd)</b>		
Usually or always reuse paper and glass	Over half	Barr et al., 2005  1,265 questionnaires, a demographically representative sample in four areas of Devon
Re-use things like empty bottles, tubs or jars, envelopes or paper	18% Always/Very often	BMRB International for Defra, 2007  Base 3618
<b>Donations</b>		
Have donated to a charity shop	78%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England
Have donated to a furniture reuse organisation	41%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England
Have donated via a charity collection sack	66%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England
Have donated via a charity donation bank	51%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England
Have given unwanted items to family / friends	82%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England

Donate clothes to charity	25%	Tucker & Douglas, 2006a, WR0112 Referring to work by Waste Aware Scotland (2002), no sample details provided
Donate to charity	Around 80% (both years)	Tucker & Douglas, 2006a, WR0112 Referring to work by Waste Aware Hertfordshire (2000 and 2004), no sample details provided
<b>Waste prevention behaviour</b>	<b>Proportion carrying out the behaviour</b>	<b>Source and sample details</b>
<b>Donations (cont'd)</b>		
Donate or sell WEEE	24%	Tucker & Douglas, 2006a, WR0112 Refers to a survey of 800 UK households
Donate to charity	3.22 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112 Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
Donate items to charity shops	28% Every time 24% Most times	Ipsos MORI 2009 for Scottish Executive Base 3,054
<b>Avoid packaging</b>		
Buy goods with minimum packaging	Over 40%	Tonglet et al., 2004 191 questionnaires in Brixworth, Northamptonshire, in 2003
Usually or always look for goods with less packaging	1/3	Barr et al., 2005 1,265 questionnaires, a demographically representative sample in four areas of Devon
Avoid over-packaging	10-20%	Tucker & Douglas, 2006a, WR0112 Referring to work by Waste Aware Scotland (2002), no sample details provided
Look for less packaging	Nearly 30% (both years)	Tucker & Douglas, 2006a, WR0112 Referring to work by Waste Aware Hertfordshire (2000 and 2004), no sample details provided
Reject over-packaged goods	1.83	Tucker & Douglas, 2006b, WR0112 Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
Buy loose fruit or vegetables	More than 90%	WRAP, 2007b No sample details given

Buy loose produce	2.74 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
Buy loose food	10%	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Scotland (2002), no sample details provided
Decide not to buy something because you feel it has too much packaging	3% Always/Very Often	BMRB International for Defra, 2007  Base 3618
<b>Waste prevention behaviour</b>	<b>Proportion carrying out the behaviour</b>	<b>Source and sample details</b>
<b>Buying second hand</b>		
Buy reconditioned or second-hand electrical appliances all the time	2%	Brook Lyndhurst, <i>Bad Habits Hard Choices</i> , cited in Watson, 2008  Telephone survey of 1,015 adults in Great Britain
Have bought from a charity shop	69%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England
Have bought from a FRO	30%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England
Have bought from eBay / other online auction	46%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England
Have bought from a car boot sale	45%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England
Have bought from a second hand shop (non-charity)	31%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England
Buy second hand goods	2.19 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire

<b>Repair</b>		
Repair broken equipment	<5%	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Scotland (2002), no sample details provided
Repair rather than replace	2.89 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
'Always' or 'usually' try to repair things before buying new	70%	Watson, 2008  No sample details given
Waste prevention behaviour	Proportion carrying out the behaviour	Source and sample details
<b>Repair (cont'd)</b>		
Repair things instead of buying new	Over 55%	Tonglet et al., 2004  191 questionnaires in Brixworth, Northamptonshire, in 2003
<b>Batteries</b>		
Use rechargeable batteries	30% in 2000; 38% in 2004	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Hertfordshire (2000 and 2004), no sample details provided
Use rechargeable batteries	2.40 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
Buy rechargeable batteries	Over 40%	Tonglet et al., 2004  191 questionnaires in Brixworth, Northamptonshire, in 2003
Use of rechargeable batteries	17% Every time 14% Most times	Ipsos MORI 2009 for Scottish Executive  Base 3,054
<b>Long life products</b>		
Use long life light bulbs	36% in 2000; 47% in 2004	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Hertfordshire (2000 and 2004), no sample details provided
Use long life light bulbs	2.89 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire

Buy long-life goods	Over 40%	Tonglet et al., 2004 191 questionnaires in Brixworth, Northamptonshire, in 2003
Buy long-life light bulbs	Over 40%	Tonglet et al., 2004 191 questionnaires in Brixworth, Northamptonshire, in 2003
<b>Waste prevention behaviour</b>	<b>Proportion carrying out the behaviour</b>	<b>Source and sample details</b>
<b>Nappies</b>		
Use reusable nappies	43.8% of respondents with nappy-age children	Tucker & Douglas, 2006a, WR0112 Survey of 9,000 people at 15 CA sites in Surrey and 5,000 questionnaires (no response rate given) to a random sample of Surrey residents – no details of what proportion of respondents had nappy-age children
Use cloth nappies	3% (both years)	Tucker & Douglas, 2006a, WR0112 Referring to work by Waste Aware Hertfordshire (2000 and 2004), no sample details provided
Use washable nappies (household with children under 3)	5% Every time 3% Most times	Ipsos MORI 2009 for Scottish Executive Base 293
<b>Junk mail</b>		
Registered with the MPS	35% (of those who had heard of the MPS = 46% of the sample)	Ipsos MORI, 2008a A nationally representative sample of 1,959 adults in Great Britain.
Register with the MPS	15%	Tucker & Douglas, 2006a, WR0112 No sample details, refers to the public
Stop junk mail	28%	Tucker & Douglas, 2006a, WR0112 Refers to a survey by Ipsos MORI (2004) in Hertfordshire, no sample details given
Take action to prevent junk mail	33.9%	Tucker & Douglas, 2006b, WR0112 Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire

Refuse junk mail	18% in 2000, 26% in 2004	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Hertfordshire (2000 and 2004), no sample details provided
Reject junk mail	<5%	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Scotland (2002), no sample details provided
Registered with the Mailing Preference Service	33% Jan 2006 29% March 2007 35% July 2008	Nationally representative sample Face-to-face Base 1959 Routed 848  Ipsos MORI 2008a
Registered with the Mailing Preference Service	15% of British households (4,045,211 households – September 2007 data)	<a href="http://www.stopjunkmail.org.uk/facts/default.php">http://www.stopjunkmail.org.uk/facts/default.php</a> Accessed 10.05.2009
<b>Waste prevention behaviour</b>	<b>Proportion carrying out the behaviour</b>	<b>Source and sample details</b>
<b>Junk mail (cont'd)</b>		
Opted-out for receiving unaddressed junk mail delivered by Royal Mail – 'door-to-door opt-out'	Less than 0.5% of British households	<a href="http://www.stopjunkmail.org.uk/facts/default.php">http://www.stopjunkmail.org.uk/facts/default.php</a> Accessed 10.05.2009
<b>Share / hire</b>		
Share appliances	2.34 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
Share appliances with neighbours	9%	Tonglet et al., 2004  191 questionnaires in Brixworth, Northamptonshire, in 2003
Hire rather than buy	1.96 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
<b>Sell</b>		
Sell unwanted items	2.99 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire

Have sold items on eBay / other online auction	36%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England
Have sold items at a car boot sale	40%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England
Have sold to a second hand shop (non-charity)	22%	Association of Charity Shops, undated  Street survey of 997 people, using quota sampling, in the East of England
<b>Waste prevention behaviour</b>	<b>Proportion carrying out the behaviour</b>	<b>Source and sample details</b>
<b>Food related behaviours</b>		
Avoid buying fast food	<5%	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Scotland (2002), no sample details provided
Feed left-over food to pets	<5%	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Scotland (2002), no sample details provided
Reuse leftover food	2.76 Average activity score on a scale from 1 (never done) to 4 (done if at all possible)	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
Make a shopping list	2/3	WRAP, 2007b  No sample details given
Stick to it most of the time	48% of the above	WRAP, 2007b  No sample details given
Never / rarely tempted to buy unplanned items	1/4	WRAP, 2007b  No sample details given
To what extent does throwing away food bother you	32% A great deal* 30% A fair amount 17% A little	WRAP's committed food waste reducer metric is defined by those responses with  Ipsos MORI, 2008b  1,340 omnibus survey with representative sample of Great Britain
Effort made to minimise food thrown away	34% A great deal* 36% A fair amount 16% A little	
		Ipsos MORI, 2008b  1,340 omnibus survey with representative sample of Great Britain

Amount of uneaten food thrown away	32% Hardly any* 7% None*	Ipsos MORI, 2008b  1,340 omnibus survey with representative sample of Great Britain
Throw away food because it has gone off	15% Never	BMRB International for Defra, 2007  Base 3618
<b>Compost</b>		
Compost	35% (of UK households with gardens)	WRAP, 2007b  No sample details given
Always compost kitchen and garden waste	1/5	Barr et al., 2005  1,265 questionnaires, a demographically representative sample in four areas of Devon
Compost either garden waste or both kitchen and garden waste	35%	Parfitt, 2006  Data for England and Wales (2005), no sample details given
<b>Waste prevention behaviour</b>	<b>Proportion carrying out the behaviour</b>	<b>Source and sample details</b>
<b>Compost (cont'd)</b>		
Compost household waste	32.0% in 2006 35.3% in 2007	WRAP, 2007a  The 2007 figure comes from a survey of 1,594 people
Compost	25%	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Scotland (2002), no sample details provided
Compost garden and/or kitchen waste	34% (of households with access to a garden)	Gray & Toleman, 2006  Telephone interviews with approx. 20,000 households in England, Wales and Scotland with access to a garden (2005)
Compost	14.1%	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
Importance of home composting	23% Very important 23% Fairly important	Ipsos MORI, 2008b  1,340 omnibus survey with representative sample of Great Britain
Prepared to compost at home even if it requires	21% A lot of additional effort 17% Some additional effort 14% A little additional effort  11% Only if it does not require any additional effort	Ipsos MORI, 2008b  1,340 omnibus survey with representative sample of Great Britain Routed 1086



How much you compost at home	21% Everything 14% A lot, but not everything 11% Only a small part	Ipsos MORI, 2008b  1,340 omnibus survey with representative sample of Great Britain Routed 1086
<b>Carrier bags</b>		
Use own shopping bag	2.53	Tucker & Douglas, 2006b, WR0112  Random sample of 1,463 households in two areas of Hampshire and two areas of East Ayrshire
Usually or always use own shopping bag	1/3	Barr et al., 2005  1,265 questionnaires, a demographically representative sample in four areas of Devon
Use a bag for life or reuse bags for supermarket shopping	Around half	Andrew Irving Associates, 2005  No sample details given
Have bought a bag for life	1/3	Andrew Irving Associates, 2005  No sample details given
<b>Waste prevention behaviour</b>	<b>Proportion carrying out the behaviour</b>	<b>Source and sample details</b>
<b>Carrier bags (cont'd)</b>		
Use bag for life every time for shopping	1/3 of those with a bag for life (10% of sample)	Andrew Irving Associates, 2005  No sample details given
Rarely or never use free supermarket bags for main shop	8%	Andrew Irving Associates, 2005  1,048 street interviews across Great Britain with regionally representative samples
Rarely or never use free supermarket bags for top-up shopping	11%	Andrew Irving Associates, 2005  1,048 street interviews across Great Britain with regionally representative samples
Use no free bags in an average week	3%	Andrew Irving Associates, 2005  1,048 street interviews across Great Britain with regionally representative samples
Try to use as few carrier bags as possible	69%	Andrew Irving Associates, 2005  1,048 street interviews across Great Britain with regionally representative samples
Reuse all carrier bags	59%	Andrew Irving Associates, 2005  1,048 street interviews across Great Britain with regionally representative samples

Reuse most carrier bags	16%	Andrew Irving Associates, 2005 1,048 street interviews across Great Britain with regionally representative samples
At least sometimes use containers other than free bags for main supermarket shop	37%	Andrew Irving Associates, 2005 1,048 street interviews across Great Britain with regionally representative samples
At least sometimes use containers other than free bags for top-up shop	45%	Andrew Irving Associates, 2005 1,048 street interviews across Great Britain with regionally representative samples
Regularly use own shopping bag for main shop	10%	Andrew Irving Associates, 2005 1,048 street interviews across Great Britain with regionally representative samples
Regularly use a bag on wheels for main shop	4%	Andrew Irving Associates, 2005 1,048 street interviews across Great Britain with regionally representative samples
Have bought a reusable plastic bag	40% (+2% say someone else in the household has)	Andrew Irving Associates, 2005 1,048 street interviews across Great Britain with regionally representative samples
<b>Waste prevention behaviour</b>	<b>Proportion carrying out the behaviour</b>	<b>Source and sample details</b>
<b>Carrier bags (cont'd)</b>		
Regularly use a 'bag for life' for groceries	1/3 of those with a 'bag for life'	Andrew Irving Associates, 2005 1,048 street interviews across Great Britain with regionally representative samples
Use a 'bag for life' every time or most times	13%	Andrew Irving Associates, 2005 1,048 street interviews across Great Britain with regionally representative samples
Reuse free supermarket carrier bags several times	22%	Ipsos MORI, 2008b 1,340 omnibus survey with representative sample of Great Britain
Reuse free supermarket carrier bags once or twice	15%	Ipsos MORI, 2008b 1,340 omnibus survey with representative sample of Great Britain
Tend to use free supermarket carrier bags as bin bags	37%	Ipsos MORI, 2008b 1,340 omnibus survey with representative sample of Great Britain

Do not take any free disposable carrier bags from the supermarket	12%	Ipsos MORI, 2008b  1,340 omnibus survey with representative sample of Great Britain
Respondents were also asked to select a statement about 'Bags for Life' that applies to them:	23% selected "I have bags like this and always use them" 21% selected "I have bags like this and often use them" 15% selected "I have bags like this and occasionally use them"	Ipsos MORI, 2008b  1,340 omnibus survey with representative sample of Great Britain
Use long-life shopping bags	38%	Tonglet et al., 2004  191 questionnaires in Brixworth, Northamptonshire, in 2003
Use own shopping bag	10-20%	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Scotland (2002), no sample details provided
Reuse shopping bags/boxes	48% Every time 17% Most times	Ipsos MORI 2009 for Scottish Executive  Base 3,054
Take your own shopping bag when shopping	25% Always/Very Often	BMRB International for Defra, 2007  Base 3618
<b>Waste prevention behaviour</b>	<b>Proportion carrying out the behaviour</b>	<b>Source and sample details</b>
<b>Other</b>		
Have donated and bought in charity shops	62%	Association of Charity Shops, undated
Have donated and bought from FROs	21%	Street survey of 997 people, using quota sampling, in the East of England
Reduce household hazardous waste (and plan to continue)	33.5%	Tucker & Douglas, 2006a, WR0112  No sample details given
Burn waste	10%	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Scotland (2002), no sample details provided
Reduce paper use	<5%	Tucker & Douglas, 2006a, WR0112  Referring to work by Waste Aware Scotland (2002), no sample details provided

Table 6 Non-waste prevention behaviours

Behaviour	Proportion carrying out the behaviour	Source and sample details
<b>Food waste</b>		
Throwing food away regularly	1/3	Tucker & Douglas, 2006a, WR0112 No sample details given, but refers to the UK population
Throwing away more than 10% of weekly shop	16%	Tucker & Douglas, 2006a, WR0112 No sample details given, but refers to the UK population
Likely to buy 2-4-1 offers, even if some thrown away	26% say they are very likely to buy 2-4-1 31% say they are likely to buy 2-4-1	Tucker & Douglas, 2006a, WR0112 Refers to a survey by the Environment Agency (2002), no sample details given
To what extent does throwing away food bother you	10% Not very much 10% Not at all	Ipsos MORI, 2008b 1,340 omnibus survey with representative sample of Great Britain
Effort made to minimise food thrown away	9% Not very much 5% Not at all	Ipsos MORI, 2008b 1,340 omnibus survey with representative sample of Great Britain
Amount of uneaten food thrown away	3% Quite a lot 9% A reasonable amount 21% Some 27% A small amount	Ipsos MORI, 2008b 1,340 omnibus survey with representative sample of Great Britain
Say they throw away 'a significant amount' of food left on plate	32%	WRAP, 2007b No sample details given
Say they throw away 'a significant amount' of prepared, unserved food	24%	WRAP, 2007b No sample details given
Dispose of hazardous household waste in sink / drain	1%  The bin was the most common route for household hazardous waste disposal, but no figures are given.	Tucker & Douglas, 2006a, WR0112 Refers to a survey of 750 doorstep interviews with Scottish households (2004)
Throw away food because it has gone off	15% Always/Very Often	BMRB International for Defra, 2007 Base 3618
<b>Shopping</b>		
Never looking for low packaging	40%	Tucker & Douglas, 2006a, WR0112 Referring to a survey by Brook Lyndhurst (2002) in London, no sample details given
Over-shop at times	Almost everyone	WRAP, 2007b No sample details given

Behaviour	Proportion carrying out the behaviour	Source and sample details
<b>Carrier bags</b>		
Use free carrier bags for clothes shopping	85%	Andrew Irving Associates, 2005 No sample details given
Use free carrier bags for high street shopping	63%	Andrew Irving Associates, 2005 No sample details given
Use free carrier bags for DIY shopping	69%	Andrew Irving Associates, 2005 No sample details given
Put 'practically everything' in free carrier bags	79% on main shopping trip 77% on top-up shopping trip	Andrew Irving Associates, 2005 1,048 street interviews across Great Britain with regionally representative samples
Pick up more carrier bags than they need	1/2	Andrew Irving Associates, 2005 1,048 street interviews across Great Britain with regionally representative samples
Discard all single use bags	8%	Andrew Irving Associates, 2005 1,048 street interviews across Great Britain with regionally representative samples
Tend not to reuse free supermarket carrier bags but throw them away	6%	Ipsos MORI, 2008b 1,340 omnibus survey with representative sample of Great Britain
Tend not to reuse free supermarket carrier bags but recycle them	5%	Ipsos MORI, 2008b 1,340 omnibus survey with representative sample of Great Britain
Respondents were also asked to select a statement about 'Bags for Life' that applies to them:	8% selected "I have bags like this but rarely use them" 2% selected "I have bags like this but don't ever use them" 29% selected "I don't have bags like this"	Ipsos MORI, 2008b 1,340 omnibus survey with representative sample of Great Britain
Take your own shopping bag when shopping	36% Never	BMRB International for Defra, 2007 Base 3618
<b>Home composting</b>		
Importance of home composting	15% Not very important 20% Not at all important	Ipsos MORI, 2008b 1,340 omnibus survey with representative sample of Great Britain
Not prepared to home compost	33%	Ipsos MORI, 2008b 1,340 omnibus survey with representative sample of Great Britain Routed 1086
Do not make compost at home	51%	Ipsos MORI, 2008b 1,340 omnibus survey with representative sample of Great Britain Routed 1086

Behaviour	Proportion carrying out the behaviour	Source and sample details
<b>Home composting (cont'd)</b>		
Have no experience of home composting	55.5%	WRAP, 2007a  This figure comes from a survey (2007) of 1,594 people
<b>Private re-use</b>		
Reuse plastic drink bottles	36% Never	Ipsos MORI 2009 for Scottish Executive  Base 3,054
Reuse plastic food containers	25% Never	Ipsos MORI 2009 for Scottish Executive  Base 3,054
Reuse wrapping paper/gift bags	24% Never	Ipsos MORI 2009 for Scottish Executive  Base 3,054
Reuse shopping bags/boxes	15% Never	Ipsos MORI 2009 for Scottish Executive  Base 3,054
Re-use things like empty bottles, tubs or jars, envelopes or paper	22% Never	BMRB International for Defra, 2007  Base 3618
<b>Other</b>		
Have no plans to reduce household hazardous waste	11.6%	Tucker & Douglas, 2006a, WR0112  No sample details given
Never repair broken products	38%	Tucker & Douglas, 2006a, WR0112  Refers to a survey of 800 UK households
Discard WEEE	Over 75%	Tucker & Douglas, 2006a, WR0112  Refers to a survey of 800 UK households
Donate items to charity shops	10% Never	Ipsos MORI 2009 for Scottish Executive  Base 3,054
Use rechargeable batteries	38% Never	Ipsos MORI 2009 for Scottish Executive  Base 3,054
Use washable nappies (households with children under 3)	75% Never	Ipsos MORI 2009 for Scottish Executive  Base 293
Decide not to buy something because you feel it has too much packaging	57% Never	BMRB International for Defra, 2007  Base 3618

GAP EcoTeams Source: GAP, 2008	Behaviour	Proportion carrying out the behaviour		Sample details
		% Already doing before EcoTeams	% Started doing as a result of EcoTeams	
	Compost/wormery/etc. for kitchen organic waste	63%	25%	Base 127
	Compost for garden waste	65%	19%	Base 127
	Buy products made from recycled materials where possible (e.g. loo roll)	43%	43%	Base 127
	Buy products that can be recycled over products that cannot	31%	56%	Base 127
	Buy products that have minimal or no packaging over ones that do	39%	55%	Base 127
	Stopped junk mail through the Mail Preference Service or a sticker on letter box	44%	27%	Base 127
	Borrow or rent items rather than buy if item is only needed occasionally	27%	19%	Base 127
	Shopped for second hand goods as alternative to new	47%	18%	Base 127

Hampshire Small Changes Big Difference Source: Brook Lyndhurst (for HCC) 2008	Behaviour	Proportion carrying out the behaviour		Sample details
		Baseline % saying all/most	Follow up % saying all/most	
	Donate furniture or electrical goods to charities or other organisations for re-use	43%	63%	Base 106
	Use your own shopping bag(s)/re-use bag instead of using new bags at the supermarket checkout	67%	83%	Base 106
	Buy recycled toilet paper/tissue	41%	51%	Base 106
	Compost kitchen waste at home (e.g. fruit & vegetable peelings)	69%	76%	Base 87
	Compost garden waste at home	72%	78%	Base 87
	Buy refills instead of new products	37%	42%	Base 106
	Have products repaired or mended rather than buying new	35%	40%	Base 106
	Borrow or hire tools for household or garden jobs	11%	15%	Base 106
	Buy reconditioned electrical appliances instead of new ones	0%	3%	Base 106
	Pass on books and magazines	56%	55%	Base 55
	Use disposable nappies	33%	27%	Base 55
	Donate clothes you no longer need to charity	94%	86%	Base 106

Table 7 Practice of waste prevention behaviours in Hampshire (WR0117) and GAP (WREP WR0114 & Defra EAF studies)

## 2 Who practises waste prevention behaviours?

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The following section paints a picture of the profile of a person who practises waste prevention behaviours and outlines some of the key characteristics. This analysis informed the writing of **L2 m3 Consumers - engaging** and **chapter 3 in L2 m1 Technical Report**.

- The “green consumer”?
- The recycler?
- Sociodemographic differences in waste prevention behaviour
- Regional differences in waste prevention behaviours
- Role of demographics in influencing waste prevention behaviours
- Other ways of segmenting the public
- Profile of a waste preventer
- Other influencing factors

### 2.1 The “green consumer”?

Individuals who are concerned about environmental issues are frequently reported to be more interested or engaged in waste prevention. For example:

- Tonglet et al. (2004) and Tucker & Douglas (2006a, WR0112) note in their literature reviews that this trend is often observed
- Waste Watch (2007a) note that many of those who were attracted to their ‘What not to Waste’ waste prevention initiative tended to already have an interest in environmental issues
- Tucker and Douglas (2006a, WR0112) found evidence in their literature review which suggests that members of environmental groups are more likely to practice environmental consumerism in general – but it appears that waste prevention is still low on their list of priorities
- Tucker and Douglas (2006b, WR0112) went on to test the above in their own survey, and found that although members of environmental groups appeared to be more engaged in waste prevention behaviours than non-members, this difference was not statistically significant

OVAM (2008), on the other hand, suggest that people cannot be neatly divided into such categories of “environmentally conscious” and “environmentally less responsible” consumers. They note that people’s consumption behaviours can fluctuate, and often vary depending on the product domain (e.g. one person can be environmentally conscious on food purchases but not when it comes to holidays).

### 2.2 The recycler?

Evidence is mixed as to whether recyclers are more or less likely than non-recyclers to undertake waste prevention behaviours:

- Waste Watch (2007a, WR0105) found that, of the 16 participants in their ‘What not to Waste’ initiative, those who were keen recyclers before taking part tended to be more interested and enthusiastic to carry out as many waste reduction activities as possible, while those who had previously been recycling but were otherwise less ‘green’ or had busier lifestyles were inclined to be more selective and choose waste prevention behaviours they considered achievable
- Research by Obara (2005) indicated that there were no significant differences in waste minimisation behaviour depending on the kerbside recycling scheme service available, but that respondents who



claimed to recycle frequently were more likely to minimise their waste than those who recycled infrequently or never

- In contrast, Tonglet et al. (2004) found that people who were carrying out waste minimisation behaviours were more likely to feel that they did not need to recycle (because they considered “others” to be doing enough) – the authors put forward the possibilities that this could be due to waste minimisation behaviour leading to low levels of recyclable waste, or due to the different nature of recycling and waste minimisation behaviours
- Tucker and Douglas (2006a, WR0112) note in their literature review that research has demonstrated there to be a negative relationship between kerbside recycling and waste prevention at source, while their own research suggested that people engaged in bring recycling (as opposed to kerbside recycling) and home composting were also more likely to also engage in waste prevention (Tucker & Douglas, 2006b, WR0112).

## 2.3 Socio-demographic differences in waste prevention behaviour

### Gender

The bulk of the evidence seems to suggest that women are more likely than men to practise waste prevention:

- Tucker and Douglas (2006a, WR0112) found evidence in their literature review that women were more likely to be involved in green consumerism in general, although waste prevention activities were not a priority in this area
- Their work also suggested that women appear to be more likely than men to be involved in source reduction of waste, although the correlation was weak (Tucker & Douglas, 2006a, WR0112)
- Barr (2007) found that gender had a small indirect effect and a moderately strong direct effect on waste reduction, with women more likely than men to reduce waste

There is also evidence from studies on specific waste prevention behaviours which suggests a similar pattern:

- Tonglet et al. (2004) found that women were more likely than men to be engaged in reuse and repair behaviours
- Andrew Irving Associates (2005) found that women were more likely to have bought a reusable bag (42%) than men (24%), while awareness of the existence of these ‘bags for life’ was also higher among women (82%) than men (69%)

ACS (2006) investigated a range of reuse behaviours, including donating, selling and buying second-hand, and found the following differences by gender:

- Donating behaviours:
  - Women appear to be more likely to donate to charity shops and through other routes: 55% of those who had donated to charity shops were women, as well as 54% of those who had donated via collection sacks, and 56% of those who had donated to charity banks
  - Women were also more likely than men to have given things to family or friends
- Selling behaviours:
  - Men were more likely to have sold items on eBay, with 54% of those having done so being male
  - Women were, in contrast, slightly more likely have sold items at car boot sales
  - Men were slightly more likely to have sold items to (non-charity) second-hand shops

- Buying behaviours:
  - Women were more likely than men to have bought from a charity shop, with 56% of buyers being female
  - Men were, in contrast, more likely to have bought from furniture reuse organisations
  - Men were slightly more likely to have bought from a (non-charity) second hand shop
  - Women were slightly more likely to have bought from online auctions
  - Women were also slightly more likely to have bought from car boot sales

Reasons: Barr (2007) suggests that these patterns may come about as the result of established gender roles, and Watson (2008) provides further support as he notes that bag reuse is more common among women, whose gender role it is to be in charge of shopping, while buying from furniture reuse organisations is in fact more common among men, whose gender role it is to be responsible for furniture purchases.

## Family life stage

Households with no children appear to be the most likely to prevent waste, while households with young children are the least likely:

- Tonglet et al. (2004) investigated a range of waste minimisation behaviours, and found that households with no children were the most likely to engage in all of the 11 behaviours considered, while households with children under 12 were the least likely to do so
- Tucker and Douglas (2006a, WR0112) also found evidence for this in their literature review, which suggested that families with young children were the poorest performers in waste reduction
- Tucker and Douglas (2006b, WR0112) also found support for this in their own work, which suggested that families with children (along with young adults) were the least likely to be involved in a range of waste prevention behaviours

WRAP's (2007b) research on food waste uncovered similar patterns in food waste behaviours, with households with children being most likely to waste food, as well as engage in various behaviours which increase the probability of food waste:

- High food wasters were more likely to be families with school-age children
- 45% of families with children under the age of 16 are high food wasters
- 47% of households with young children say they throw away leftovers, compared to 32% of households in general
- People with children were found to be more likely than others to stray from shopping lists
- Shopping trips with children tend to lead to over-purchasing due to pester power
- People with young children tended to prefer over- rather than under-purchasing, to avoid running out of things
- Families with children often cook separate meals for children and adults
- They are also more likely to say they ruin food in preparation
- Young families are also more sensitive to date labels on foods

On the other hand, Waste Watch (2007a, WR0105) found that households with children were generally more interested in composting their food and garden waste than households with no children (n=16). Whether that interest translates into actual behaviour is uncertain – and it is also possible that the interest stems from the high levels of food waste referred to in WRAP's research above.

Building on from the *Understanding Food Waste* study (WRAP 2007b) and using findings from compositional waste analysis (actual behaviour) WRAP's more recent *The Food We Waste* report found that households with children appear to waste more food mainly because the households are larger (i.e. contain more people, not on a per person basis). Furthermore, the study found that older people waste as much avoidable food as younger people (1.2 kg per person per week) and that retired households appear to waste less food only because they tend to be smaller households (WRAP, 2008).

This study (WRAP, 2008) also found that:

- Households that have never composted at home waste more food than households that either currently compost or used to compost (3.3kg per week compared with 2.5 and 2.1kg per week respectively).
- Households that are committed to recycling also waste slightly less food than non-committed households (3.2kg per week of avoidable food compared with 3.9kg per week).

Reasons: In terms of reasons for the influence of children on households' waste prevention behaviour, Tonglet et al. (2004) suggest that this may reflect people's time availability: with the presence of children leading to less time available for waste prevention behaviours such as careful shopping and sorting items for reuse.

## **Social class**

There is relatively little information available on differences between social classes when it comes to waste prevention in general, but a number of studies have looked at specific behaviours and differences between social classes.

### Waste prevention in general

- Tonglet et al. (2004) investigated 11 different waste prevention behaviours, and found that in most cases, those in unskilled employment were the least likely to be carrying them out

### Home composting

- Work by Gray and Toleman (2006) suggested that those in higher social classes were more likely to compost than others: in their sample (n=19,563), approximately 60% of composters were in social grade ABC1, compared to 44% of non-composters (average across Great Britain is approximately 50% of the population)
- WRAP (2007b) similarly found that those on higher incomes were more likely to compost, while low-income families and students were less likely to take it up
- Tucker & Douglas (2006a, WR0112) referred to work in the literature review which suggested that professional and managerial classes were the most likely to compost all of their kitchen waste

### Food waste

- WRAP's (2007b) survey work on food waste also suggested that those on higher incomes were less likely to waste food (although the more affluent people were more likely to produce more vegetable waste)
- On the basis of compositional analysis (WRAP, 2008) managerial and professional households produce less food waste than less affluent households though there is no difference between them on a per capita basis, because less affluent households tend to have more people in them (WRAP, 2008, pg 190). Affluent households may produce more vegetable waste than less affluent households, however (WRAP, 2007b).

## Reuse

- ACS (2006) carried out an extensive survey of behaviours involving donating and selling items for reuse, and buying items second-hand, arriving at the following conclusions with respect to differences between social classes:
  - Those in social classes ABC1 were marginally more likely to donate to charity shops, while those classes DE include the largest proportion of people never to have made donations
  - Those in social classes ABC1 were more likely to donate via collection sacks, as well as being marginally more likely to donate via charity banks, than those in other social classes
  - Those in social classes ABC1 were also more likely than other to donate to furniture reuse organisations, with social class C1 the largest donator
  - Those in social classes ABC1 were most likely to have sold things on eBay or other online auctions (61% of those who had done so were ABC1)
  - Those in social classes DE were the most likely to have sold things at car boot sales
  - There were no significant differences in social groups of buyers and non-buyers from charity shops, although those in social classes AB were slightly more likely than others to have never bought anything from charity shops or furniture reuse organisations
  - Those in social classes DE were most likely to have bought something from a furniture reuse organisation, as well as making up the highest proportion of buyers
  - Those in social classes ABC1 were slightly more likely than others to have bought from eBay or other online auctions
  - Those in social classes C2DE were slightly more likely than others to have bought from car boot sale
- This survey found no significant differences by class in whether respondents had given things to their family or friends, although the report does note that those in classes AB were the least likely to never have passed anything on to family or friends
- In contrast, Curran and Williams (2007) found that 26% of survey respondents (n=466, data collected in three cities in England in 2005) from high deprivation areas said they gave items away to friends or family, compared to 16% of respondents in affluent areas

It appears, then, that variation in people's waste prevention behaviour by social class may be dependent on the type of waste prevention behaviour in question: the evidence suggests that those in higher social grades are more likely to engage in home composting, food waste prevention, and some donation / passing on for reuse behaviours, while those in lower social grades are more likely to engage in behaviours involving buying second-hand, as well as some involving selling for re-use.

## **Household size and type**

Evidence on the impact of household size on waste prevention behaviour and performance is mixed:

- The literature reviewed by Tucker and Douglas (2006a, WR0112) suggested that households of five or more are the poorest performers in terms of general waste reduction
- Their own survey work (2006b, WR0112), however, suggested that householders' waste prevention behaviours vary not only with household size, but also between different behaviours:
  - Larger households tend to buy more in bulk, hire instead of buy, and use rechargeable batteries; single-person households are the least likely to do any of these
  - Smaller households are more likely to use their own shopping bags
  - Large and small households together are the most likely to reject over-packaged goods, compared to medium-sized households, but least likely to donate to charity

Research on food waste gives similarly mixed results:

- WRAP (2007b) found that larger families wasted higher total quantities of food
- Similarly, Tucker & Douglas (2006a, WR0112) found evidence in the literature that larger households tend to waste more food than smaller households
- WRAP's (2007b) work, however, also suggested that larger households wasted less food per capita than smaller households
- In their further food research in 2008, WRAP found that larger households waste more food overall, while smaller households waste less – but on a per capita basis, large households waste less per person and smaller households waste more (WRAP, 2008)

Tucker and Douglas (2006b, WR0112) also investigated differences between house types, and found that:

- Detached households are more likely to:
  - Donate to charity
  - Hire rather than buy
  - Reuse clothing as rags
  - Use rechargeable batteries
- Terraced and semi-detached households are less likely to do any of the above, and flats the least
- The authors note that the relative affluence of the respondents [possibly related to house type] shows similar differences in behaviour

House type has also been investigated in relation to composting behaviour, with the following results:

- Gray and Toleman (2006) found that people living in accommodation that they own were more likely to compost:
  - Around 78% of current composters lived in owner-occupied accommodation, with only 20% living in rented accommodation
  - 63% of non-composters lived in owner-occupied accommodation, compared to 35% living in rented accommodation
- Parfitt (2006) refers to data which suggests that those with larger gardens may be more likely than others to compost: the mean garden size of an experienced composting household was found to be 100 square metres larger than others'

AEA et al. (2008, WR0116) considered the influence of tenure on waste prevention behaviours, and found that tenants were:

- Significantly less likely to home compost (those who may move regularly)
- More likely to buy cheaper, second hand items, buy from charity and attend give and take days (those in lower income groups)

In conclusion, it is difficult to say much that is definitive about the influence of household size, house type and tenure on householders' waste prevention behaviour. It seems that many of the apparent differences described above are likely to be due to factors other than the household size or house type (e.g. using rechargeable batteries). At the same time, other behaviours are likely to be influenced

directly by these factors (e.g. larger households are more likely to buy in bulk because they need to buy more items than single households, as well as being likely to waste more food than smaller households).

## Age

Most of the evidence suggests that older people are overall more likely than younger people to be engaged in waste prevention behaviours:

- Tonglet et al. (2004) investigated 11 waste prevention behaviours, and found that the 65+ age group were most likely to engage in nine out of these (including point of purchase, reuse and repair behaviours); in contrast, those aged 25-39 were the least likely to engage in waste prevention
- Tucker and Douglas (2006a, WR0112) also refer to evidence in the literature which suggests that people in older age groups are marginally more likely to practice source reduction

Other evidence suggests that differences between age groups are at least partly dependent on the waste prevention behaviour in question, although much of this still supports the above proposition that older people are more engaged in waste prevention behaviours than younger people:

### Bag reuse

- The survey by Tucker and Douglas (2006b, WR0112) found that retired people were the most likely to use their own shopping bag
- A survey of 1,048 people by Andrew Irving Associates (2005) found that one fifth of those aged 55+ said they regularly use their own bag for their main grocery shop, compared to only 6% of those under the age of 55, and 10% across the whole sample
- Watson (2008) in turn refers to sources which suggest that middle-aged people are the most likely to use reusable bags, due to being more organised, planning ahead and making routine shopping trips

### Other reuse behaviours

- ACS (2006) investigated various reuse behaviours, and identified the following patterns between age groups:
  - Middle aged people were found to be most likely to donate to charity shops
  - The age group 25-44 were more likely than expected to have sold items on eBay (56% of those who had sold something on eBay were aged 25-44, compared to this age group making up only 38% of the UK population)
  - No significant age differences were found between buyers and non-buyers from charity shops, although age group 25-44 were the most likely to have never bought anything from a charity shop
  - Those aged 25-44 were the highest proportion by age group to have bought from furniture reuse organisations
  - The age group 25-44 also made up a disproportionately large fraction of online buyers (52%, despite only making up 38% of the UK population)

### Food waste prevention

- Work by WRAP (2007b) suggests that high food wasters are more likely to be younger (aged 16-34) people currently in employment, while older people waste the least food
- Older people are also more likely to make shopping lists, prepare meals from scratch, plan better, and cook exactly the right amount; in contrast, 50% of those aged under 24 say they never cook anything from scratch and have no skills to make use of leftovers (WRAP, 2007b)

- The survey by Tucker and Douglas (2006b, WR0112) also found that retired people were the most likely to reuse leftovers
- However, WRAP's more recent study (based on compositional analysis) shows that contrary to conventional wisdom, older people waste as much food as younger people, although they may appear to waste less due to smaller household sizes (WRAP, 2008)

#### Home composting

- Work by WRAP (2007b) and Gray and Toleman (2006) suggests that older people are more likely than younger people to compost (see table below)
- Parfitt (2006) also suggests that changing demographics, i.e. more people entering the age bracket of 45-65 years (which is associated with increased gardening activity), are in part responsible for the recent increase in composting participation (see earlier discussion on trends)

Age group	Under 45	45-64	65+	Total
Current composters	32%	39%	29%	100%
Non-composters	47%	31%	22%	100%

Table 8 Home composting and age Source: Gray & Toleman, 2006

#### Other waste prevention behaviours

- The survey by Tucker and Douglas (2006b, WR0112) found that retired people were the most strongly engaged in:
  - Using long-life light bulbs
  - Reusing glass and cloths
- The same survey also found that retired people were the most weakly engaged in:
  - Using rechargeable batteries
  - Buying in bulk
  - Sharing appliances
  - Buying second hand items
  - Hiring instead of buying

Reasons: Watson (2008), in investigating reuse behaviours, suggested that the relationship between age and involvement in waste prevention activity may be specific to the behaviour, or even to the item. He notes that the key variables which influence attitudes and behaviour (specifically with respect to reuse) vary with age, and that older people are more likely to "think thrifty" while younger people are more likely to buy reused furniture for cost reasons. Tonglet et al. (2004) also note that retired people are more likely to have the time for certain waste prevention behaviours, such as planning their food shopping and sorting items for reuse.

## 2.4 Regional differences in waste prevention behaviours

This is another area where evidence is rather patchy, and it appears that regional differences are dependent on the waste prevention behaviour in question.

- Tucker and Douglas (2006b, WR0112) found that respondents in Hampshire were more engaged in waste prevention behaviours than respondents in East Ayrshire, and that these regional differences were most pronounced for reuse activities

- Gray and Toleman (2006) note that no significant differences were found between urban and rural dwellers (with access to a garden) in whether or not they compost
- Watson (2008) refers to research (sample details not quoted) which suggested that more residents in North of England (30%) and Scotland (28%) would be embarrassed to admit to buying second hand than in South East England (13%)
- Watson (2008) also notes (sample details not quoted) that buying 'bags for life' is least common in the North East of England (26%), compared to Greater London (38%) and Wales (41%)

## 2.5 Role of demographics in influencing waste prevention behaviours

Although a number of differences in waste prevention behaviours between socio-demographic groups have been identified by researchers, many of them conclude that these differences, though significant, are very small (e.g. Barr, 2007; Tucker and Douglas, 2006b, WR0112). Tucker and Douglas (2006b, WR0112), for example, note that socio-demographic factors only explain 5% of behavioural variation.

Tucker and Douglas (2007, WR0112) suggest that situational factors and lifestyles play more of a role in waste prevention behaviour than social classes, and Gray and Toleman (2006) postulate that socio-demographic factors may modify the influence of other, internal factors, such as attitudes.

## 2.6 Other ways of segmenting the public

### Cluster analysis by Tucker and Douglas (2006b, 2007, WR0112)

Tucker and Douglas, (2006b, 2007, WR0112) discovered that their survey sample had a behavioural group structure with three behavioural clusters (two of them including sub-clusters), grouped together mainly on the basis of the intensity of their behaviours (see graph below):

- A small cluster (alpha)
  - Relatively strong behaviours
  - Strong attitudes, including an emotional response to the acceptance of personal responsibility and higher self-efficacy
  - A tendency towards the value of openness to change, and less of a liking for gadgets
- An intermediate cluster (beta)
  - Strong behaviours on valorisation of unwanted goods and minimisation of new buy, moderate levels of reuse, and relatively weak purchase behaviours (i.e. choosing lower waste products)
  - Strong attitudes
  - The most socially motivated and the busiest cluster
- A relatively large cluster (gamma)
  - Engaging modestly or weakly across all behaviours
  - Weak attitudes
  - Least socially-oriented and most fond of gadgets



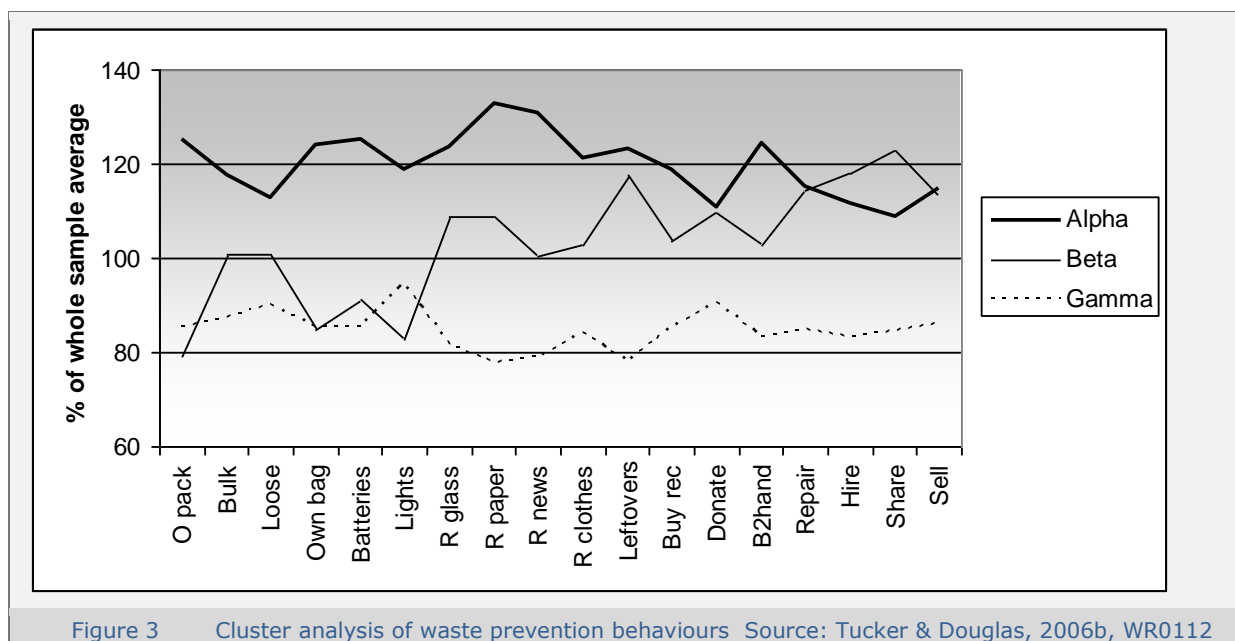


Figure 3 Cluster analysis of waste prevention behaviours Source: Tucker & Douglas, 2006b, WR0112

No demographic differences were found between the clusters. Although attitudes and values differed significantly between the three groups, as noted in the descriptions above, these could not be used to predict group membership, because the spread of attitudes within groups was larger than the mean differences in attitudes between groups. Only 54% of the sample were correctly classified into the three clusters (and only 38% when this was attempted for the five clusters, including the two sub-clusters). The best predictions were achieved for the alpha group and the alpha1 sub-group, with 61% of cases correctly classified (Tucker & Douglas, 2006b, WR0112).

### Cluster analysis by Barr et al. (2005)

Barr et al. (2005), similarly to Tucker and Douglas, carried out cluster analysis to identify groups of people with similar behaviours, and developed the following segmentation:

- 'Committed environmentalists'
  - Consisting of just under a quarter of the sample (294 individuals)
  - Keen recyclers, gave frequently to charity, virtually all composted (with over 60% 'always' doing so), usually reused paper and glass (with virtually all doing so at least 'sometimes')
  - Less committed to buying recycled (with 40% doing this 'usually' or 'always')
- 'Mainstream environmentalists'
  - A larger proportion (412 individuals)
  - Recycled and donated to charity with almost the same frequency as 'committed environmentalists', and approximately the same number bought recycled
  - Marginally fewer reused items
  - Much less likely to compost (with 2/3 in this segment never composting and less than 5% always doing so)
- 'Occasional environmentalists'
  - The largest cluster (505 individuals)
  - Lower levels of recycling, low levels of composting, and significantly reduced levels of reuse (with well under 20% 'always' reusing glass and paper)
- 'Non-environmentalists'
  - Small cluster (43 individuals)
  - Predominantly said they 'never' or 'rarely' take any of the listed actions

	Committed environmentalists	Mainstream environmentalists	Occasional environmentalists	Non-environmentalists
Mean age	55	52	46	43
Gender	35% male	31% male	38% male	50% male
Household size	Tended to be smaller	Tended to be smaller	Tended to be larger	Tended to be larger
Tenure	Tended to own their own home (83%)			Greater proportion were private or local authority tenants (38%)
House type	Tended to live in terraced properties (51%) and flats (29%)	Tended to live in semi-detached homes (34%)		
Income	Significantly higher proportion earned between £7,500-£10,000			More people on under £7,500/yr than other clusters (but also 18% on over £30,000/yr)
Education	Less likely than other clusters to have received formal education, but also more likely to have a degree	Tended to have GCSEs	Tended to have GCSEs	A large had no formal education
Political affiliation	More likely to vote green and LD, and most likely to vote at all	Close to national average	Close to national average	Contained a large number of Labour voters, a large proportion not voting, and few Liberal Democrats
Membership of community organisations	Most likely to be members		Least likely to be members	Least likely to be members

Table 9 Segmentation developed by cluster analysis Source: Barr et al. (2005)

## Reuse segmentations

LCRN (2008) refer to four categories of customer profiles identified by reuse organisations (though no data is presented on what proportion of customers these make up):

- Traditional - referrals of people on an income related benefit
- Thrifty - elderly, students, and people unwilling to declare benefit status
- Green - people who prefer to reuse rather than buy new
- Fashion - people looking for something retro, funky, kitsch and quirky

Watson (2008), though not describing this as a formal segmentation, suggests that reuse customers include:

- “those who feel compelled to buy second hand but wish that they did not have to” and
- “those who can choose whether or not to buy reused, for whom a decision to do so can reflect a wide range of motivations, from the economical and creative pursuit of otherwise mainstream purposes of consumption, through the enjoyment of second hand purchase to the pursuit of politically motivated anti-corporatist or environmentally responsible consumption”

## 2.7 Profile of a waste preventer

Despite the fact that demographics are a poor predictor of waste prevention behaviour, some authors note that very crude generalisations can be made, which may be useful in assisting the targeting of waste prevention initiatives, for example:

- Barr (2007) draws a pen-portrait of a young, female, single-family dwelling, high-income, well-educated, politically liberal individual, who tends to be more likely than others to "play an active part in waste management activities" (Barr, 2007, p. 439)
- Tucker and Douglas (2006a, WR0112), on the basis of their literature review, describe the typical home composter as a home-owner, older or at later family stage, living in a detached or semi-detached house with multiple occupants in the household, a large garden, an interest in gardening and frequent participation in gardening activities

Two of the reviewed reports make (indirect) recommendation on the key target groups for waste prevention activities:

- OVAM (2008) suggest that the baby boomer generation (42-62 year-olds) are likely to be an important target group, because they are due to retire in the near future and will therefore have more time to devote to environmental concerns (they also note that this was the original 'mass consumer' generation, which means that there may be potential to tap into any feelings of guilt they may harbour for current environmental problems, as a motivator for action)
- Brook Lyndhurst (2007, WR0104) conclude that the lifestyle choices of middle-aged single people will be particularly important in determining the overall scale of change in waste arisings in future, because these are set to be the fastest growing type of household, are expected to have relatively high disposable incomes, and may have high waste-generating potential lifestyles (the report notes that not only are single person households less 'waste efficient', but this demographic group can be very 'conspicuous' in its consumption)

## 2.8 Other influencing factors

- Length of time: Tucker & Douglas (2006b, WR0112) found that the length of time their respondents had been involved in specific waste prevention behaviours had an influence on the strength of their behaviours: those who claimed that they had always been carrying out waste prevention had stronger attitudes and behaviours across the board
- Type of food bought: The literature review by Tucker and Douglas (2006a, WR0112) also uncovered a survey which found that the more fresh foods purchased, the lower the percentage lost – those buying more pre-prepared foods wasted less of these, but more of fresh foods
- 'Adventurous' cooking: The above survey also suggested that 'adventurous' cooking tends to lead to more waste (Tucker & Douglas, 2006a, WR0112)
- Scope of research: Tucker and Douglas (2006b, WR0112) found that, despite a great deal of variation between individuals in their attitudes, behaviours and values, at the community level the four experimental communities were very similar in their average attitudes, behaviours and values

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*A full bibliography is given in Waste prevention bibliography (L3 m8/2 (D)).*

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## 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.