

# Food Behaviour Consumer Research: Quantitative Phase



Research was carried out for WRAP by Brook Lyndhurst to investigate consumer attitudes and behaviours relating to food and food waste, and what might motivate consumers to throw away less food. The results of the work fed directly into the development of the Love Food Hate Waste consumer-facing campaign. It included a national quantitative survey plus focus groups. The work was also used to develop a metric that could be used to track the impact of the campaign. This report focuses on the quantitative aspects of the research.

WRAP helps individuals, businesses and local authorities to reduce waste and recycle more, making better use of resources and helping to tackle climate change.

**Written by:** © Brook Lyndhurst 2007 - Jayne Cox and Phil Downing



**Front cover photography:** Bubble and squeak – A classic recipe for using up leftovers

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# Executive summary

In October 2006, Brook Lyndhurst and ICM were commissioned by WRAP to conduct consumer research to explore household food behaviour, including how much food consumers say they waste, which groups are more likely to waste food, what are the driving factors behind food waste and what are the motivations and triggers that could encourage a reduction.

This Summary outlines the key findings from the quantitative research conducted to date. Further qualitative analysis will be undertaken in due course. The results are based upon 1,862 interviews with a representative sample of GB households aged 16+ between 18 November and 03 December 2006. A filter question was asked to ensure interviews were conducted with household members with a degree of responsibility for grocery shopping and/or cooking.

## How much food do we say we waste?

Mirroring findings from Exodus and Mori, few consumers say they waste significant amounts of food. Nonetheless, consumers can be divided into three broad categories as follows:

- High food wasters – those stating that they waste ‘quite a lot’, ‘a reasonable amount’ or ‘some’ uneaten food waste – 30%.
- Medium food wasters – those stating they waste ‘a little’ uneaten food waste – 27%.
- Low food wasters – those stating they waste ‘hardly any’ or ‘none’ – 43%.

## Who says they waste food?

Throwing uneaten food away is something that the vast majority of consumers say they do, irrespective of age, social class, gender and so on. The only exceptions who claim to the contrary are those aged 65+.

There are, however, some groups who are more likely to concede they throw away uneaten food: ‘high’ food wasters are more likely to be younger (less than 45 years old), of lower social class, living in private or social rented accommodation, in full time work or a parent at home, in larger households and with children in the household.

Given the autocorrelation between some of these factors (e.g. younger people are more likely to live in private rented accommodation), we judge that there are three key food waste groups:

- Young professionals, aged 16-34, in full time work – 42% are ‘high’ food wasters.
- Young families, aged 25-44, children aged under 16 in the home, either working or at home parents - 45% are ‘high’ food wasters.
- Social renters, typically those in social class DE - 35% are ‘high’ food wasters.

## What types of food do we waste?

The most frequently cited food type thrown in the bin is inedible peelings, which over half of consumers say they throw a significant amount of away.

Among the edible fraction, food is more likely to be thrown in the bin post-preparation, i.e. as excess left on the plate after eating, as excess prepared but not served, and as products opened but not finished.

The one exception among uncooked food types is fruit, vegetables and salad, which is frequently cited as a significant source of food waste.

Among the target socio-demographic groups, young families consistently report higher levels of waste, particularly in terms of food already prepared. Young professionals are also more likely to waste products opened but not finished and, notably, products not opened.

## What are the drivers of food waste?

There is no single cause of food waste – this survey alone identifies as many as 33 reasons that consumers say explains why they throw away food. However, seven factors appear to be key:

- Buying too much food in general, particularly driven by special offers (e.g. BOGOF).
- Buying more perishable products (e.g. fruit and vegetables) as part of healthier eating patterns and food experimentation.
- Not eating the foods that need to be eaten first, as consumers opt for what they fancy eating on the day over what they already have at home (itself driven by frequent top up shops and ‘spontaneous purchasing’).
- Undertaking an ad hoc ‘spring clean’ of cupboards, fridges and freezers to dispose of old, forgotten or unwanted food products.
- High sensitivity to food hygiene and the guidance dates on food labelling.
- Making too much food in general.
- Dissatisfaction with the taste of the food – especially food left by children.

Among the target socio-demographic groups, young professionals are more likely to buy too much and be swayed by what they fancy on the day rather than the food already at home. They say they cook too much food and cite their lifestyle as a barrier to effective meal planning, although they are notably less sensitive to the dates on food labels. Young families, conversely, are very sensitive to such dates as well as reporting cooking too much food and dissatisfaction among children with how the food tastes as key factors.

Poor ‘home economics’ skills, in general, are a strong driver of food waste. Young professionals and social renters are notably weak in several key areas, while there appears much room for improvement across the population in general - only around one in four say they are comfortable across all areas, from pre shop planning through to recombining left overs into new meals.

Other factors with a bearing on food waste include having alternative disposal options in home (e.g. a home compost bin or kitchen waste collection appears linked to low food waste behaviour), the types of food eaten and, to a lesser extent, households sitting down together for a meal and the size of food storage space in the home.

## What is the potential for change?

The potential to engage consumers on the issue of food waste, according to how bothered they are by food waste and what efforts they are already undertaking to reduce the amount thrown away, is mixed. At the broadest level, consumers can be roughly divided into two halves, with one half receptive to the issue while the other – at least at the current time – appears not to be.

A further split within each of these two groups is instructive, giving four segments within the population which, in our judgement, account for roughly the following proportions:

- Around 13% appear to be receptive to, and actively engaged with, the issue. They say they are very bothered by food waste and go to significant efforts to reduce the amount they throw away.
- Around 28% appear to be receptive but passive, in that they are ‘fairly’ bothered and/or go to a ‘fair amount’ of effort to reduce food waste. Their concern, therefore, is weaker and less likely to translate into behavioural responses.
- A further 26% or so appear not to be particularly receptive to food waste and, while they say they are ‘a bit’ bothered by it, we judge that in reality the issue is neither salient to them nor a priority. However, they appear disconnected rather than actively resistant.
- The remaining 33% appear both unconcerned with the issue and, among some, resistant to efforts that could encourage a reduction in the amount they throw away.

## What are the triggers for change?

Among those who are not bothered by food waste, their main reasons are not throwing enough food away to be bothered about, not considering food waste to be a problem, thinking it is unavoidable, or being risk averse to food poisoning. Young families are far more likely to cite the latter, in line with earlier findings.

Among those who are bothered, three reasons largely account for consumers' concerns: a waste of money, a sense of wasting "good food" and a general sense of guilt. The environment is a much weaker, and secondary, concern. These factors, and their importance relative to each other, are remarkably stable across the population as a whole. Only among the target socio-demographic groups are there some interesting nuances: social renters, for example, are less concerned by wasting 'good' food and more likely to cite the financial cost.

While cost emerges as an important issue when prompted, the saliency of the issue is much lower - only around one in five saying they think 'a great deal' about the cost of food thrown away, with a similar proportion saying they think about it a 'fair amount'. In contrast, around half think about it only a little or not at all.

Finally, the findings that concern the environment's potential to be a trigger of behaviour change are inconclusive. This is because, to a large degree, consumers have so far failed to make any connection between food waste and environmental impact. Indeed, consumers unreservedly believe that packaging waste is a greater environmental issue than food waste, while there is widespread belief that food waste has no environmental impact whatsoever because it is biodegradable. Most tellingly of all, it is those consumers most receptive to the environmental message who have in fact not made the link. Such attitudes to food waste, particularly in relation to packaging, are a significant "pre-barrier" to the effectiveness of the environmental message. In our judgement further qualitative research is required as a matter of urgency.

## Summary

The research has gone some way to furthering our understanding of food waste, in terms of the amount and types of food thrown away, the underlying drivers and the possible triggers for change.

In terms of the amount and types of food waste, the research identifies three key target groups – young professionals, young families and social renters – but it is also clear that food waste is something that everyone acknowledges they do to some extent. It also identifies post-preparation waste (e.g. food left on the plate) as more significant than waste of the constituent ingredients pre-preparation - with the exception of fruit and vegetables which are frequently thrown away.

In terms of the underlying drivers, the survey does not identify information gaps around storage methods as key. Instead, food waste appears to be driven by consumers, tempted by special offers, buying too much food and/or being tempted by other food as part of 'top up' or 'spontaneous' shops, both of which increase the likelihood that food will reach its use by date and therefore be disposed of on food safety grounds. In addition, cooking too much or children/others in the household not liking the food are also highly significant factors. Home economic 'skills', in general, play a key role in mediating these influences.

Finally, in terms of the potential for change, only a small minority are currently bothered by - and taking action to prevent - food waste. A larger minority are passively engaged, although around half of consumers are disengaged at the current time. Cost appears a key trigger (although there are doubts about how salient this issue is on a day to day basis), as is a sense of wasting 'good' food and/or a general sense of guilt. The potential for an environmental message is unclear, largely because consumers, even those who are environmentally conscious, have yet to make any link between food waste and the environment.

# Contents

- 1.0 Introduction ..... 5**
  - 1.1 Background and objectives..... 5
  - 1.2 The research methodology ..... 5
  - 1.3 Interpreting the Findings I – dimensions of analysis ..... 5
  - 1.4 Interpreting the Findings II – quantitative research ..... 6
  - 1.5 Structure of this Report..... 6
- 2.0 How Much Food Do We Say We Waste? ..... 7**
- 3.0 Who Says They Waste Food? ..... 8**
- 4.0 Which Foods Do We Say We Waste? ..... 12**
- 5.0 What are the Drivers of Food Waste? ..... 15**
  - 5.1 Main factors ..... 21
    - 5.1.1 ‘Home economics’ skills ..... 21
    - 5.1.2 Sensitivity to labels ..... 22
    - 5.1.3 Types of food eaten ..... 23
    - 5.1.4 In home disposal options..... 24
  - 5.2 Secondary factors..... 24
    - 5.2.1 Frequency of shop ..... 24
    - 5.2.2 Sitting down for main meal..... 24
    - 5.2.3 (iii) Fridge and cupboard space ..... 24
- 6.0 What is the Potential for Change? ..... 25**
- 7.0 What are the Triggers for Change? ..... 28**
- Appendix: WRAP Food Topline (Draft) – December 2006..... 34**

## 1.0 Introduction

In October 2006, Brook Lyndhurst and ICM were commissioned by WRAP to conduct consumer research to explore household food behaviour. This Briefing Paper outlines the key findings from the quantitative research conducted to date. Further qualitative research will be undertaken in due course.

### 1.1 Background and objectives

The overall aim of the Retail Team at WRAP is to reduce the amount of food and packaging that ends up in the household bin, by working with retailers and their supply chains, and by seeking to change the behaviour of consumers so that less food becomes waste. An estimated 6 million tonnes of food waste is disposed of to landfill every year, equating to approximately £420 of food wasted per person per year. Reductions in food waste require consumers to buy and/or waste less food.

This piece of research feeds into a wider WRAP programme of research to help set up, test and monitor the impact of a communications campaign being piloted from September 2007. The campaign will be designed to increase awareness of food as a wasted resource in the home and, if possible, bring about a change in household behaviours. The research had two related but distinct objectives:

- To contribute to the emerging body of knowledge on food waste, including how much food is wasted, which groups among the population are more or less likely to waste food, the underlying factors that lead to food waste, and the motivations and triggers that could encourage food waste reduction; and
- to establish a 'baseline' against which the impact of WRAP's work can be assessed via future consumer surveys – in particular through the deployment of consumer 'metrics' questions in the survey.

The research builds upon and complements consumer research undertaken by MORI and Exodus, and would ideally complement actual data on food waste composition (although such work has yet to be undertaken).

### 1.2 The research methodology

The results are based upon 1,862 interviews with a representative sample of GB households aged 16+ between 18 November and 03 December 2006. A filter question was asked to ensure interviews were conducted with household members with a degree of responsibility for grocery shopping and/or cooking. The questionnaire was designed by Brook Lyndhurst in conjunction with WRAP. Interviews were then conducted by ICM.

### 1.3 Interpreting the Findings I – dimensions of analysis

This Briefing Paper follows a number of important and interlocking research dimensions. For example, there are important distinctions between the aggregated, headline findings which apply to the population as a whole, and specific socio-demographic groups or segments within the population (e.g. the differences between 'high' food wasters and 'low' food wasters, or between young professionals and retired households).

The data in this report is presented as graphs and tables. In general, the graphs represent visually the headline findings across the population as a whole, whereas the tables represent differences between socio-demographic groups. The tables follow a standard format as outlined below:

**Table 1 Example of standard format table.**

Table x. Title				
Q.				
	Overall (1,862)	High ( )	Medium ( )	Low ( )
Response 1	%	%	%	%
Response 2	%	%	%	%
Response 3	%	%	%	%

## 1.4 Interpreting the Findings II – quantitative research

The report presents the findings of quantitative research. It is therefore important to understand the strengths and limitations of this approach and, in particular, the findings that can be reasonably drawn. Quantitative research provides “hard” data that is statistically representative of the target population (in this instance householders with responsibility for grocery shopping and/or cooking). From this it is possible to quantify observations and infer them to the wider population.

Nevertheless, it is important to note that a sample of consumers has been interviewed and all results, therefore, are subject to margins of error. At the aggregate level this research involves a large sample size which provides results accurate to between  $\pm 1\%$  and  $\pm 2\%$  (at the 95% confidence level). However, sample sizes become an important consideration when comparing results across different socio-demographic or food waste behaviour groups, when the sample sizes are lower. In this case, differences between groups have to be larger to be considered “real” and not the result of a chance occurrence. Throughout the tables in the report we highlight, in bold, all those results which are significant and represent substantial difference between sub groups.

As an overall observation, it must be remembered that the data from the survey is subjective in nature; that is, it depends on self-reporting by interviewees and ‘what people say they’re doing’. This presents several methodological challenges, not least the potential for respondents to overstate what they do. This can either be conscious (when respondents answer according to what they think they should be doing rather than what they actually are doing) or unconscious (if respondents misunderstand the question asked of them or if they simply have low expectations of what qualifies as ‘a reasonable amount’ of food waste).

We have designed the questionnaire in such a way as to minimise the risk of over claiming. For example, we have deployed a number of “consistency checks” within the questionnaire to ensure that responses at a particular question are consistent with responses later on.

On a general note when interpreting the data presented in this report, where percentages do not sum to 100, this may be due to computer rounding, the exclusion of ‘don’t know’ or ‘not stated’ categories, or multiple answers. An asterisk (\*) denotes any value of less than half a percent but greater than zero.

## 1.5 Structure of this Report

The structure of this report is as follows:

**Section 2: How much food do we say we waste?** – establishing the amount of food that people say they throw away in the bin, to arrive at a classification of consumers based upon their food waste habits.

**Section 3: Who says they waste food?** - looking at how the amount of food people say they throw away varies according to socio-demographic variables such as age, social class and household size. It establishes particular segments within the population who are more predisposed to throwing away uneaten food.

**Section 4: Which foods do we say we waste?** - highlighting the types of food people say they throw away in the bin, exploring variations between different food categories and between uncooked food on the one hand, and cooked/prepared meals on the other.

**Section 5: What are the drivers of food waste?** – investigating the underlying factors that lead to food waste, including household proficiency in terms of pre-shop planning, in home storage, and the cooking and preparation of food. The section also examines the impact of ‘lifestyle’ influences and sensitivity to labels that indicate ‘use by’ dates.

**Section 6: What is the potential for change?** – assessing the extent to which people say they could be encouraged to waste less food, how bothered they are by throwing away uneaten food, and what efforts they say that they are already making.

**Section 7: What are the triggers for change?** – unpicking potential messages, such as economic necessity or environmental concern, that could trigger a change in food waste behaviour.

### Appendices

Appendix 1: Top line survey results

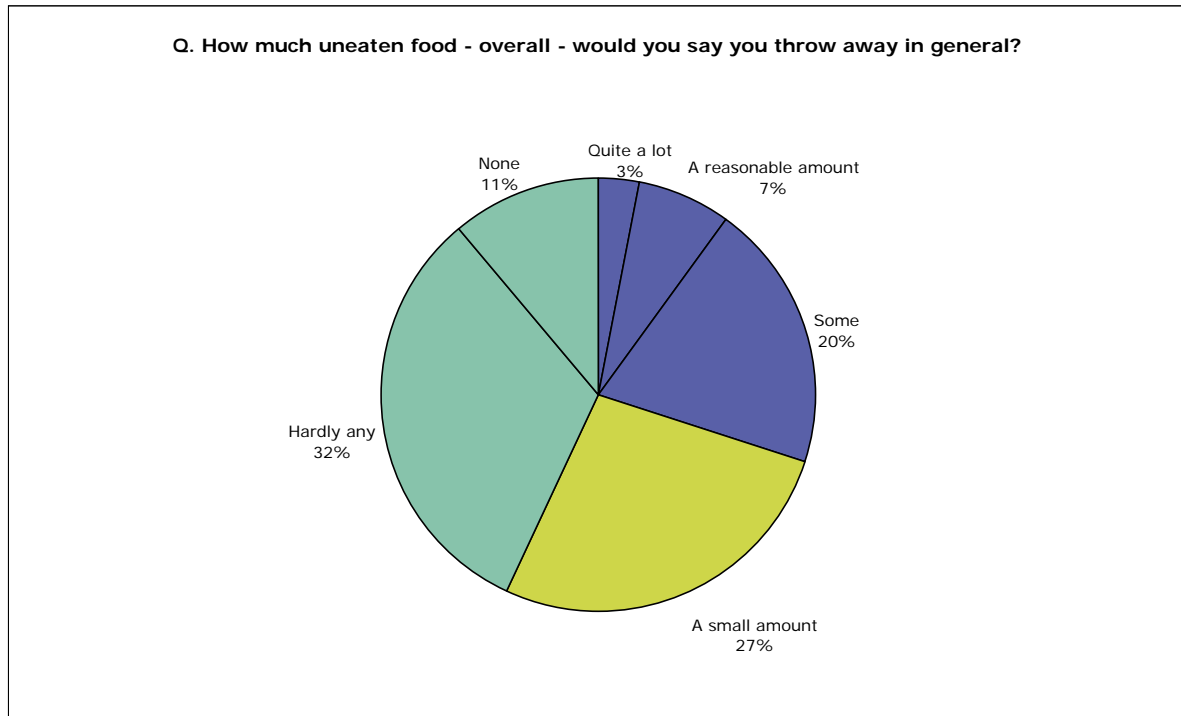


## 2.0 How Much Food Do We Say We Waste?

The purpose of this section is to establish how much uneaten food we say we throw away.

Mirroring the findings of previous research on the subject, few consumers say they waste a significant amount of food – only around one in thirty (3%) concede they waste 'quite a lot' and a further 7% 'a reasonable amount' (Figure 1). However, one in five (20%) do acknowledge they waste 'some', and a similar proportion 'a little' (27%). In contrast, just over two in five (43%) say they waste 'hardly any' or 'none'.

Figure 1: Claimed food waste, overall



Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

In view of the potential for understating food waste (either because people are naturally keen to 'play down' how much they waste or because it is difficult to assess food waste in this way) it is the *relative distribution* of answers that is significant, and on this basis we judge that consumers can be divided into three groups as follows:

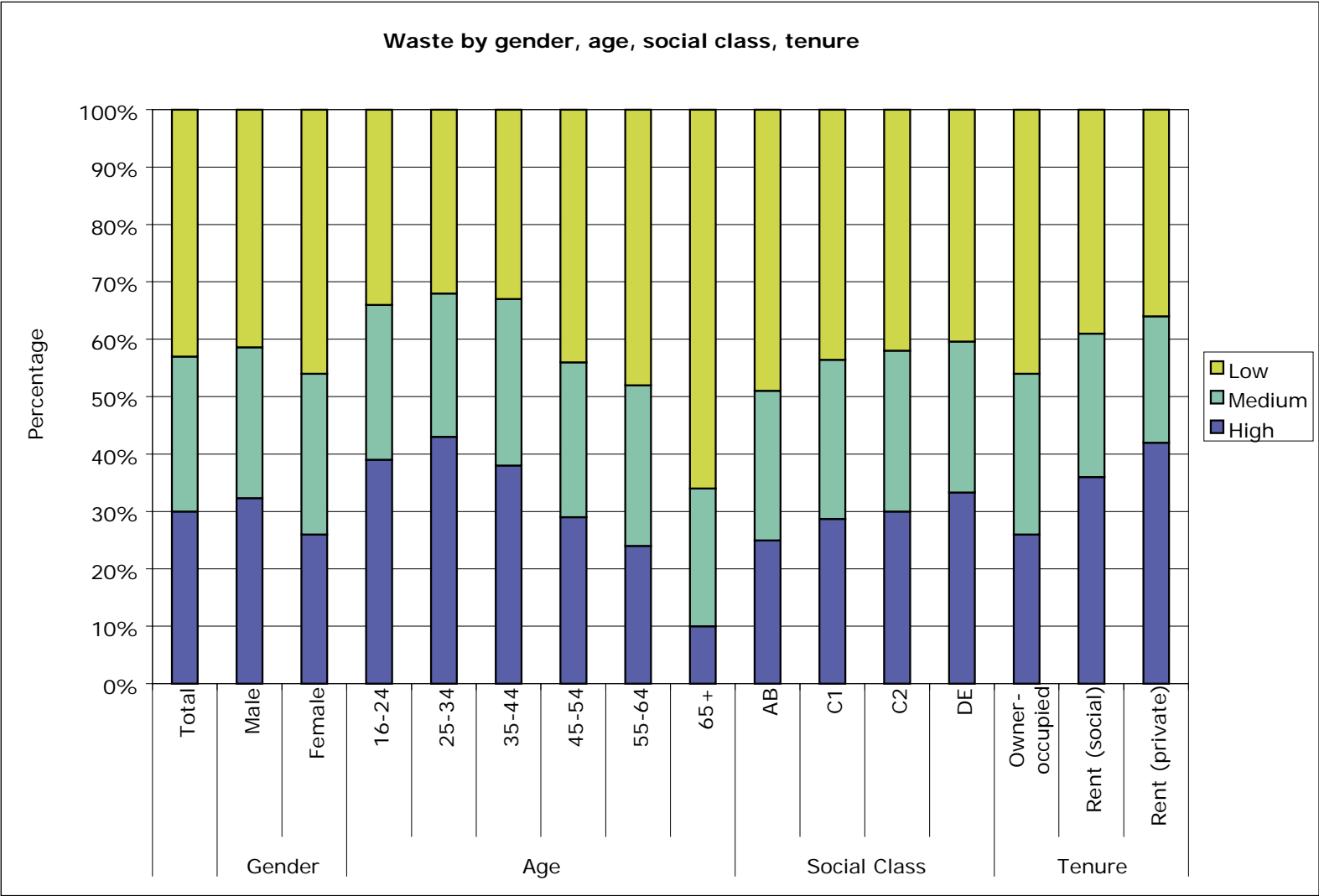
- **High food wasters** – those stating that they waste 'quite a lot', 'a reasonable amount' or 'some' uneaten food waste – *30% of consumers*
- **Medium food wasters** – those stating they waste 'a little' uneaten food waste – *27% of consumers*
- **Low food wasters** – those stating they waste 'hardly any' or 'none' – *43% of consumers*

### 3.0 Who Says They Waste Food?

The research demonstrates that throwing uneaten food away is something that the vast majority say they do, irrespective of age, social class, housing tenure and so on. The only exceptions who claim to the contrary are those who are retired and those who are aged 65 and over - only 13% and 10%, respectively, can be classified as 'high' food wasters on the basis of their responses, compared to the average of 30% across the sample as a whole. This echoes the findings from the Mori qualitative research which found the behaviour of this group to be different in respect of food waste.

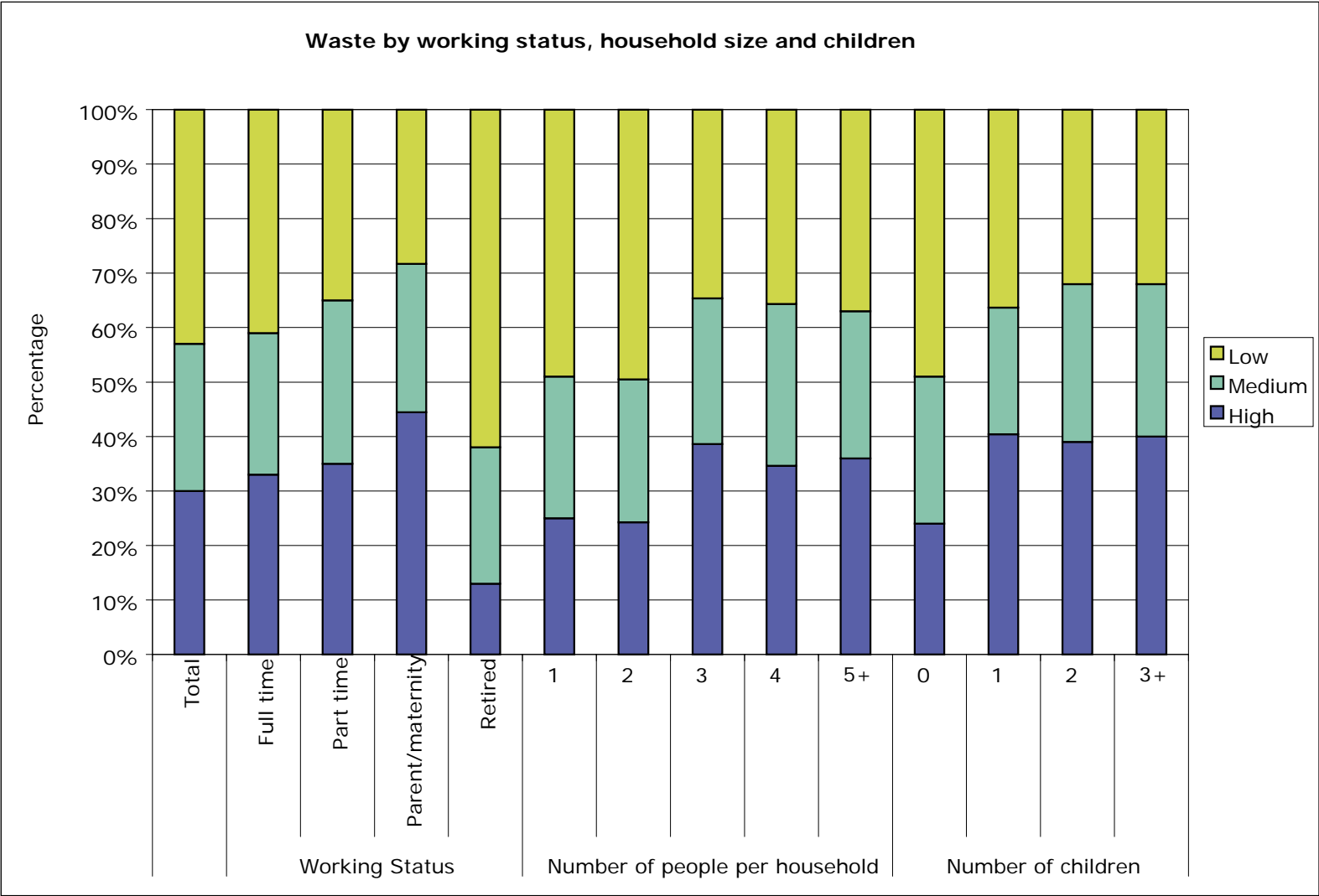
This finding notwithstanding, the survey does indicate that some groups are indeed more likely to throw away uneaten food than others. Figures 3 and 4 demonstrate significant variations according to a number of socio-demographic factors. High food wasters are more likely to be younger (less than 45 years old), of lower social class, living in private or social rented accommodation, in full time work or a parent at home, in larger households and with children in the household.

Figure 2: Variations in food waste by socio-demographic factors



Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

Figure 3: Variations in food waste by socio-demographic factors



Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

When considering different 'segments' within the sample it is important to note that a number of socio-demographic factors "auto correlate" with each other – i.e. younger householders are more likely to live in private rented accommodation, those in social class DE are more likely to live in social rented accommodation, and likewise those households with children are also likely to be bigger households.

Therefore, what appears, on the surface, to be 8 or 9 key groups actually can be condensed into a smaller sub set of key population segments. Based on further interrogation of the data, we judge that there are three groups in particular who are more likely to throw away uneaten food compared to the sample average of 30%:

- Young professionals, aged 16-34, in full time work and comprising 7% of the survey sample – 42% are 'high' food wasters
- Young families, aged 25-44, children aged under 16, either working or at home parents and comprising 27% of the survey sample - 45% are 'high' food wasters
- Social renters, comprising 21% of the survey sample - 35% are 'high' food wasters

The first two groups show a strong preponderance to throw away uneaten food, while the latter is less stark, albeit still significant and worthy of attention.

## 4.0 Which Foods Do We Say We Waste?

The survey asked consumers which types of food they typically throw away and we present the data here according to three categories:

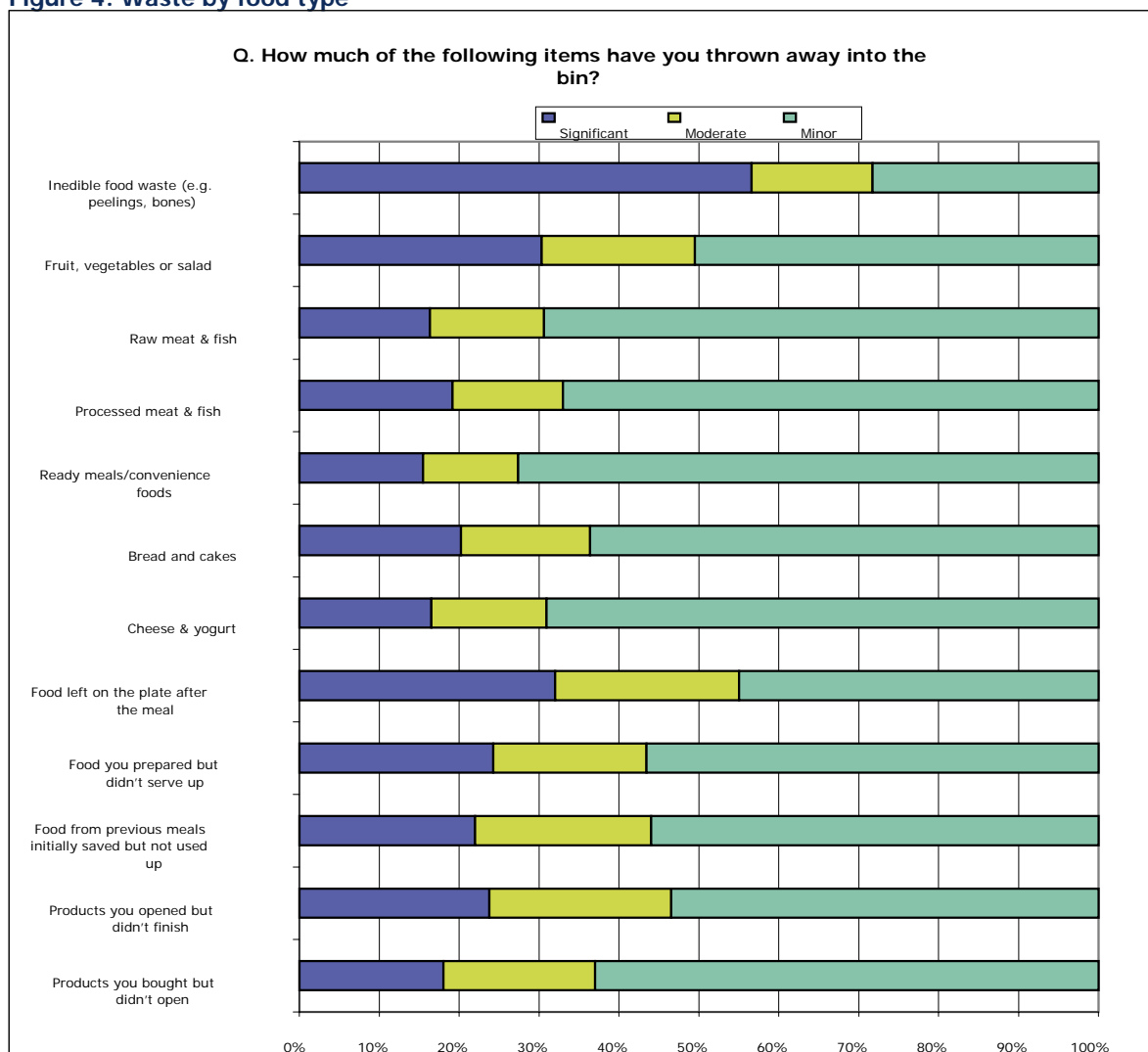
- Significant – those who say they throw away ‘quite a lot’, ‘a reasonable amount’ or ‘some’
- Moderate – those who say they throw away ‘a little’
- Minor – those who say they throw away ‘hardly any’ or ‘none’

As an overarching remark, the findings indicate that more food is thrown away post-preparation than as raw ingredients (Figure 2). Close to one in three (32%) concede they throw away a ‘significant’ amount of food left on the plate after the meal, while close to one in four (24% and 24% respectively) say they throw away a significant amount of food prepared but not served, as well as products opened but not finished.

Turning to uncooked food types, one in five (20%) say they waste a significant amount of breads and cakes, falling to one in six (16%) for raw meat and fish, and one in eight (13%) for ready/convenience meals. The only exception is fruit & vegetables where wastage appears high – three in ten (30%) acknowledge that they waste a significant amount.

The survey also demonstrates that a majority of consumers (56%) say they throw away a significant amount of inedible food waste, defined in the survey as “e.g. peelings and bones”.

**Figure 4: Waste by food type**



Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

Among high, medium and low food wasters the results show a pronounced difference in claimed wastage habits (Table 2). Perhaps unsurprisingly, high food wasters report much higher levels of waste for specific food groups than 'mediums' or 'lows', without exception. For example, while just 13% of lows say they throw away a 'significant' amount of fruit, vegetables and salad, this rises to 28% among medium food wasters and 59% among highs. Highs also follow the general trend that more food is wasted post-preparation.

However, even though levels of acknowledged food waste are lower among 'lows' and 'mediums', a similar pattern to that of highs is evident – among raw ingredients it is fruit, vegetables and salads that are most frequently thrown away, while in general it is processed/cooked food that is thrown away more often. The difference between lows and mediums, on the one hand, and highs on the other is therefore the scale and degree of waste.

**Table 2. Types of food thrown away by food waste groups**

<i>Q. Thinking generally, how much of the following food items – whether prepared/cooked or not – do you throw away in the bin? [results based on those saying 'quite a lot', 'a reasonable amount' or 'some']</i>				
	<i>Overall (1,862) %</i>	<i>High (552) %</i>	<i>Medium (501) %</i>	<i>Low (807) %</i>
Inedible food waste	56	75	60	40
Fruit, vegetables or salad	30	59	28	13
Raw meat and fish	16	33	13	6
Processed meat and fish	18	38	12	7
Ready meals/convenience foods	13	29	8	3
Bread and cakes	20	38	19	8
Cheese and yogurt	16	31	14	6
Food left on plate after the meal	32	65	29	12
Food prepared but not served	24	56	20	8
Food saved from previous meals	22	51	18	6
Products opened but not finished	24	50	20	7
Products purchased but not opened	18	42	11	6

Turning to the target socio-demographic groups (Table 3), it is young families who consistently report higher levels of wastage, most noticeably in respect of food already prepared – for example almost half (47%) say they waste at least some food left on the plate after the meal, compared to 32% of households in general. Young professionals also tend to waste cooked/prepared food more than average, particularly food cooked but not served, products opened but not finished and, notably, products not even opened. Social renters report food waste in line with the average.

**Table 3. Types of food thrown away by target socio-demographic groups**

*Q. Thinking generally, how much of the following food items – whether prepared/cooked or not – do you throw away in the bin? [results based on those saying 'quite a lot', 'a reasonable amount' or 'some']*

	<i>Overall (1,862) %</i>	Young profs (129) %	Young families (510) %	Social renters (382) %
Inedible food waste	56	50	<b>63</b>	56
Fruit, vegetables or salad	30	35	<b>37</b>	31
Raw meat and fish	16	<b>22</b>	<b>21</b>	16
Processed meat and fish	18	21	<b>23</b>	17
Ready meals/convenience foods	13	16	<b>18</b>	12
Bread and cakes	20	<b>27</b>	<b>26</b>	21
Cheese and yogurt	16	21	<b>21</b>	17
Food left on plate after the meal	32	34	<b>47</b>	35
Food prepared but not served	24	<b>32</b>	<b>33</b>	27
Food saved from previous meals	22	26	<b>31</b>	25
Products opened but not finished	24	<b>33</b>	<b>32</b>	23
Products purchased but not opened	18	<b>29</b>	<b>24</b>	20



## 5.0 What are the Drivers of Food Waste?

This section explores the factors that underpin food waste, a subject which the survey looked at in some detail. Question 10, which directly asked respondents to account for why food is thrown away in their household according to four sub sections – ‘shopping for food’, ‘storing food’, ‘preparing/cooking food’ and ‘eating and lifestyles’ - provides much of the headline detail.

As an over-arching finding, the survey identifies as many as 33 reasons that help explain food waste in the home, reflecting the complexity of food waste and the fact it is not easy to isolate a single factor. Nonetheless, key influences do stand out and rank highly in comparison to others. Looking first of all at the results *within* each of the four sub-sections, we find the following:

■ **Shopping for food:** a key influence is simply buying too much food (cited by 22% of respondents), itself inextricably linked to “being tempted” in the store, whether by “buy one get one free” offers (30%), “multi-packs” (22%) or by food approaching its sell by date (19%). This runs somewhat counter to the claim of participants in the Mori qualitative research who claimed they were savvy and not sidetracked by special offers.

A second major factor relates to the *kinds of* products purchased. Indeed, a key reason cited for food waste is consumers’ attempts to buy more fresh produce that doesn’t last as long (23%), indicating that food waste, at least in the short term as some consumers make the transition, is an unfortunate and unintended consequence of healthier eating patterns and/or the kinds of food “experimentation” noted by Mori.

■ **Storing food:** This group of factors does not appear, in the view of consumers at least, to be generating much food waste in the home – with two notable exceptions. First, one in four consumers (25%) attribute food waste to ‘not eating the foods that need to be eaten first’, partly due to poor storage management but more strongly linked to the fact some consumers care more about eating something they fancy than what they have at home (the issue of ‘spontaneous shopping’ and high frequency ‘top up’ shopping is key here and is discussed in more detail on page 25).

Second, consumers concede that while storage constraints or methods may not be key factors on a week to week basis, they do resort to an ad hoc “spring clean” to get rid of old products (24%).

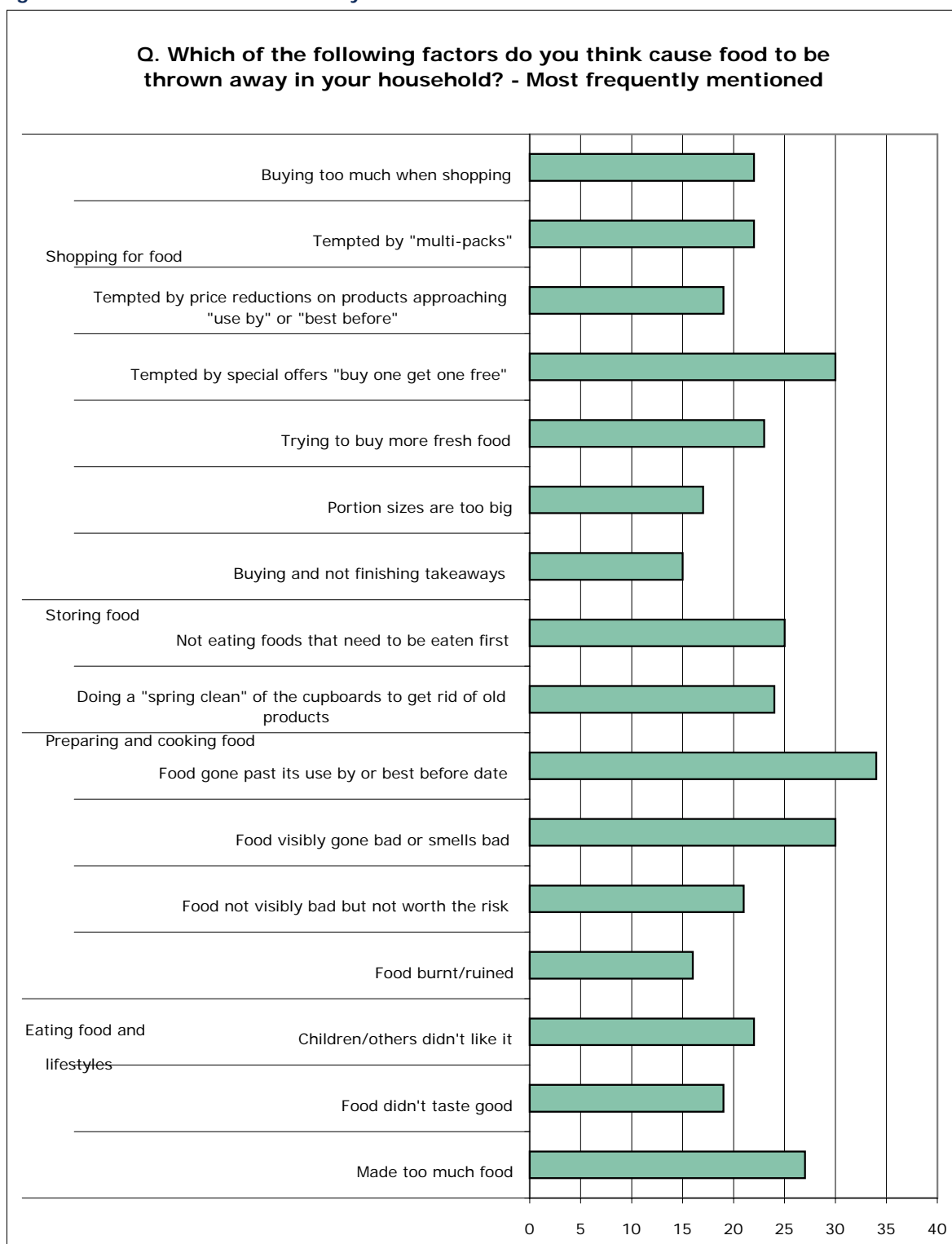
■ **Preparing and cooking food:** The results highlight the sensitivity of consumers to food safety and its impact on the amount of food thrown in the bin. As many as one in three (34%) attribute food waste to food going past the date on the label<sup>1</sup>, and close to one in five (21%) will not take a risk with a product close to its date, even if it appears fine. Around one in three (30%) also say they throw away food that visibly looks/smells bad.

■ **Eating food and lifestyles:** Two key reasons related to the eating of food strongly influence food waste – making too much (27%), echoing Exodus’ findings, and dissatisfaction with how the food tastes (22% cite children/other members of the family not liking a meal and a further 19% say that they themselves didn’t like it). Lifestyle factors – for example not having the time to plan – is an important factor but for a smaller minority (15%).

Looking next at the top factors across the food ‘stages’ as a whole (Figure 5), the most frequently cited explanations for waste are food passing its official ‘date’ (34%), food visibly gone bad (30%), being tempted by “buy one get one free” offers (30%), making too much food (27%) and not eating the foods that need to be eaten first (25%). In short: buying food, being tempted by other food; allowing the original food to reach its use by date; and then disposing of it; and/or cooking too much food or having to waste it because children/others in the household don’t like it.

<sup>1</sup> The survey did not distinguish between the different types of labels relating to food freshness – e.g. best before, sell by or use by. Research by the Food Standards Agency suggests that recognition among the public of the differences between the labels is limited.

Figure 5: Drivers of food waste – key influences



Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

Looking at the results according to sub-groups within the population, 'high' food wasters, unsurprisingly, are more likely to cite reasons that explain why they throw food away (Table 4). However, by and large they cite the same reasons as everyone else, and the key difference is that a higher proportion cites them.

**Table 4. Main drivers of food waste by food waste habits**

*Q. Everyone has to throw away food sometimes. Which of the following factors do you think cause food to be thrown away in your household?*

\*Results are based on those factors most frequently mentioned - any factor scoring less than 20% has been excluded. Factors are then ranked in order of importance within each category.

	Overall (1,658) %	High (552) %	Medium (501) %	Low (605) %
<b>Shopping for food</b>				
Tempted by special offers e.g. "bogof"	30	39	31	21
Trying to buy more fresh products	23	29	25	16
Buying too much when shopping	22	29	22	15
Tempted by "multi-packs"	22	28	24	15
Tempted by price reductions on products approaching their sell by date	19	22	20	14
Buying takeaways and not eating everything	15	22	14	8
<b>Storing food</b>				
Not eating foods that need to be eaten first	25	31	28	17
Doing a 'spring clean' of cupboards	24	22	26	25
<b>Preparing and cooking food</b>				
Food gone past its sell by date	34	45	35	23
Food visibly gone bad	30	34	32	26
Food not visibly bad but not worth taking risk	27	24	24	17
Food burnt/ruined during preparation	16	21	16	12
Not planning meals	13	21	11	8
<b>Eating food and lifestyles</b>				
Made too much food	27	34	27	21
Children/others in household didn't like it	22	32	21	4
Food didn't taste good	19	29	18	12
Not enough time/plans change	15	18	16	11

Turning to the target socio-demographic groups (Table 5), there are some important variations that reflect the fact that consumers, at different stages in their life, are influenced by different factors:

- Young professionals are much more likely to cite reasons across all of the food 'stages'. In terms of *buying food* they are much more likely to say they buy too much, are tempted by special offers, and eat takeaways but don't finish them. Furthermore, almost two in five (37%) cite not eating the foods that need to be eaten first, suggesting this groups is particularly swayed by what they fancy eating on the day rather than what they have at home. Moving into *preparation and cooking* they are actually less sensitive to food hygiene concerns, but much more likely to cite not planning meals/not having the time to plan, burning food, making too much food and not liking it.
- There is less deviation from the average among young families, with the exception of a few key factors where there is a marked departure from consumers in general – they are much more sensitive to food hygiene

concerns and the dates on the label, more likely to waste food because they are trying to buy more fresh produce, more likely to burn/ruin food in preparation, and are much more likely to cite the fact that children/others in the household don't like the food. This supports Exodus' finding that children play a key role in food being thrown away.

- There are also only few significant variations among social renters who, in general, cite reasons in line with the average. However, they are more likely to attribute food waste to buying takeaways and not eating everything, and the fact the food didn't taste good.

**Table 5. Main drivers of food waste by target socio-demographic groups**

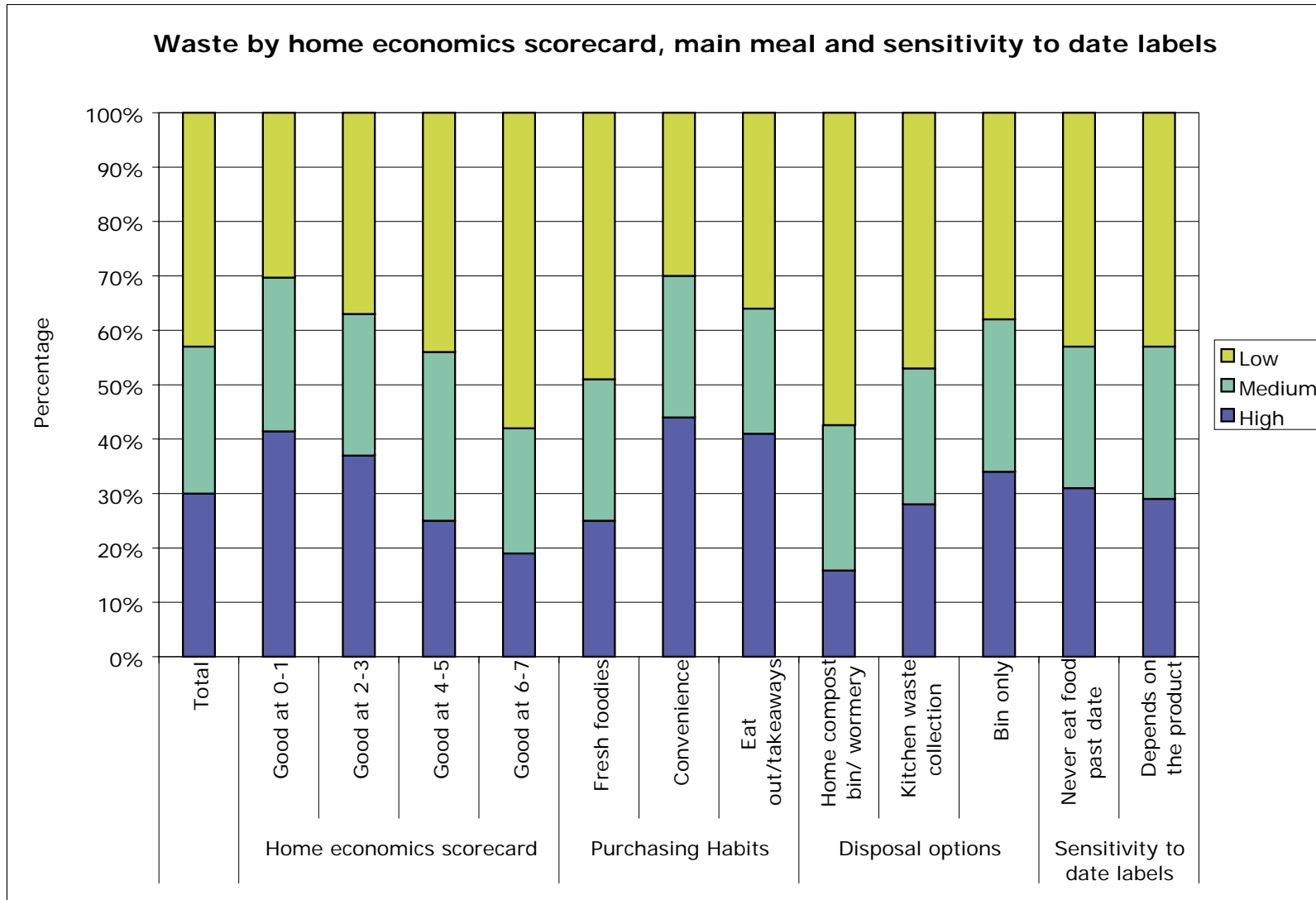
*Q. Everyone has to throw away food sometimes. Which of the following factors do you think cause food to be thrown away in your household?*

\* Results are based on those factors most frequently mentioned – any factor scoring less than 20% has been excluded. Factors are then ranked in order of importance within each category.

	Overall (1,658) %	Young profs (129) %	Young families (510) %	Social renters (345) %
<b>Shopping for food</b>				
Tempted by special offers e.g. “bogof”	30	42	31	33
Trying to buy more fresh products	23	25	27	21
Buying too much when shopping	22	33	23	23
Tempted by “multi-packs”	22	27	25	24
Tempted by price reductions on products approaching their sell by date	19	22	22	20
Buying takeaways and not eating everything	15	23	17	19
<b>Storing food</b>				
Not eating foods that need to be eaten first	25	37	27	27
Doing a ‘spring clean’ of cupboards	24	20	23	20
<b>Preparing and cooking food</b>				
Food gone past its sell by date	34	29	40	31
Food visibly gone bad	30	30	30	29
Food not visibly bad but not worth risk	21	22	21	23
Food burnt/ruined during preparation	16	22	20	15
Not planning meals	13	20	15	16
<b>Eating food and lifestyles</b>				
Made too much food	27	35	30	26
Others in household didn't like it	22	15	46	26
Food didn't taste good	19	32	22	24
Not enough time/plans change	15	25	16	13

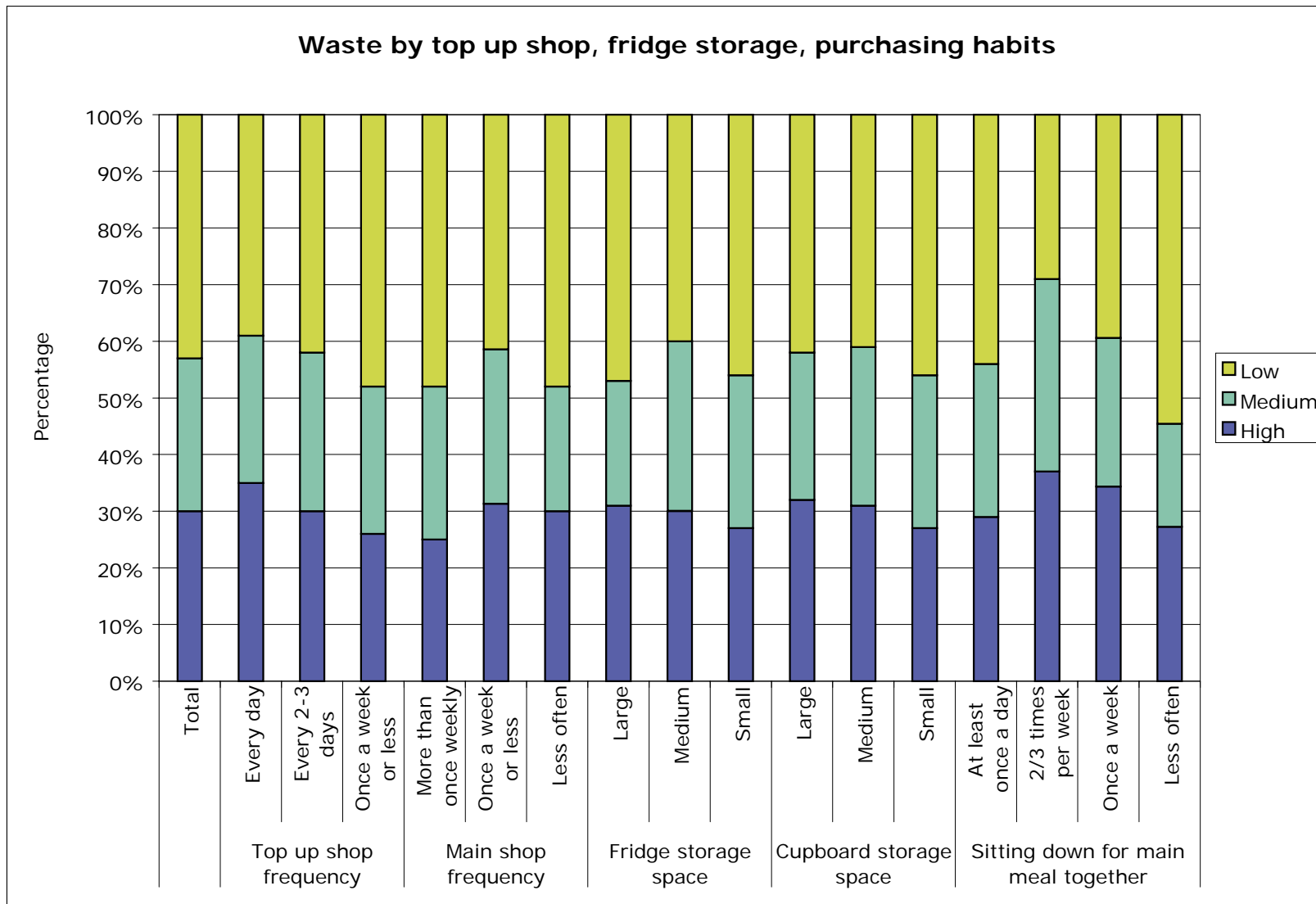
The results identify several important areas for attention, both in terms of generic factors that lead to food waste as well as audience-specific factors. The remainder of this section now explores their relative impact on the amount of food thrown away. First, figures 6 and 7 show how the amount of food thrown away varies according to some of the key factors outlined above. The commentary that follows then explores each key influence in turn. Figure 6 looks at factors which appear to have a strong influence on food waste, whereas figure 7 looks at factors with a smaller or secondary impact.

Figure 6: Food waste by drivers



Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

Figure 7. Food waste by drivers



Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

## 5.1 Main factors

The following analysis is based upon Figure 6, which indicates where there is a strong relationship between food waste and the underlying factors discussed below.

### 5.1.1 'Home economics' skills

Figure 6 demonstrates a strong relationship between propensity to waste food and 'home economics' skills (e.g. pre shop planning, storage in the home, cooking skills and so on). The relationship is inverse, i.e. the more equipped consumers feel in each of the areas the less they say they throw food away. Indeed, Table 5 shows that high food wasters are, in general, less proficient than lows. Weaker areas for highs - and indeed the wider population in general - are discipline in the store, meal planning and recombining ingredients and left overs into 'new' meals.

**Table 5. Home economics skills by food waste behaviour**

*Q. Thinking about your normal food shopping routine and habits involving food, how would you rate yourself on the following?* [results based on those saying 'very' or 'fairly' good]

	Overall (1,862) %	High (552) %	Medium (501) %	Low (807) %
Pre shop planning	59	48	59	66
Discipline in store	44	36	40	53
Looking at labels in store	60	51	59	68
Food organisation in the home	55	43	55	62
Meal planning	45	38	42	52
Cooking skills	63	51	62	70
Combining foods	49	37	47	58

These skills appear to be related to age, gender and social class, with less proficiency among younger respondents, those in social class DE, and among men. Furthermore, when analysing the results according to the target socio-demographic groups (Table 6), it is clear that there is a notable skills gap among young professionals and, to a lesser extent, social renters. In contrast, young families appear to be reasonably proficient in these areas and in line with the average, in spite of their higher waste habits.

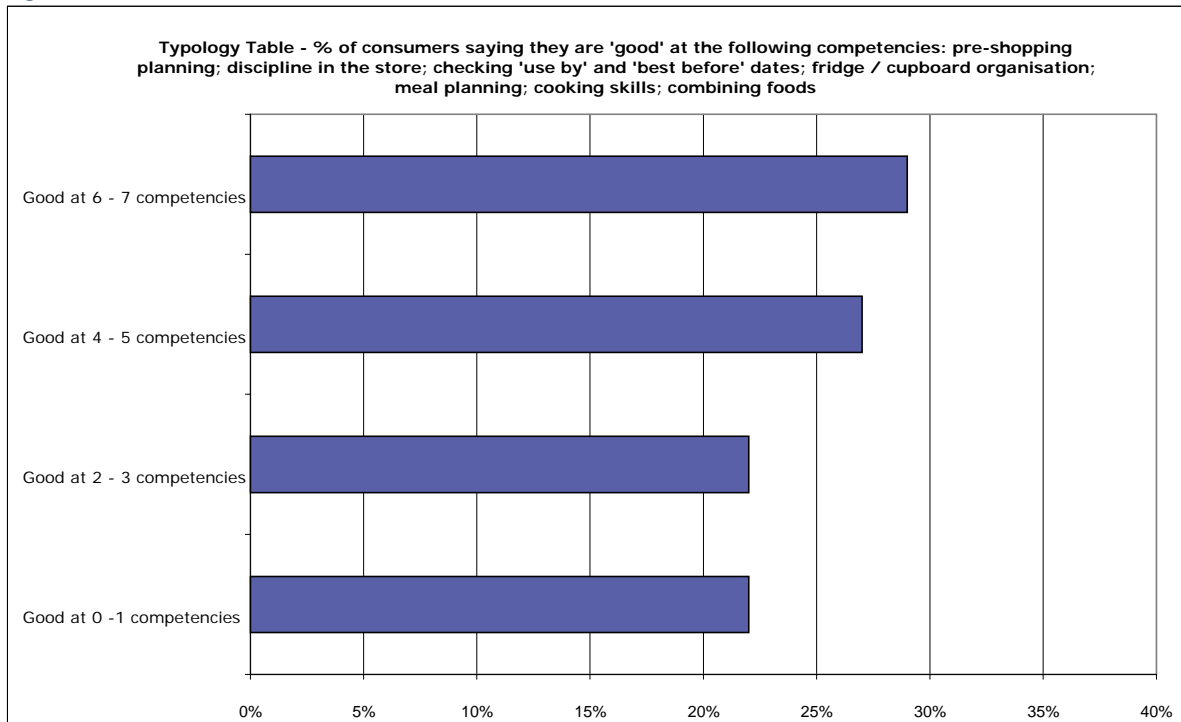
**Table 6. Home economics skills by target socio-demographic groups**

*Q. Thinking about your normal food shopping routine and habits involving food, how would you rate yourself on the following?* [results based on those saying 'very' or 'fairly' good]

	Overall (1,862) %	Young pros (129) %	Young families (510) %	Social renters (382) %
Pre shop planning	59	45	55	51
Discipline in store	44	37	41	36
Looking at labels in store	60	47	62	55
Food organisation in the home	55	46	52	50
Meal planning	45	32	43	38
Cooking skills	63	44	59	51
Combining foods	49	34	45	41

Overall, the research finds significant room for improvement among the population as a whole: only close to three in ten (29%) say they are systemically good across all the competencies, while in contrast just over one in five (22%) say they are good at none or one of the competencies, and the same proportion (22%) say they are good at a few (Figure 8).

**Figure 8: Home economics 'scorecard'**

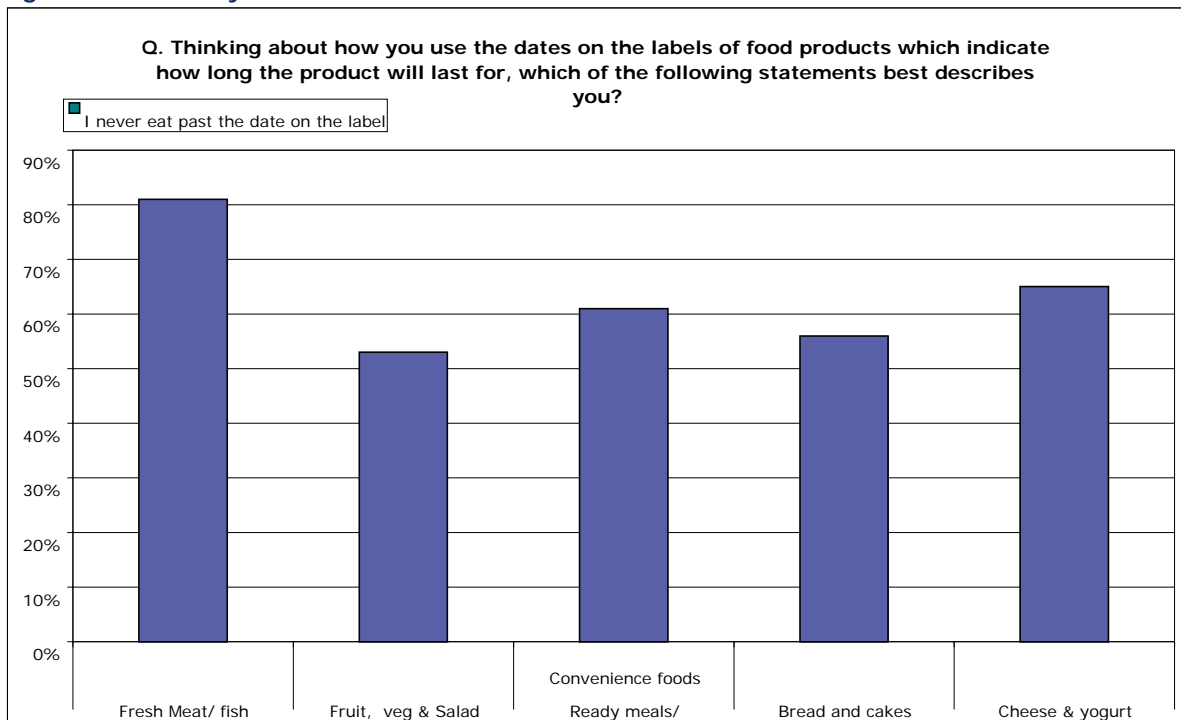


Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

### 5.1.2 Sensitivity to labels

Supporting the Exodus research, the findings demonstrate that sensitivity to dates on labels is cited frequently as a cause of food waste. Consumers are indeed extremely conscious of such labels – especially in relation to raw meat and fish (Figure 9). A majority of 61% say they 'never' eat any type of food past the date on the label.

**Figure 9: Sensitivity to food dates**



Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006



However, while this is undoubtedly one of the key big issues in relation to food waste, Table 7 shows that it does not distinguish high food wasters from lows. That is, low food wasters are not less sensitive to food labels, nor do they appear to keep food for longer. Rather, it appears that the distinguishing factor is that other factors – e.g. buying too much, not using the foods that need to be eaten first - lead to high wasters being faced with more food approaching, at or beyond the use by date.

**Table 7. Sensitivity to the dates on food labels by food waste behaviour**

*Q. Thinking about how you use the dates on the labels of food products which indicate how long the products with last until, for each of the following food groups which of the following statements best describes you? [results based on those saying 'never' eat past the date]*

	Overall (1,862) %	High (552) %	Medium (501) %	Low (807) %
Fresh meat/fish	81	81	81	80
Fruit, vegetables and salad	53	54	51	53
Processed meat and fish	72	71	75	70
Ready meals/convenience foods	61	64	63	58
Bread and cakes	56	57	54	56
Cheese and yogurt	65	68	63	64

There are some variations according to the target socio-demographic groups (Table 8). Young families, as already noted, are far more risk averse in relation to labels and so are throwing away food to be “on the safe side”. This also appears to apply to social renters. In contrast, however, another high food waste group – young professionals – appear slightly less concerned by dates on labels (confirming Mori’s initial findings from the qualitative research) although even among this group a clear majority say they never eat past the date on the label.

**Table 8. Sensitivity to the dates on food labels by target socio-demographic groups**

*Q. Thinking about how you use the dates on the labels of food products which indicate how long the products with last until, for each of the following food groups which of the following statements best describes you? [results based on those saying 'never' eat past the date]*

	Overall (1,862) %	Young profs (129) %	Young families (510) %	Social renters (382) %
Fresh meat/fish	81	75	<b>85</b>	85
Fruit, vegetables and salad	53	52	53	<b>64</b>
Processed meat and fish	72	71	<b>77</b>	76
Ready meals/convenience foods	61	59	<b>67</b>	<b>71</b>
Bread and cakes	56	60	57	<b>68</b>
Cheese and yogurt	65	64	<b>70</b>	<b>72</b>

### 5.1.3 Types of food eaten

Figure 6 demonstrates a strong relationship between the types of food eaten and the amount of food thrown away, with those buying more fresh produce, in general, less likely to throw away uneaten food. However, the caveat “in general” is important here because there are exceptions to this finding. First, among those who consume more fresh products there is a substantial increase in inedible food waste (which could be disposed of via alternative routes). Second, as already noted, some consumers conversely start wasting more food as they move towards healthier patterns of eating.

Finally, it should also be noted that there is an autocorrelation between patterns of consumption and food waste. Young professionals, for example, are more likely to eat convenience products. In which case the question becomes: do young professionals throw away food because it is convenience food? Or is convenience food thrown away because it is eaten predominantly by young professionals?

### 5.1.4 *In home disposal options*

Figure 6 shows that those with a home compost bin/wormery are less likely to throw away uneaten food waste, and the same applies, albeit to a lesser extent, to those with a kitchen waste collection service. Among those with a compost bin, only 16% are high food wasters compared to 28% who have a kitchen waste collection and 34% who only use the bin.

There is, however, an autocorrelation between those with a compost bin and the types of people associated with low food waste habits (e.g. mature households, older consumers). Therefore, the extent to which home composting or the provision of kitchen collection services has an impact on food waste minimisation – for example through increased surveillance of what is thrown away – requires further research.

## 5.2 Secondary factors

The following analysis is based upon Figure 7, which indicates where there is a relationship, albeit less pronounced, between food waste and the underlying factors discussed below.

### 5.2.1 *Frequency of shop*

Figure 7 shows that frequency of shop – both main shop and top up shop - has an impact on reported levels of food waste, albeit one that is relatively limited. The combination that appears to lead to most food waste is a weekly main shop followed by a frequent top up (i.e. 2/3 times a week), which is the dominant pattern of shopping (accounting for 48% of consumers). Among this group, 34% are high food wasters. This potential tension associated with more frequent shopping – i.e. better management day-to-day on the one hand against the risk of “spontaneous shopping” on the other - was highlighted as a potential trade off in MORI’s qualitative research. The survey suggests that any gains made through being able to buy just what is needed for the day are outweighed by “spontaneous shopping”.

### 5.2.2 *Sitting down for main meal*

Although it is not a particularly strong factor, at least not in relation to those outlined above, Figure 7 demonstrates that food waste tends to be lower among those who say they sit down together for a meal at least once a day, compared to those who only do so 2 or 3 times a week or less. Just less than three in ten (29%) of those who sit down together once a day are high food wasters, compared to 37% among those who do so 2-3 times a week and 34% who sit down to eat together once a week. It is noteworthy that sitting down together to eat on a daily basis is the dominant pattern in GB households – according to the survey two thirds (67%) say they follow this pattern.

### 5.2.3 (iii) *Fridge and cupboard space*

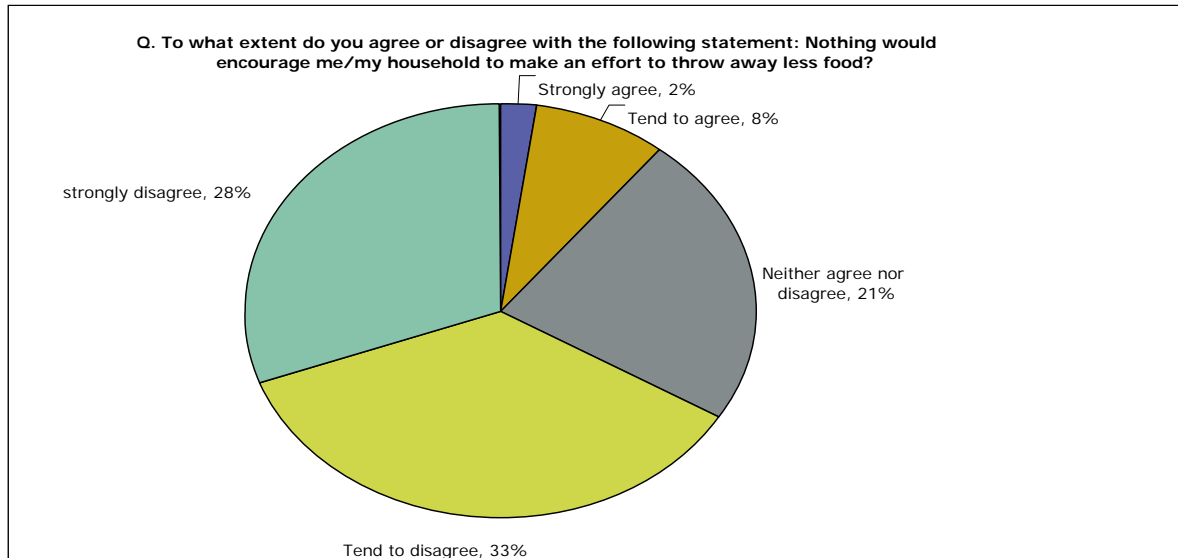
Figure 7 demonstrates a marginal relationship between food waste and size of food storage space - whereby those with larger cupboards and fridges are slightly more likely to say they throw away food – although this is not statistically significant. For example, among those with large cupboard storage space 32% are defined as high food wasters, compared to 27% among those with smaller cupboard space. This may require further exploration and/or monitoring in future research.

## 6.0 What is the Potential for Change?

The purpose of this section is to explore the potential for changing consumer behaviour. How resistant are consumers to change? How bothered are they by food waste? And how much effort are they already going to?

Starting with the former, only one in ten (10%) consumers agree with the statement “nothing could encourage me to reduce the amount of food I throw away”, in contrast to almost two in three (61%) who disagree (Figure 9). Therefore the research detects no ideological opposition, per se, to reducing food waste.

**Figure 9: Opposition to food waste reduction in the home**

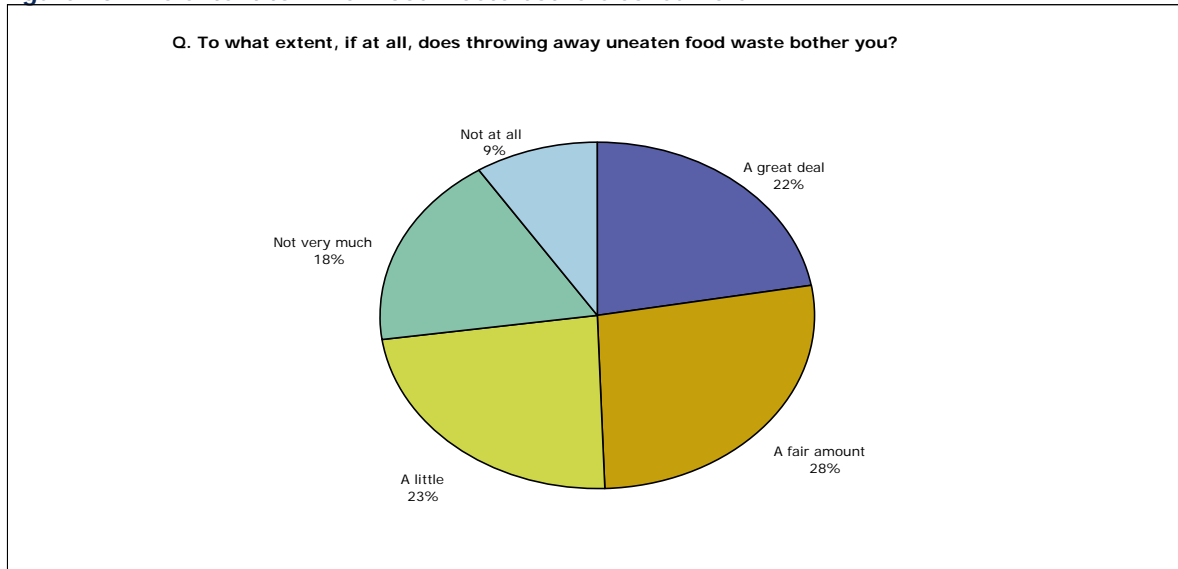


Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

There appears, however, a more significant barrier in terms of how engaged consumers are with the issue, which the survey gauged through how bothered consumers say they are by food waste and how much effort they say they are making to minimise the amount they throw away.

First, in terms of how bothered consumers claim to be by food waste, there is a broad split into two groups (Figure 10). Almost half (49%) claim to be bothered by food waste - either 'a great deal' (22%) or 'a fair amount' (27%). In comparison, 51% who say they are not bothered - comprising around one in four (23%) who claim to be bothered 'a little' and a similar proportion (27%) who concede outright that they are not bothered.

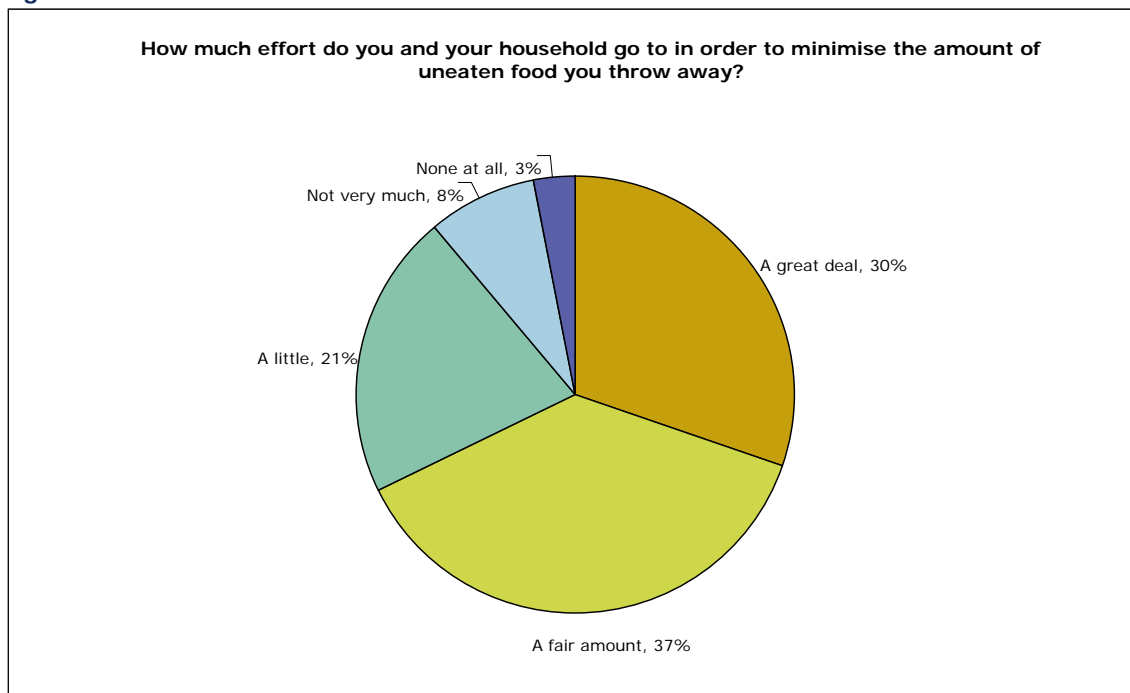
**Figure 10: The extent to which food waste bothers consumers**



Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

A similar pattern is evident in terms of claimed effort to reduce food waste (Figure 11) – there is a split between around two in three (67%) who say they are making effort to reduce the amount of food thrown away (either ‘a great deal’ (30%) or ‘a fair amount’ (37%)), and the remaining third (32%) who say they are not making much effort (either ‘a little’ (21%), ‘not very much’ (8%) or ‘not at all’ (3%)).

**Figure 11: Current efforts to reduce food waste**



*Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006*

Taken together, these questions suggest that consumers can be split into four categories according to how bothered they are by food waste and the efforts they are currently undertaking:

- Around 13% appear to be receptive to, and actively engaged with, the issue. They say they are very bothered by food waste and go to significant efforts to reduce the amount they throw away
- Around 28% appear to be receptive but passive, in that they are ‘fairly’ bothered and/or go to a ‘fair amount’ of effort to reduce food waste. Their concern, therefore, is weaker and less likely to translate into behavioural responses.
- A further 26% or so appear not to be particularly receptive to food waste and, while they say they are ‘a bit’ bothered by it, we judge that in reality the issue is neither salient to them nor a priority. However, they appear disconnected rather than actively resistant.
- The remaining 33% appear both unconcerned with the issue and, among some, resistant to efforts that could encourage a reduction in the amount they throw away. This minority is more likely to agree with the statement “nothing would encourage me to throw less food away”.

Among the sub groups there is evidence of variation, particularly in terms of claimed effort to reduce food waste, which closely matches that of claimed food waste behaviour i.e. high food wasters are less likely to be making an effort to reduce the amount of food they throw away; as are each of the three target socio-demographic groups (Table 9).

A similar pattern is evident in terms of those bothered by food waste, although the link to claimed waste behaviour is not as sharp. Variations according to the three target socio-demographic groups are less pronounced, while high food wasters are notably split between those who are bothered and those who aren’t (with the former more likely to be 35-44 and in social class AB, and the latter more likely to be aged 16-24 and in social class DE). Finally, a high proportion of low food wasters actually say they are not bothered, which, as section 7 will outline, is predominantly because they don’t waste enough food to be bothered about.

**Table 9. Potential for change – by food waste behaviour and target socio-demographic group**

*Q. Thinking about when you have to throw uneaten food items away, to what extent, if at all, does it bother you?*

*Q. How much effort do you and your household go to in order to minimise the amount of uneaten food you throw away?*

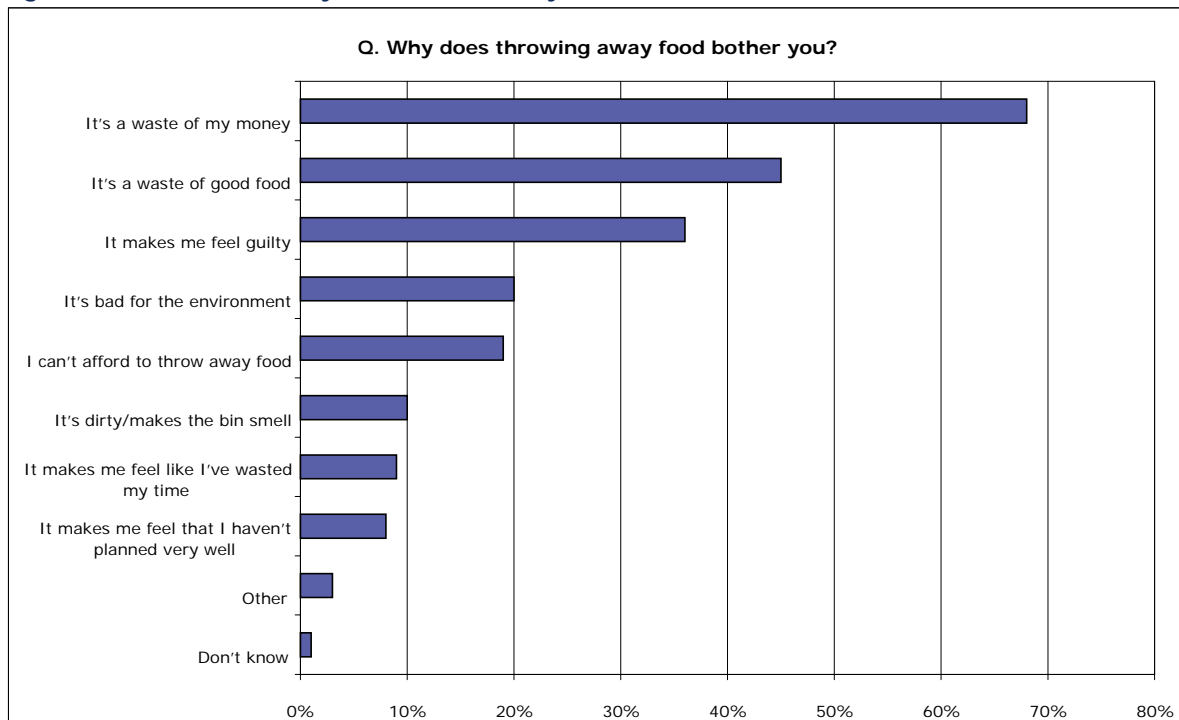
	<i>Overall (1,862) %</i>	<i>High (552) %</i>	<i>Medium (501) %</i>	<i>Low (807) %</i>	<i>Young profs (129) %</i>	<i>Young families (510) %</i>	<i>Social renters (382) %</i>
<i>Bothered by food waste</i>							
A great deal	22	16	19	28	16	24	18
A fair amount	27	34	29	21	31	29	25
A little	23	27	27	18	21	25	27
Not very much/not at all	27	22	25	32	33	23	30
<i>Effort to reduce food waste</i>							
A great deal	30	14	25	43	23	23	24
A fair amount	37	40	43	33	31	41	33
A little	21	32	23	13	31	24	26
Not very much/none at all	11	15	9	11	16	13	16

## 7.0 What are the Triggers for Change?

This section explores the reasons why people say they are bothered, or not bothered, by food waste.

Looking first at the reasons cited by those who say that they are bothered by food waste (Figure 12), three key factors stand out: a waste of money (68%), a sense of wasting “good food” (45%) and a general sense of guilt (36%). Secondary factors include the impact on environment (20%) and economic necessity i.e. not being able to afford to waste food (19%).

**Figure 12: Reasons cited by those bothered by food waste**



Base: 1,345 GB residents who say they are bothered by food waste, aged 16+, face-to-face and in home, Nov-Dec 2006

These factors, and their importance relative to each other, are remarkably stable across different socio-demographic groups within the population. For example, Table 10 demonstrates this according to high, medium and low food wasters who are bothered by food waste.

**Table 10. Reasons why food waste bothers people - by food waste behaviour**

	Overall – bothered (1,345) %	High – bothered (425) %	Medium – bothered (376) %	Low – bothered (544) %
Q. Why does throwing away food bother you? Would you say it's any of the following or something else? [results based on top 5 reasons cited]				
It's a waste of my money	68	65	71	69
It's a waste of good food	45	43	47	46
It makes me feel guilty	36	33	39	37
It's bad for the environment	20	20	18	20
I can't afford to throw away food	19	16	17	21

Analysis by target socio-demographic groups does reveal some nuances in the responses, but nothing that changes the overall priority of the motivating factors (Table 11). So, for example, social renters who are bothered by food waste are less concerned by altruistic concerns such as the environment or the notion of

wasting 'good food', and more likely to cite personal economic circumstances. In contrast, those young professionals bothered by food waste are more likely to cite guilt and environmental impact<sup>2</sup>.

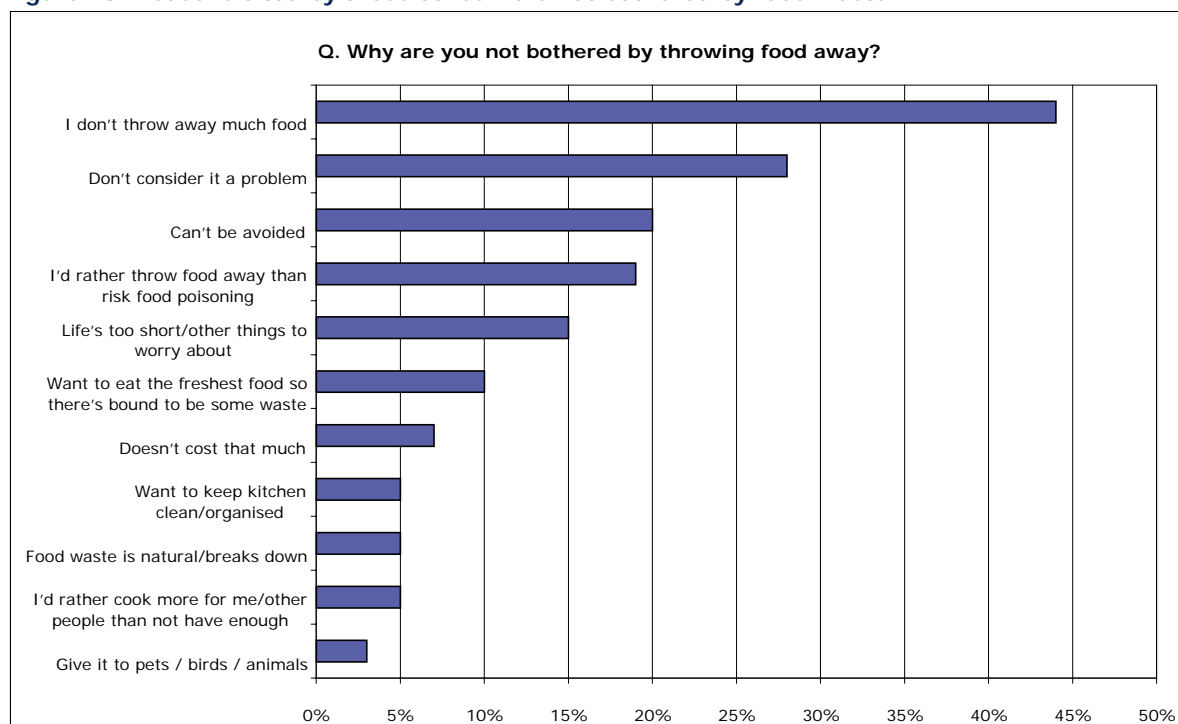
**Table 11. Reasons why food waste bothers people - by target socio-demographic groups**

*Q. Why does throwing away food bother you? Would you say it's any of the following or something else? [results based on top 5 reasons cited]*

	<i>Overall – bothered (1,345) %</i>	<i>Young pros – bothered (87) %</i>	<i>Young families – bothered (391) %</i>	<i>Social renters – bothered (264) %</i>
It's a waste of my money	68	66	71	71
It's a waste of good food	45	45	40	31
It makes me feel guilty	36	43	35	30
It's bad for the environment	20	31	21	15
I can't afford to throw away food	19	15	19	23

Turning to the group of consumers who say they are not bothered by food waste (a relative minority of the sample), over two in five (44%) say they 'don't throw much away' (which is particularly true of lows). However, it is clear that a mixture of lack of awareness and interest are also key barriers (Figure 13). Almost two in three (28%) say they 'don't consider it a problem', a further one in five (20%) claim 'it can't be avoided' and a smaller proportion (15%) admit they have 'other things to think about/life's too short'. A further key reason for one in five (19%) is 'I'd rather throw food away than risk food poisoning'. A further key reason for one in five (19%) is 'I'd rather throw food away than risk food poisoning'.

**Figure 13: Reasons cited by those consumers not bothered by food waste**



*Base: 510 GB residents who say they are not bothered by food waste, aged 16+, face-to-face and in home, Nov-Dec 2006*

<sup>2</sup> *Other research - for example Bad Habits and Hard Choices: In Search of Sustainable Lifestyles, Brook Lyndhurst (2004) - has found that young people are more likely to be aware of and cite environmental concerns but, conversely, do less to act upon them than other age groups.*

There are notable variations according to the food waster categories (Table 12). For example, unbothered medium and low food wasters are more likely to attribute this to the fact that they don't throw away much food. Instead, unbothered high food wasters are much more likely to say they don't consider it an issue.

**Table 12. Reasons why food waste doesn't bother people - by food waste behaviour**

*Q. Why are you not bothered by throwing food away? Would you say it's any of the following or something else? [results based on top 5 reasons cited]*

	Overall (510) %	High (126) %	Medium (125) %	Low (259) %
Don't throw away much food	44	19	50	53
Don't consider it a problem	28	47	24	22
It can't be avoided	20	22	22	18
I'd rather throw food away than risk food poisoning	19	29	18	15
Life's too short	15	20	23	8

In terms of target socio-demographic groups (Table 13), unbothered young families (a relative minority of all young families in the sample) are much more likely to say they neither consider food waste a problem nor are they willing to risk food poisoning (reflecting once more their sensitivity to food hygiene issues).

**Table 13. Reasons why food waste doesn't bother people - by target socio-demographic groups**

*Q. Why are you not bothered by throwing food away? Would you say it's any of the following or something else? [results based on top 5 reasons cited]*

	Overall (510) %	Young profs (42) %	Young families (115) %	Social renters (115) %
Don't throw away much food	44	21	34	35
Don't consider it a problem	28	31	42	32
It can't be avoided	20	24	27	18
I'd rather throw food away than risk food poisoning	19	12	32	21
Life's too short	15	19	16	17

## Environment and Economic influences

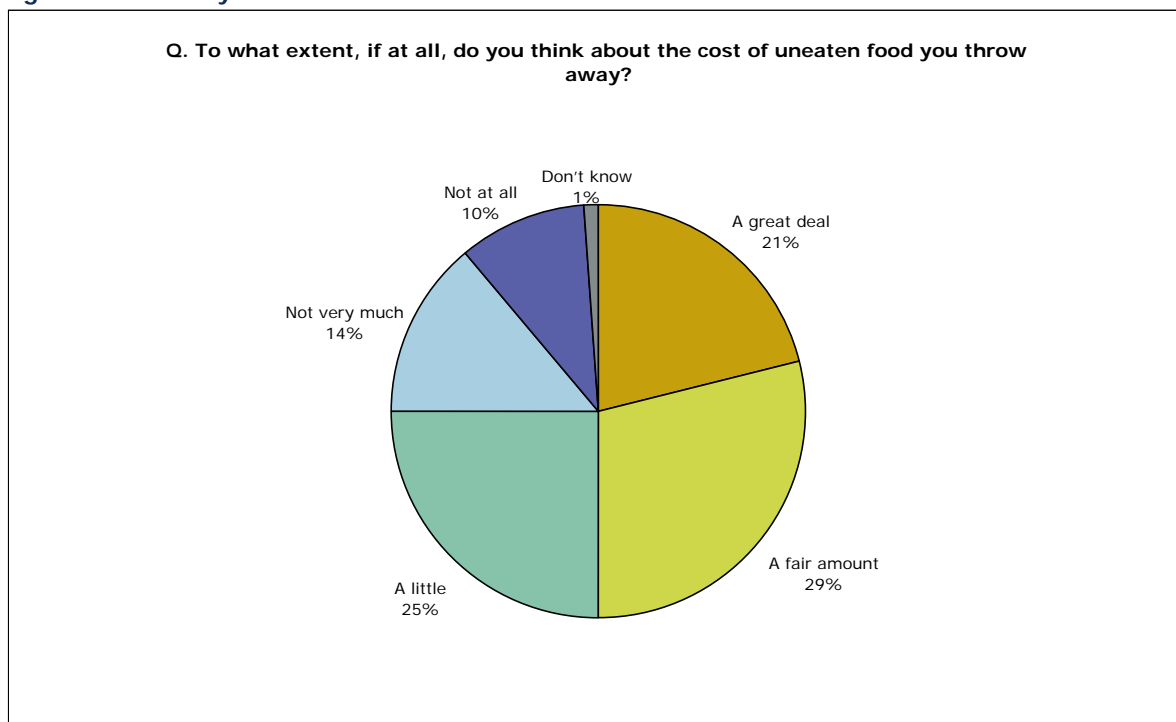
In addition to the motivations outlined above, the survey explored the importance of both personal economic and environmental issues.

The cost of food waste has already been highlighted as a key reason why consumers say they are bothered by food waste. However, while it may be important when prompted, the survey also investigated how salient this issue is – that is, how often do consumers really think about the cost of food they throw away?

The research indicates that consumers do not think about the issue as much as might be expected given the claimed importance of the issue. Only one in five (21%) say they think 'a great deal' about the cost of uneaten food waste, while a further 29% say they think about it 'a fair amount' (Figure 14). In contrast, one in four (25%) say they think about it only 'a little', while a similar proportion (24%) do not think about it at all.



**Figure 14: Saliency of the cost of food waste**



Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

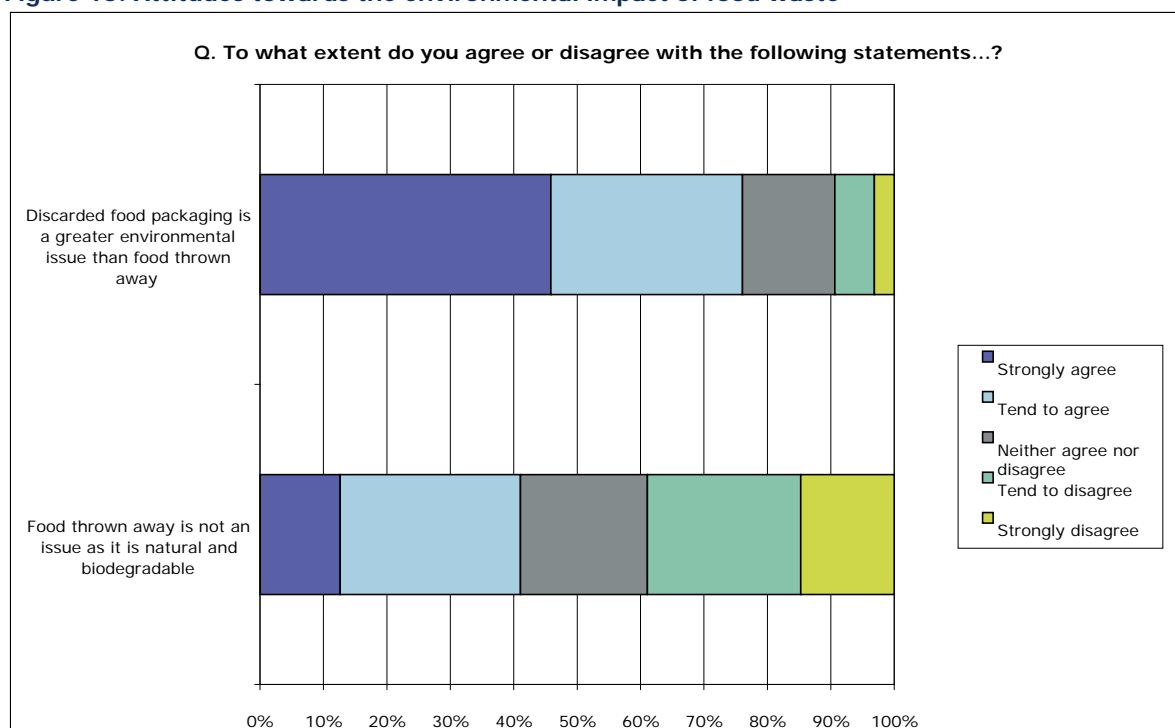
Turning to environmental impact, Figure 12 demonstrated that, at the current time, the environmental message is a weaker and secondary motivating factor – only 20% of those who are bothered by food waste cite this as a reason.

However, the research demonstrates that, rather than a rejection of the potential impact of the environmental message, this appears to reflect a lack of awareness on the part of consumers. By and large, they do not appear to have made any connection between the food they throw away and the environment (supporting Mori's initial findings from the qualitative research).

Crucially, consumers are much more sensitive towards packaging waste than food waste. Almost three quarters (73%) agree that 'discarded food packaging is a greater environmental issue than food thrown away', including as many as two in five (44%) who 'strongly agree' (Figure 15). The survey also finds that, more worryingly, a significant proportion of consumers not only believe that food waste is secondary to packaging, but also that it does not have any environmental impact. Two in five (39%) agree with the statement 'food waste thrown away is not an issue as it is natural and biodegradable', compared to 37% who disagree and a further one in five (19%) who 'neither agree nor disagree'<sup>3</sup>.

<sup>3</sup> The results here are notably lower than those found in the Exodus research, although they show the same overall trend, i.e. there is little connection between environmental impact and food waste

**Figure 15: Attitudes towards the environmental impact of food waste**



Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

Most tellingly of all, it is those consumers who say they are more environmentally conscious<sup>4</sup> – who should, in theory, be a key target audience regarding the environmental impact of food waste – who actually are more likely to agree packaging is a more important issue. Indeed, almost three in five (58%) ‘strongly agree’ compared to the sample average of 44% (Table 14). A similar pattern is evident in terms of food waste behaviour – it is actually the low food wasters who consider packaging a greater issue than food waste.

Likewise, those who are environmentally conscious are only marginally less likely to believe that food waste has no environmental impact at all (34% agree it is not an issue compared to 39% of consumers in general). Unlike attitudes to packaging, though, a minority among the environmentally conscious do appear to have made at least some connection between food waste and environmental impact – just over one in four (27%) ‘strongly disagree’ with the suggestion that food waste has no impact at all (compared to 14% in general).

**Table 14. Food waste and the environment– by food waste behaviour and environmental receptivity**  
Q. To what extent do you agree or disagree with the following statements...?

	Overall (1,862) %	High (552) %	Medium (501) %	Low (807) %	High env receptive (264) %	Mid env receptive (602) %	Low env receptive (986) %
<i>Discarded food packaging is a greater environmental issue than food thrown away</i>							
Strongly agree	44	35	45	50	58	47	39
Tend to agree	29	31	32	26	17	31	31
Tend to disagree	6	7	5	5	6	6	5
Strongly disagree	3	2	3	4	9	4	1
<i>Food thrown away is not an issue as it is natural and</i>							

<sup>4</sup> Defined as anyone who says they are undertaking ‘a great deal’ of effort to minimise their own impact on climate change

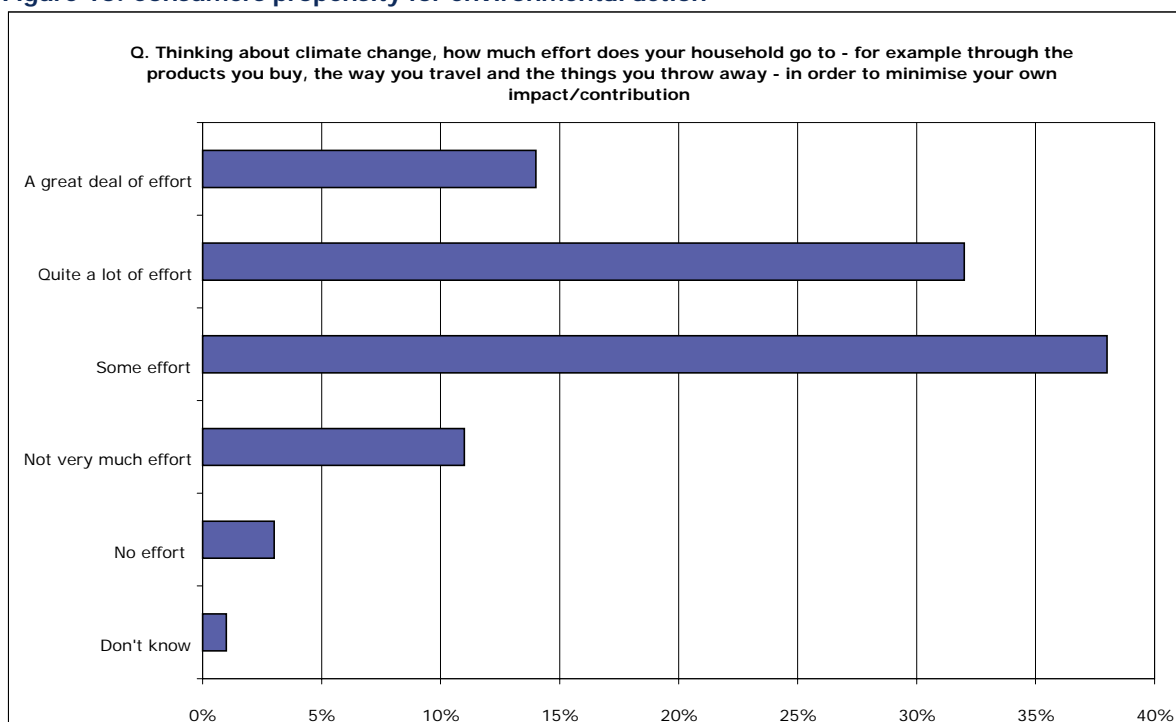
<i>biodegradable</i>							
Strongly agree	12	10	10	15	16	11	12
Tend to agree	27	24	28	28	<b>18</b>	27	30
Tend to disagree	23	<b>13</b>	21	21	23	26	21
Strongly disagree	14	<b>7</b>	12	17	<b>27</b>	14	10

Therefore, the research remains inconclusive as to whether the environment is a potentially powerful message or not because consumers have not yet made the link between food waste and environmental impact. What is clear, however, is that such attitudes - particularly in relation to packaging – are a significant “pre-barrier” to the effectiveness of the environmental message. Most tellingly of all, it is those consumers most receptive to the environment who have in fact fundamentally misunderstood the issue (that is, they are more likely to think that packaging is a greater environmental issue and just as likely to think that food waste does not have an environmental impact).

The nearest quantitative expression of latent environmental concern about food waste is provided by the Exodus research where 59% agreed, in theory, that they would ‘probably’ make an effort to throw away less if they had more information on the environmental impact. Therefore, we judge that further work is required as a matter of urgency to unpack the environmental issue and understand the potential for it to play a role in encouraging food waste minimisation.

One final thing that this survey can tell us, though, is that there is a potential target audience if the environmental messages ‘takes’ with consumers. When asked to what extent they are currently taking personal actions to address climate change, one in seven (14%) say they are making ‘a great deal of effort’ (Figure 16). This group is equivalent to the “committed” greens which have been identified in various typologies of environmental behaviour. Furthermore, there is a wider secondary audience possibly synonymous with “light greens” - with one in three (32%) claiming to be undertaking ‘quite a lot of effort’.

**Figure 16: Consumers propensity for environmental action**



Base: 1,862 GB residents aged 16+, face-to-face and in home, Nov-Dec 2006

# Appendix: WRAP Food Topline (Draft) – December 2006

- Results are based on 1,862 interviews conducted over the period 18 November – 03 December 2006.
- Interviews were conducted with household members responsible, to some degree, for shopping and/or cooking. A filter question (QA/QB) was used to exclude those respondents with no responsibility for either shopping or cooking in the home.
- The notation \* indicates a value greater than zero but less than one.
- Results are based on the full sample of 1,862 unless otherwise stated.
- The results should be read in conjunction with the summary report (forthcoming 24 Jan 2007).

## Filter question

<i>QA. Are you responsible for the food shopping in this household?</i>		
<i>QB. Are you responsible for the cooking &amp; preparation of food in this household?</i>		
	QA	QB
Responsibility for all or most	68%	66%
Responsibility for about half	23%	21%
Responsibility for less than half	9%	11%
Not responsible for any	*	2%

## Section 1: Shopping Habits

<i>Q1. How often do you usually do your <u>main</u> shopping trip?</i>		
<i>Q2. And how often do you usually do smaller '<u>top up</u>' shops?</i>		
	Q1. Main	Q2. Top up
Every day	2%	18%
Every 2-3 days	9%	51%
About once a week	68%	20%
A couple of times a month	11%	2%
Less often	5%	4%
Never	5%	4%

<i>Q3. On average, how often, if at all, do you sit down for your main meal at home with all the other members of your household (including children)?</i>	
Two or more times a day	19%
Once a day	48%
Two or three times a week	11%
About once a week	6%
Two or three times a month	1%
About once a month	1%
Less often	3%
Never	8%
Don't know	3%

## Section 2: Shopping habits and routines

*Q4. Thinking about your normal FOOD shopping routine and habits involving food, how would you rate yourself on the following?*

	Very good	Fairly good	Average	Not very good	Definitely not one of my strengths	Don't do this
Pre-shopping planning (e.g. making a list, checking the cupboards to see what you already have)	26%	33%	19%	12%	6%	5%
Discipline in the store (e.g. sticking to the list, avoiding 'impulse' buys)	17%	27%	25%	21%	7%	3%
Looking at labels in the store to check "use by" and "best before" dates that indicate how fresh food is and how long it will last	33%	27%	19%	13%	5%	2%
Fridge/cupboard organisation at home (e.g. knowing what you have and when products' "use by" or "best before" dates are coming up)	25%	30%	25%	12%	6%	2%
Meal planning (e.g. knowing what you are going to prepare in the week ahead)	16%	29%	23%	19%	8%	5%
Cooking skills (e.g. the range of things you can prepare from raw/fresh ingredients)	29%	34%	22%	9%	5%	1%
Combining foods (e.g. taking food leftovers/random ingredients and making a meal)	21%	28%	22%	14%	7%	7%

## Section 3: Cooking & eating habits in the home

*Q5. Now thinking about the food you prepare and eat. How often, if at all, do you and your household eat the following types of food for your main meal?*

	Every day	4-5 days/ week	2-3 days/ week	Once a week	Less often	Never
Fruit & veg – from fresh	45%	21%	22%	7%	3%	1%
Fruit & veg – from frozen/tins (e.g. baked beans, tomatoes)	6%	18%	39%	20%	12%	5%
Fresh Fish or Meat	19%	27%	34%	14%	3%	2%
Ready-made meals (e.g. that are heated and require no further preparation)	2%	5%	19%	25%	27%	21%
Convenience foods – frozen or packaged – e.g. fish fingers, chips, burgers	2%	6%	23%	27%	27%	15%
Take away meals eaten at home	*	2%	7%	26%	45%	19%
Eating out at a restaurant	*	1%	4%	18%	63%	14%

**Q6. Thinking about how you use the dates on the labels of food products which indicate how long the product will last until, for each of the following food groups which of the following statements best describes you?**

	Fresh Meat/ fish	Fruit, veg & Salad	Processed meat & fish	Ready meals/ Convenience foods	Bread and cakes	Cheese & yogurt
I never eat past the date on the label	81%	53%	72%	61%	56%	65%
I occasionally eat past the date on the label	15%	35%	18%	18%	32%	25%
I often eat past the date on the label	2%	8%	3%	4%	9%	6%
I don't look at the date on the label	1%	2%	1%	2%	2%	1%
I don't eat this food	1%	*	5%	13%	*	2%
Don't know	*	1%	2%	1%	1%	2%

**Q7. Thinking generally, how much of the following food items – whether prepared/cooked or not - have you thrown away into the bin?**

	Quite a lot	A reasonable amount	Some	A small amount	Hardly any	None	Don't eat
Inedible food waste (e.g. peelings, bones)	21%	16%	19%	15%	20%	8%	1%
Fruit, vegetables or salad	3%	9%	18%	19%	30%	20%	*
Raw meat & fish	2%	4%	10%	14%	33%	35%	2%
Processed meat & fish (e.g. sandwich meats)	2%	5%	11%	13%	32%	31%	6%
Ready meals/convenience foods (e.g. pizza, burgers)	1%	4%	8%	10%	30%	31%	16%
Bread and cakes	2%	5%	13%	16%	34%	29%	1%
Cheese & yogurt	2%	4%	10%	14%	33%	34%	2%

**Q8. And thinking generally, how much of the following have you thrown away into the bin?**

	Quite a lot	A reasonable amount	Some	A small amount	Hardly any	None
Food left on the plate after the meal	5%	8%	19%	23%	31%	14%
Food you cooked/prepared too much of but didn't serve up	2%	6%	16%	19%	30%	26%
Food from previous meals that you initially saved but didn't get around to eating/using up	2%	5%	15%	22%	29%	27%
Products you opened and used but didn't finish (e.g. deli foods, sauces, cans/jars, spreads)	2%	5%	17%	23%	32%	22%
Products you bought but didn't open (e.g. deli foods, cans/jars, spreads, bakery goods)	2%	3%	13%	19%	34%	29%

**Q9. Thinking about the different types of food waste we have just discussed, how much uneaten food – overall - would you say you throw away in general? Would you say...?**

Quite a lot	3%
A reasonable amount	7%
Some	20%
A small amount	27%
Hardly any	32%
None	11%

**Q10.** Everyone has to throw food away sometimes. Which of the following factors do you think cause food to be thrown away in your household?

**Q11.** And which of these would you say are the main reasons why food is thrown away in your household?

Base: All those who throw away uneaten food (1,658)

	Issue	Main
<b>Shopping for food</b>		
Buying too much when shopping	22%	10%
Buying things you already have at home	13%	4%
Not making a list before shopping	12%	4%
Not sticking to a list in the store	11%	4%
Tempted by "multi-packs"	22%	9%
Tempted by price reductions on products approaching their "use by" or "best before" date	19%	10%
Tempted by special offers e.g. 'buy one get one free'	30%	12%
Trying to buy more fresh food (that doesn't last as long)	23%	13%
Portion sizes of products are too big	17%	9%
Don't check the "use by" or "best before" dates in store	11%	5%
Buying takeaways and not eating everything	15%	8%
<b>Storing food</b>		
Needing to make space in the fridge/cupboards for new things	14%	5%
Not eating the foods that need to be eaten first	25%	14%
Not keeping the fridge cold enough	5%	2%
Not knowing the use by dates of products in fridge/cupboards	12%	5%
Not always sure of how to store certain products	5%	2%
Doing a 'spring clean' of the cupboards to get rid of old products	24%	12%
Not resealing/repackaging opened products so they stay fresh	14%	7%
<b>Preparing and cooking food</b>		
Not planning meals	13%	6%
Food gone past its use by or best before date	34%	22%
Food visibly gone bad or smells bad	30%	19%
Food not visibly bad but not worth the risk	21%	11%
Food burnt/ruined during cooking/preparation	16%	6%
Experimenting with new ideas/ingredients	7%	2%
Need more recipes and ideas for using food	4%	2%
Lack of confidence in combining leftovers to make a 'new' meal	7%	3%
Don't like cooking with leftovers/eating leftovers	12%	6%
Other members of household don't cook very often	5%	1%
<b>Eating food &amp; Lifestyles</b>		
Children/others in household didn't like it	22%	15%
Food didn't taste good	19%	11%
Made too much food	27%	17%
Not enough time	6%	2%
Plans change in the week/can't plan	9%	5%
Any other	2%	2%
Don't know	4%	4%

**Q12.** Thinking about when you have to throw uneaten food items away, to what extent, if at all, does it bother you?

A great deal	22%
A fair amount	27%
A little	23%
Not very much	18%
Not at all	9%

**Q13.** Why does throwing away food bother you? Would you say it's any of the following or something else?

MULTICODE UP TO 3 ONLY. PROBE "is there anything else?"

Base: All those bothered by throwing away uneaten food (1,345)

It's a waste of my money	68%
It's bad for the environment	20%
It makes me feel guilty	36%
It's dirty/makes the bin smell	10%
It makes me feel that I haven't planned very well	8%
I can't afford to throw away food	19%
It makes me feel like I've wasted my time	9%
It's a waste of good food	45%
Other	3%
Don't know	1%

**Q14.** Why are you not bothered by throwing food away? Would you say it is any of the following or something else?

MULTICODE UP TO 3 ONLY. PROBE "is there anything else?"

Base: All those who are not bothered by throwing away uneaten food (510)

Doesn't cost that much	7%
Life's too short/other things to worry about	15%
Don't consider it a problem	28%
Want to eat the freshest food so there's bound to be some waste	10%
I don't throw away much food	44%
Sometimes I enjoy the freedom to throw food away	2%
I'd rather throw food away than risk food poisoning	19%
I have a specific collection for food waste by the council	1%
I'd rather cook more for me/other people than not have enough	5%
Food waste is natural/breaks down	5%
Can't be avoided	20%
Want to keep kitchen clean/organised	5%
Give it to pets / birds / animals	3%
Other	1%
Don't know	2%

**Q15.** How much effort do you and your household go to in order to minimise the amount of uneaten food you throw away?

A great deal	30%
A fair amount	37%
A little	21%
Not very much	8%
None at all	3%

**Q16.** To what extent, if at all, do you think about the cost of the uneaten food you throw away? SINGLE CODE ONLY

A great deal	21%
A fair amount	29%
A little	25%
Not very much	14%
Not at all	10%
Don't know	1%



<b>Q17. To what extent do you agree or disagree with the following statements?</b>						
	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree	DK, n/a
Food thrown away is not an issue as it is natural and biodegradable	12%	27%	19%	23%	14%	5%
Discarded food packaging is a greater environmental issue than food thrown away	44%	29%	14%	6%	3%	4%
Nothing would encourage me/my household to make an effort to throw away less food	2%	8%	21%	33%	28%	7%

<b>Q18. Thinking about climate change, how much effort does your household go to – for example through the products you buy, the way you travel and the things you throw away – in order to minimise your own impact/contribution?</b>	
A great deal of effort	14%
Quite a lot of effort	32%
Some effort	38%
Not very much effort	11%
No effort	3%
Don't know	1%

<b>Q19. How do you dispose of food in the home? MULTICODE</b>	
In the bin	84%
In-sink disposal unit	4%
Home compost bin	16%
In home wormery	1%
Kitchen waste collection by the council	13%
Use in pet food	15%

<b>Q20. Thinking about how you store food in the home, does your household have any of the following?</b>					
	Large	Medium	Small	Don't have	Don't know
Fridge	12%	27%	12%	40%	9%
Freezer	14%	25%	11%	41%	9%
Fridge/freezer	28%	34%	4%	29%	6%
Larder	7%	18%	9%	57%	9%
Cupboard space	25%	54%	12%	3%	6%

<b>Q21. Do you have a fridge thermometer?</b>	
Yes	36%
No	60%
Don't know	4%

## Socio-demographics

<b>Gender</b>	
Male	39%
Female	61%

<b>Age</b>	
16-24	8%
25-34	16%
35-45	22%
46-54	18%
55-64	17%
65+	18%
Refused	1%

<b>Social Class</b>	
AB	18%
C1	32%
C2	22%
DE	26%
Refused	3%

<b>Working status</b>	
Working full time	36%
Working part time	16%
Parent at home	8%
On maternity leave	1%
Retired	25%
Unemployed/seeking work	6%
Other	6%
Refused	1%

<b>Housing type</b>	
Block of flats	15%
Flat in converted house	3%
Terraced house	24%
Semi detached house	35%
Detached house	15%
Bungalow	5%
Refused	1%

<b>Housing tenure</b>	
Owner occupied – owned outright	34%
Owner occupied – on mortgage	31%
Rented – social	21%
Rented - private	12%
Other	2%
Refused	1%

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**Waste & Resources  
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