



HELPING HOUSEHOLDS TO PREVENT WASTE

INTERVENTION PILOT REPORT

DECEMBER 2021

CONTENTS

Executive Summary.....	03
About the Research.....	08
Methodology.....	14
Results.....	17
Conclusion & Recommendations.....	33



EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

Introduction

This project aims to understand what can be done to better support households to reduce the amount of waste they produce, with the following objectives:

- Co-design solutions with high-wasting households, identifying what will work best for them
- Pilot one intervention in high-wasting areas in England, aimed at preventing waste in households
- Identify the impact of the intervention on waste (including residual waste, co-mingled recycling, and food waste)
- Identify the impact of the intervention on resident attitudes, perceptions, and self-reported behaviour
- Develop recommendations for any further testing or scaling of the intervention

About the intervention

Co-design workshops were carried out with residents from high-wasting households in England to gain input into the development of potential waste prevention interventions. One intervention idea was taken forward for further development. This intervention involved writing to residents about waste, providing them with information to help and support them in reducing their household waste, in ways that work best for them. The intervention was made up of three separate communications:

- Letters: attractively designed letters delivered in council branded envelopes from waste and recycling teams, asking residents to make changes at home to reduce the amount they are generating.
- Rules-of-thumb for preventing waste: five key principles for households to keep in mind for reducing waste, in the ways that work best for them. Printed in a door hanger style for

residents to display at home, delivered with the letters.

- Follow up 'nudge' postcards: delivered two weeks after the letters. Postcards reiterated key messages and rules-of-thumb to encourage residents to maintain or renew their efforts to prevent waste.

In addition to other key messages, the letters and postcards used one of three messages aimed at encouraging residents to take action. These were:

- An environmental message, highlighting the energy and resources used in producing the things we consume
- A cost to the council message, highlighting the amount of taxpayer's money spent on waste disposal
- A social norming message, highlighting that many residents are already making changes at home to prevent waste.

EXECUTIVE SUMMARY

Methodology

Target areas

Two local authority/local waste contractor partners were recruited to support on the delivery of the pilot; Oxford Direct Services (ODS; contractor for Oxford City Council) and Cheltenham Borough Council. Partners were recruited via the Keep Britain Tidy Network, and each selected three high-wasting collection rounds where the intervention would be implemented, as well as control area, used to indicate what would have happened in the target rounds had no intervention taken place. In total across the six collection rounds, 6,007 households received the intervention.

Waste monitoring

Weights of waste and recycling from kerbside collections (including food waste) in the target areas were used to identify the impact of the intervention. Weights were identified via weighbridge ticket data post collection, for the four

weeks prior to the intervention and the four weeks following.

Resident surveys

308 door-to-door surveys were carried out in the target areas once all rounds of the communications were delivered (around 50 surveys in each area where the intervention was implemented). These aimed to identify recall of the intervention and key messages, feedback on the communications, and self-reported impact on attitudes, perception and behaviour around waste prevention.

Resident waste diaries

Eight high-wasting households (four in Oxford, four in Cheltenham) were recruited to complete weekly waste diaries before and after receiving the intervention. They recorded the amount of waste they were producing, perceptions around this, and thoughts on implementing the five rules-of-thumb. Each week, participating households completed their diaries in the form of

written responses and videos, submitting them via email.

Partner feedback

Feedback was gathered from the two partners, ODS and Cheltenham Borough Council, on the intervention, their interpretation of the results, and suggestions for any future iterations or scaling of the pilot.

Results

Waste and recycling

Overall, total household waste decreased in two of the six collection rounds where the intervention was tested. These rounds were both in Oxford; one where the social norming message was trialled (6% decrease in total waste, reduction of 1.29 tonnes), and one that tested the impact to the environment message (5% decrease, reduction of 0.99 tonnes). This equates to total waste dropping by 2.28 tonnes per fortnight, on average.



EXECUTIVE SUMMARY

Total household waste did not reduce in any of Cheltenham's target collection rounds. Instead, waste in these three areas increased, compared with the baseline. However, in two of the three rounds, waste increased to a lesser extent than it did in the control area. This suggests that although there were some external factors causing waste to increase during this time, the intervention in these two areas may have gone some way in limiting the impact of these factors and encouraging residents to make efforts to reduce their waste. Cheltenham also had high proportions of communal properties. This could possibly make it more difficult for through-the-door communications to reach residents, although further testing would be needed to fully understand this.

Looking at separate waste streams, decreases were most significant in general waste, compared with food waste and recycling. General waste reduced by 27% (5.32 tonnes) in Oxford, in the area where the social norming message was

tested, and by 13% (2.58 tonnes) in the round to receive the 'cost to the council' message. For this particular waste stream, the area in Oxford to receive the environmental message saw an increase of 4%.

Resident surveys

Of all residents surveyed following the intervention, 37% (114) recall seeing the intervention. Of these, 86% said the communication caught their attention, 80% said they liked the communication; and 78% said it was memorable. Three quarters (76%) of those who saw the materials said that the communication made them think that reducing waste is easy to do and 81% agreed it felt relevant to them.

As a result of seeing the communications that were delivered through their door, 68% of residents feel more motivated to reduce waste at home, 77% of residents said they feel more informed on the importance of reducing waste, and 72% of residents also said that they now feel

more informed about how to reduce waste at home.

Overall, 92% of people said they had adopted at least one of the five waste prevention behaviours outlined in the rules-of-thumb. 82% of people said they avoided buying things they don't need or used up what they have; this was the most commonly adopted behaviour as a result of the intervention. This was followed by using reusable alternatives to single-use items, which 73% of people began to do.

Resident waste diaries

Three out of the eight participating households reduced their waste during the intervention weeks, as compared to beforehand. These households, one in Oxford and two in Cheltenham, reduced weight of waste by 14%, on average.



EXECUTIVE SUMMARY

Conclusion & recommendations

With waste reducing in two of the six collection rounds, equating to an average of 2.28 tonnes per fortnight, there is some evidence to suggest that this intervention has been successful in supporting and encouraging residents to make changes to reduce the amount of waste they produce at home.

Overall, Keep Britain Tidy recommends that this approach is tested more widely to build on the results of the pilot and understand the impact this intervention can have at scale, and over a longer period. Below are a number of considerations that should be made for any future testing, and if shown to be effective, further roll-out of the intervention at scale.

1. Further testing is required to better understand the effectiveness of the different message types and which will best encourage action. With environmental messages best conveying the importance of waste

prevention, it is recommended that future pilots include this in all communications, and then further test the differences in impact of social norming and cost of waste disposal messaging.

2. Run the intervention over a longer period to allow time for residents to make initial small steps to preventing waste, and to then build on these.
3. Identify the costs and benefits to implementing the intervention to all households across a borough, versus targeting it in high-wasting collection rounds only.
4. Identify to what extent the through-the-door communications used in the intervention are effective for communal properties and, if necessary, how they can be adapted to better reach this group of residents.
5. With the greatest reductions in waste occurring within the general waste stream, future iterations of the

intervention should explore how residents can be further supported to prevent food waste and reduce the amount of recyclable items of waste they are producing.

6. If the intervention is rolled-out at scale in the future, consider how it can be supported by online content via council website and social media channels.
7. On any longer-term roll-out, also consider how the intervention could be combined with other approaches to increase its effectiveness, such as feedback loops (e.g. a personalised note or door knocking) to households struggling to reduce their waste further.



ABOUT THE RESEARCH



INTRODUCTION

Background

In England, households produce around 22 million tonnes of general waste, recycling and food waste each year¹. A strong focus on increasing recycling rates in the UK in recent years has meant that limited communications have focused on reducing overall consumption, waste and preserving vital energy and resources. Due to disposal charges, local authorities face mounting costs to process this waste, irrespective of whether it is recyclable or not. Councils can therefore only achieve financial savings of taxpayer money if overall waste is reduced.

Recent research conducted by Keep Britain Tidy has illustrated that there is a limited understanding amongst the public about waste prevention, with many people assuming that producing 'lots of recycling' means they are doing the 'right thing'. Keep Britain Tidy and BRITA UK hold the shared ambition to end waste, and believe this issue is more critical

now, than ever, in efforts to halt the climate and ecological crisis.

Aim and objectives

The project aims to understand what can be done to better support households to reduce the amount of waste they produce, with the following objectives:

- Co-design solutions with high-wasting households, identifying the what will work best for them
- Pilot one intervention in high-wasting areas in England, aimed at preventing waste in households
- Identify the impact of the intervention on waste (including residual waste, co-mingled recycling, and food waste)
- Identify the impact of the intervention on resident attitudes, perceptions, and self-reported behaviour

- Develop recommendations for any further testing or scaling of the intervention

This work has been funded by BRITA UK and delivered with support from Oxford Direct Services (ODS) and Cheltenham Borough Council.

¹ *UK Statistics on Waste*, (2021), Department for Environment, Food and Rural Affairs



CO-DESIGNING SOLUTIONS

Co-design workshops were carried out with residents from high-wasting households in England to gain input into the development of potential waste prevention interventions. Specifically, the sessions aimed to identify:

- Current behavioural drivers of household waste
- Feedback on existing intervention concepts
- How waste prevention interventions should be framed (e.g. language, messengers, tone)
- Participants' own ideas for changing behaviour

Two two-hour workshops were carried out via Zoom, with 12 participants in total. Participants were recruited by Keep Britain Tidy's market research agency partner, Feedback Market Research, using a screening questionnaire to determine eligibility. Criteria for participation were:

- Residents must be from high-wasting households (identified by number of bags produced each week and a self-reported measure of waste)
- A range of life stages, demographics and property types
- A spread of residents from regions across England

Workshop participants received a cash gift as a thank you for their time, and results were transcribed and analysed to identify key recommendations for developing the waste prevention intervention for piloting.



ABOUT THE INTERVENTION

Following co-design workshops, one waste prevention intervention idea was taken forward for further development. This intervention involved writing to residents about waste, providing them with information to help and support them in reducing their household waste, in ways that work best for them. The intervention was made up of three separate communications, as outlined below, each designed using insights from the co-design workshops and wider behavioural science research.

Letters

Residents received a letter in an addressed envelope from their local council's waste and recycling team, delivered via Royal Mail. Envelopes were addressed as 'Dear resident' and included council logos to increase their salience and authenticity. Letters were bright and attractively designed and presented residents with the following key messages:

- Their local council has an ambition to reduce waste, and is asking residents to make changes at home to reduce the amount they are generating
- The amount of waste, including recycling and food, households in the area generate each year (total and per home)
- Five rules-of-thumb for reducing waste at home

In addition to the key messages above, the letters used one of three messages aimed at encouraging residents to take action. These messages were:

- An environmental message, highlighting the energy and resources used in producing the things we consume
- A cost to the council message, highlighting the amount of tax payer money spent on waste disposal
- A social norming message, highlighting that many residents are

already making changes at home to prevent waste.



ABOUT THE INTERVENTION

Rules-of-thumb hangers

Included within the letters delivered to households was an insert outlining the five rules-of-thumb for reducing waste at home. These were as outlined in the letters, but with additional detail to help residents decide the ways that waste prevention can best work for them and their household. In this way, rules-of-thumb were guiding principles for residents to keep in mind, rather than specific tips for preventing waste.

Rules-of-thumb were printed onto card door-hangers, designed to be kept and hung up somewhere handy around the home, for residents to refer back to over time. The hangers used the same design as the letters and included council branding.

KEEP ME! HANG ME UP SOMEWHERE HANDY.

REDUCE WASTE AT HOME

Remember the five rules-of-thumb

- 1 Choose no (or less) packaging**
Always consider if there is a packaging-free option for anything you buy, like loose fruit and vegetables or bars of soap or shampoo. Buying in bulk to refill smaller containers at home is also a great way to reduce packaging.
- 2 Ditch the disposables**
Wet wipes, bottled water, sandwich bags and cotton wool pads are just some of the single-use items that can end up in our rubbish bins when there are great reusable alternatives available. Try switching to reusable bottles, cloths, tupperware and make-up remover pads instead.
- 3 Look out for refill options**
There are lots of refill options available online and locally which allow you to shop using no or minimal packaging. You can find refills for all kinds of products, from rice, pasta and cereals, to cleaning products and detergents, to cosmetics and personal care essentials.
- 4 Get organised**
We produce less waste when we're organised and avoid making last minute purchases. This is particularly true when it comes to food waste – try planning your meals for the week ahead and organising your fridge and cupboards so you know what's there.
- 5 Refuse it!**
Think about how you can buy and accumulate less stuff in the first place. Simply saying no to things you don't need, using up what you have, and avoiding any products that use unnecessary packaging are some of the best ways to reduce waste.

TURN OVER FOR MORE DETAILS!

Rules-of-thumb

www.oxford.gov.uk/recycling
[#WasteLessOxford](https://twitter.com/WasteLessOxford)

ODS
OXFORD
CITY
COUNCIL

ABOUT THE INTERVENTION

Nudge postcards

Two weeks following delivery of the letters, a second round of communication was used to further prompt residents, nudging them to maintain their efforts to prevent waste. This was an A5 postcard, delivered through residents' letterboxes by hand, by a letterbox marketing company.

The postcard repeated key messages from the letters, including one of the three messages aimed at encouraging residents to take action (either the environmental, cost to council, or social norming message). Postcards used the same design and council branding as previous communications.



METHODOLOGY



METHODOLOGY

The intervention was piloted, and robustly monitored and evaluated, using the following methodology. As well as determining overall impact, this methodology identified any differences between the three versions of the communications.

Target areas

Two local authority/local waste contractor partners were recruited to support on the delivery of the pilot; Oxford Direct Services (ODS; contractor for Oxford City Council) and Cheltenham Borough Council. Partners were recruited via the Keep Britain Tidy Network, and each selected three high-wasting collection rounds where the intervention would be implemented.

Target rounds were selected using past waste and recycling data, and seeking areas that are comparable in terms of size and demographics. In total across the six collection rounds, 6,007 households received the intervention.

Partners also selected a fourth comparable control round, where no intervention was delivered, used to indicate what would have happened in the target rounds had no intervention taken place.

Each of the test areas were randomly allocated one of the three variations of the intervention, including either the environment, cost to council, or social norming message.

Waste monitoring

Weights of waste and recycling (including food waste) from kerbside collections in the target areas were used to identify the impact of the intervention. Weights were identified via weighbridge ticket data post collection, for the four weeks prior to the intervention and the four weeks following.

Resident perception surveys

308 door-to-door surveys were carried out in the target areas once all rounds of the communications were delivered

(around 50 surveys in each area where the intervention was implemented). These were carried out by Keep Britain Tidy's market research agency partner, Feedback Market Research, and aimed to identify:

- the extent to which residents recall seeing the intervention
- the extent to which residents recall the key messages
- feedback on the communications
- self-reported impact on attitudes, perception and behaviour around waste prevention

Survey results were analysed statistical analysis software, Q, to identify key findings and trends.

METHODOLOGY

Resident waste diaries

Eight high-wasting households (four in Oxford, four in Cheltenham) were recruited to complete weekly waste diaries before and after receiving the intervention. Each week, participating households completed their diaries in the form of written responses and videos, submitting them via email, answering the following questions:

- how much general waste, food waste and recycling they produced that week
- how easy or difficult it would have been to produce less general waste, food waste and recycling that week, and why
- which items of waste could have been avoided entirely, and how
- what factors influenced the amount of waste they produced that week

Partner feedback

Feedback was gathered from the two partners, ODS and Cheltenham Borough Council, on the intervention, their interpretation of the results, and suggestions for any future iterations or scaling of the pilot.



RESULTS



WASTE AND RECYCLING

Combined waste

The following results outline changes in total waste collected at the kerbside in the target areas from the baseline phase, before the communications were distributed, to the intervention phase after. Total waste is the combination of refuse, recycling and food collections.

Overall, total waste decreased in two of the six collection rounds where the intervention was tested. These rounds were both in Oxford; one where the social norming message was trialled (6% decrease in waste, reduction of 1.29 tonnes), and one that tested the impact to the environment message (5% decrease, reduction of 0.99 tonnes). This means that where total waste decreased, it did so by an average of 5%, equating to total waste dropping by 2.28 tonnes per fortnight, on average.

While total waste also decreased in the collection round in Oxford where the 'cost to the council' message was implemented, it did so to the same extent

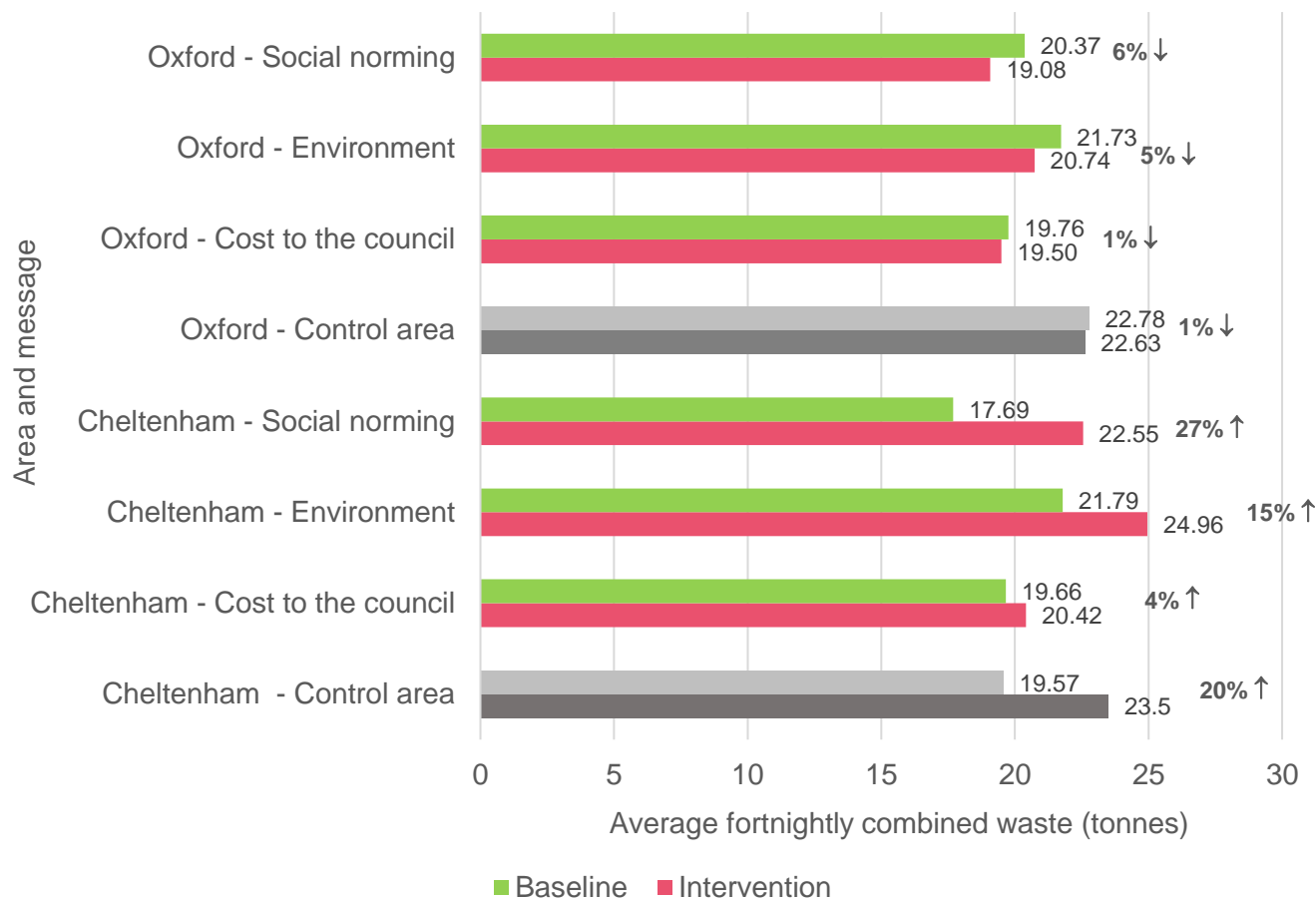


Figure 1: Average fortnightly combined waste collected at the kerbside in target areas, pre and post intervention

WASTE AND RECYCLING

as the control round (by 1%). This means that the decrease in waste cannot be attributed to the intervention, and may be due to other external factors present at the time, causing waste to reduce.

Total household waste did not reduce in any of the collection rounds in Cheltenham where the intervention was tested. Instead, waste in these three areas increased, compared with the baseline. However, in two of the three collection rounds, waste increased to a lesser extent than it did in the control area; 20% in the control round, compared with 4% where the 'cost to the council' message was tested, and 15% where the environment message was tested. This suggests that although there were some external factors causing waste to increase during this time, the intervention in these two areas may have gone some way in limiting the impact of these factors and encouraging residents to make efforts to reduce their waste.

Property type in the areas should also be taken into account; target collection rounds in Cheltenham had high proportions of communal properties. This could make it more difficult for through-the-door communications to reach residents, although further testing would be needed to fully understand this.



WASTE AND RECYCLING

Refuse

Looking at general waste only, before and after the intervention, this decreased in two of the six collection rounds. Refuse most significantly reduced in Oxford, in the area where the social norming message was tested (by 27%, 5.32 tonnes). This was followed by the round to receive the 'cost to the council' message, where general waste decreased by 13% (2.58 tonnes), on average.

As well as the third target collection round in Oxford, general waste increased in each of the test areas in Cheltenham. However, again, these increases occurred to a lesser extent than they did in the control round; only by 12% (1.04 tonnes) in the 'cost to the council' round, and 33.6% on average across the three areas. This suggests, again, that the intervention could have had some influence in encouraging household to prevent waste in these areas.

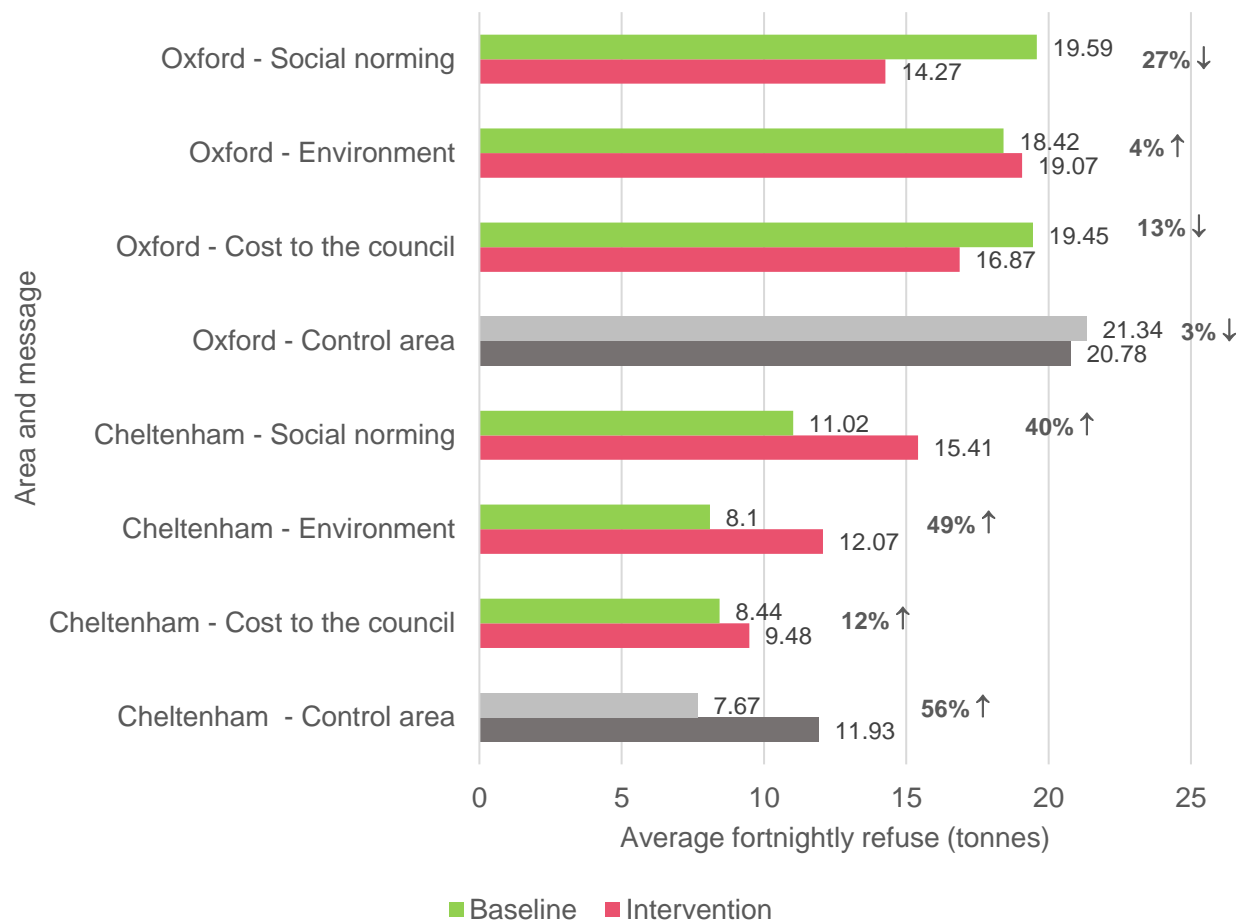


Figure 2: Average fortnightly refuse waste collected at the kerbside in target areas, pre and post intervention

WASTE AND RECYCLING

Recycling

Mixed recycling did not decrease in any of the six target areas during the intervention. To note, there is no recycling data for the collection round in Cheltenham where the social norming message was tested, as these collections were disrupted during the time of the pilot.

Recycling increased most significantly in Oxford, where the cost to council message was tested (by 34%, 2.37 tonnes). This could suggest that the reduction in refuse seen in this area in Figure 2 was caused by residents' increased use of their recycling bins.

Recycling in the other areas, however, stayed fairly consistent, which could suggest that waste (particularly where the social norming message was trialled in Oxford) was prevented entirely, rather than diverted to recycling bins.

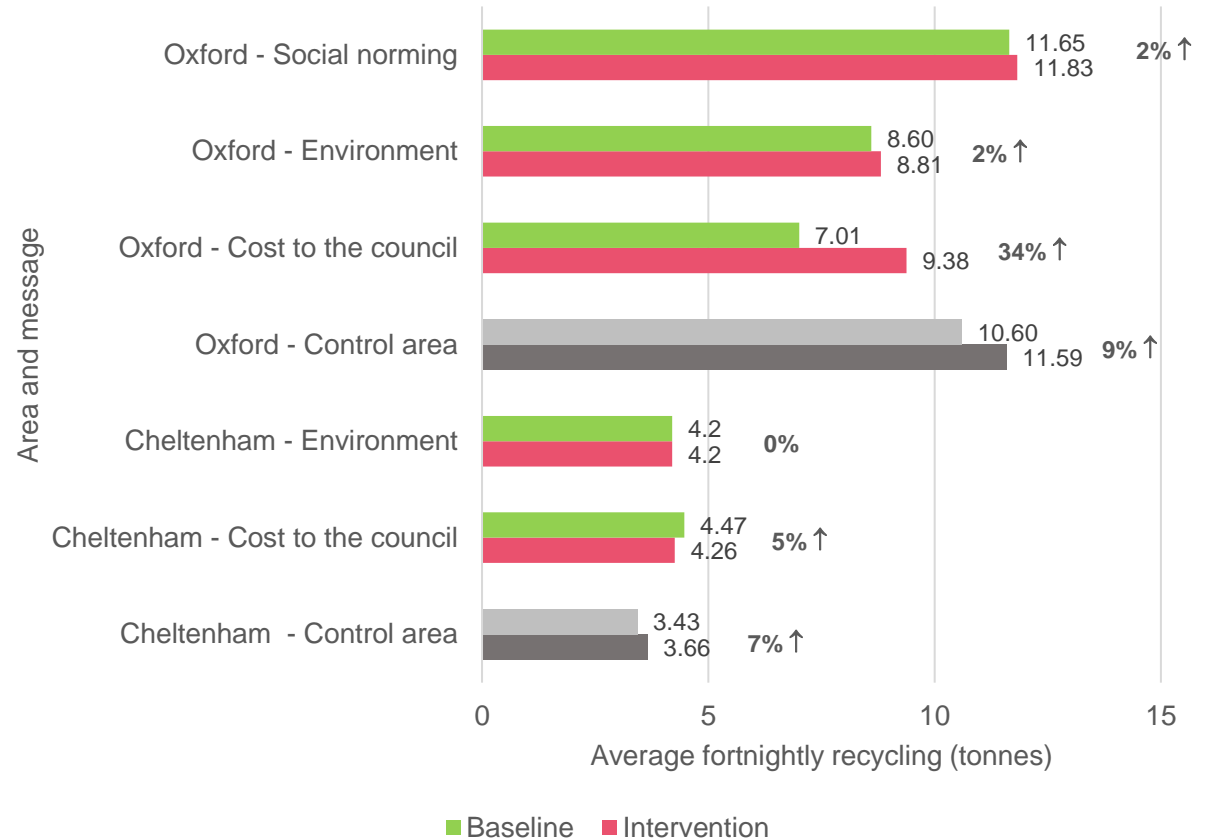


Figure 3: Average fortnightly recycling collected at the kerbside in target areas, pre and post intervention

WASTE AND RECYCLING

Food waste

Food waste decreased in two of the six collection rounds, in both areas where the environment message was tested (17% in Oxford and by 8% in Cheltenham). In Oxford, this reduction of 17% has driven the area's overall decrease in total combined waste during the pilot testing period. While waste did also reduce in a second area in Oxford, it did so to a smaller extent than in the control round, meaning that we cannot attribute this to the intervention.

Food waste increased most significantly in the area to receive Oxford's version of the social norming message (by 27%, 1.28 tonnes). This could suggest that some of the decrease in general waste seen in Figure 2 was diverted to food waste caddies.

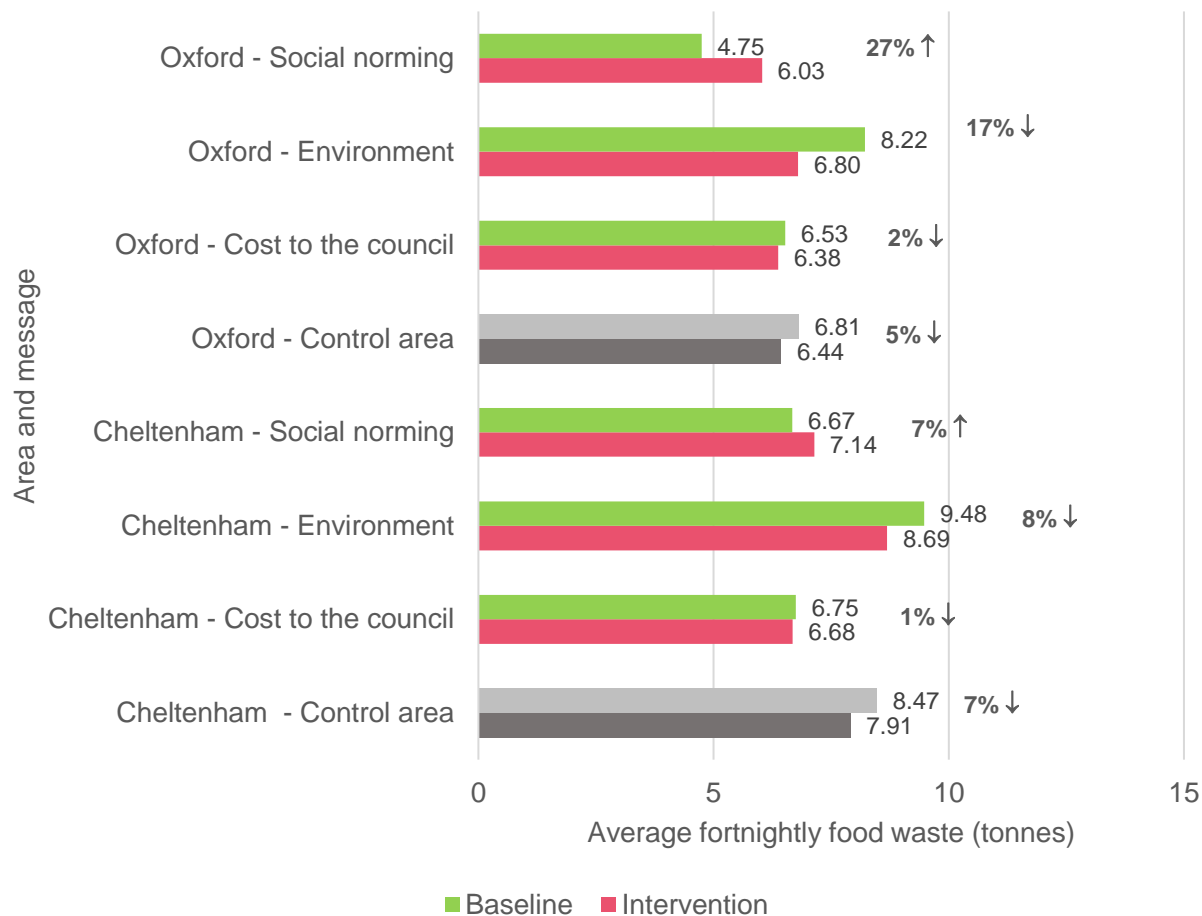


Figure 4: Average fortnightly food waste collected at the kerbside in target areas, pre and post intervention

FEEDBACK FROM RESIDENTS

Recall of the intervention

Of all residents surveyed following the intervention, 37% (114 participants) recall seeing the intervention. Overall, recall was highest in areas that received the social norming message (46%) compared with the environment (34%) and cost to council (31%) messages.

Across the six target collection rounds, recall was highest in Rosehill and Temple Cowley in Oxford, which received the social norming message (58%) and St Pauls in Cheltenham, which received the cost to council message (41%).

Recall of type of communication

Those who recall seeing the intervention were asked to provide further, unprompted detail on what it was they saw and read. A quarter (24%) explained that they received a letter, 13% mentioned the nudge postcard, and 16% mentioned rule-of-thumb, tips or guidance for reducing waste at home.

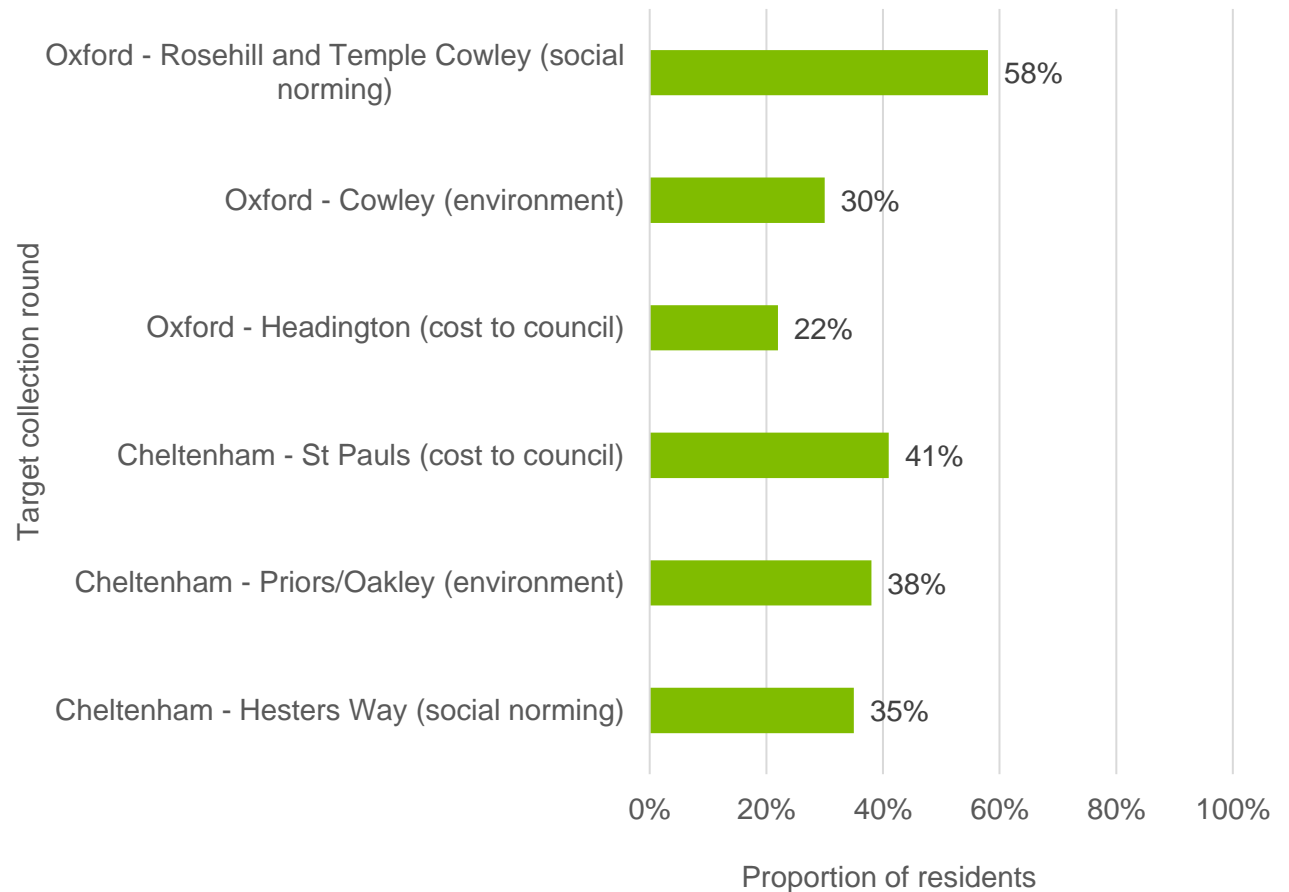


Figure 5: Proportion of residents who recall seeing the intervention, per collection round
Bases: Rosehill and Temple Cowley = 50; Cowley = 50; Headington = 55; St Pauls = 51; Priors/Oakley = 50; Hesters Way = 52

FEEDBACK FROM RESIDENTS

Recall of key messages

14% of residents who had seen the intervention materials recalled, without being prompted, that the communications told them why it is important to reduce waste at home. One in 10 (10%) explained that the intervention asked them to make changes.

Of the three message variations, 6% of those who received the social norming message recalled this without being prompted; 5% recalled the cost to council message, and 2% recalled the environmental message.

Feedback on the communications

80% of residents who recalled seeing the intervention said they liked the communications; 86% said it caught their attention; and 78% said it was memorable. These results were fairly consistent when comparing the three different message variations, although residents who had received the social norming message were more likely to

strongly agree to these statements. For instance, 53% of those who saw the social norming message strongly agreed that it caught their attention, compared with 27% who saw the cost to council message and 24% who saw the environmental message.

All residents who received the versions of the communications with the cost to council and social norming messages agreed that they were easy to understand (100%). However, this decreases to 91% among those who received the environmental message, suggesting this could be seen as a less clear or more confusing message.

Three quarters (76%) of residents said that the communications made them think that reducing waste is easy to do and 81% agreed it felt relevant to them. Nine out of 10 (90%) agreed that it was an important message, and this was highest among residents who had received the environmental message (94%).

Impact of the communications

As a result of seeing the communications, 68% of residents felt more motivated to reduce waste at home. This was slightly higher in those who received the social norming message (73%) compared with environmental (68%) and cost to council (61%) messages.

77% of residents, following seeing the intervention delivered through their letterboxes, said they feel more informed on the importance of reducing waste. This was higher among those who received the cost to council message (82%) and environmental message (79%) compared with the social norming message (71%).

After seeing the communications, 72% of residents also said that they now feel more informed about how to reduce waste at home. This finding was fairly consistent across the three message variations.

FEEDBACK FROM RESIDENTS

Self-reported change in behaviour

Residents who remember seeing the intervention materials were asked whether they have since adopted any of the waste prevention behaviours outlined in the rules-of-thumb, as a result. As shown in Figure 6, 82% of people said they avoided buying things they don't need or used up what they have; this was the most commonly adopted behaviour as a result of the intervention. This was followed by using reusable alternatives to single-use items, which 73% of people did, as a result. The least commonly adopted behaviour was using refill versions of products (e.g. dried foods and household cleaning products), although a significant proportion still did this (60%).

Overall, 92% of people said they had adopted at least one of the five waste prevention behaviours outlined in the rules-of-thumb. Results on self-reported changes in behaviour are consistent across the three message variations.

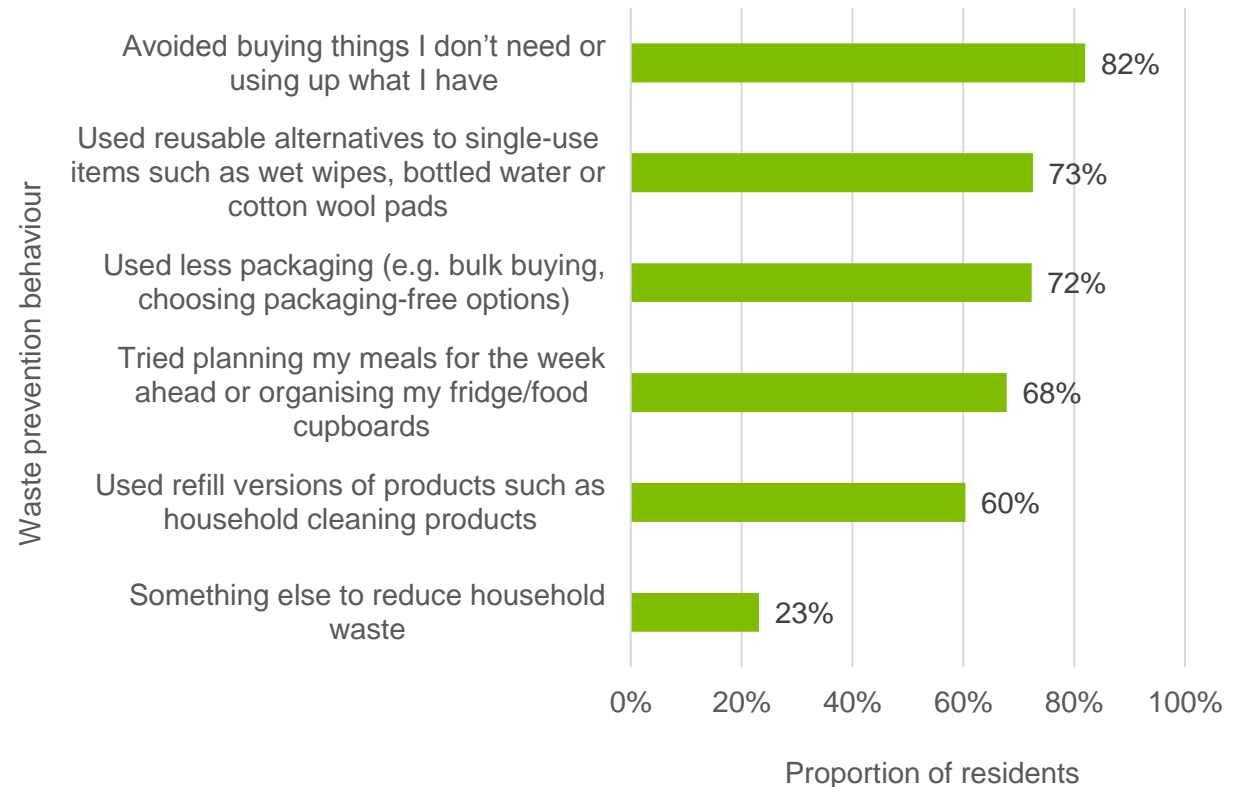


Figure 6: Proportion of residents who engaged in each waste prevention behaviour as a result of seeing the intervention materials
Base = 114

FEEDBACK FROM RESIDENTS

Perception of the council

As well as perception and behaviour around waste prevention, the intervention materials have also had a positive impact on residents' perceptions of the local council. 81% of residents agreed that seeing the communications made them think that their local council is doing something positive to reduce waste (86% in Oxford and 77% in Cheltenham).

Seven out of 10 residents (71%) also agreed that the intervention made them think more positively about their local council (75% in Oxford and 67% in Cheltenham).

Use of hashtag

Within the intervention communication materials, residents were encouraged to use a localised hashtag to share the ways in which they are trying to reduce their household waste. This was monitored during and following the pilot, and no residents made use of the hashtag. Future interventions and

communications should therefore explore how this form of engagement can be implemented differently, or whether it is necessary.



RESIDENT WASTE DIARIES

Results below outline findings from the panel of high-wasting households recruited to keep track of the amount of waste they are producing before and during the pilot. The panel also recorded their perceptions around the waste they produce, and thoughts on implementing the rules of thumb for reducing this. Due to a small sample size of eight households, these results do not explore differences between the three message variations tested.

Changes in amount of household waste produced

Looking at total waste across waste streams, as shown in Figure 7, three out of the eight participating households reduced their waste during the intervention weeks, as compared to beforehand. These households, one in Oxford and two in Cheltenham, reduced waste by 14%, on average.

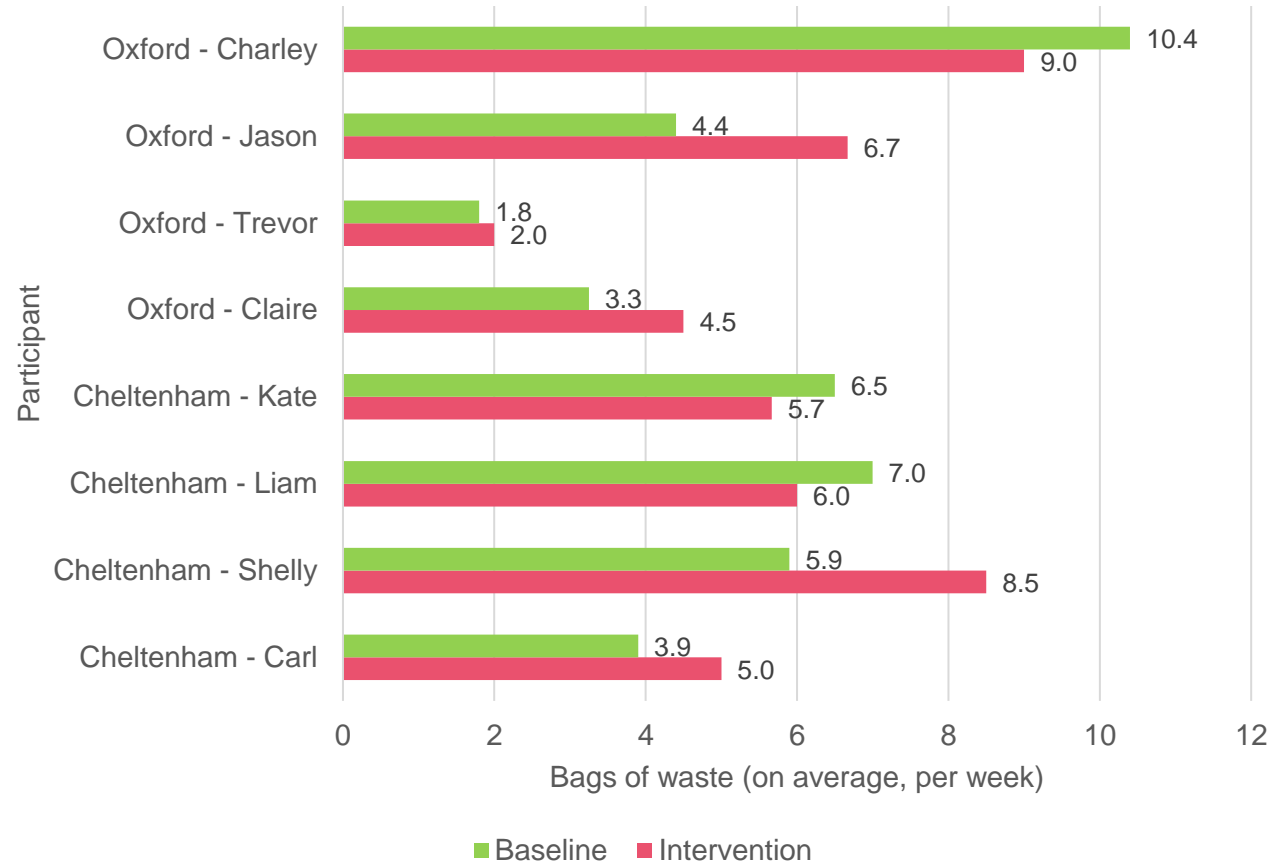


Figure 7: Average number of bags of waste per week (general waste, recycling and food) during the baseline and intervention phases

RESIDENT WASTE DIARIES

Changes in perception

When rating how easy or difficult they find it to prevent waste at home, most participants did not change their perception of this from the baseline to the intervention. Figure 8 shows average ratings from all participants, on a scale from 1 (difficult) to 10 (easy).

Overall, it was only recyclable waste that was seen to be easier to prevent entirely, following the intervention, compared to the baseline. Other waste streams were seen as more difficult. These results demonstrate that waste prevention is often viewed as being difficult to achieve, and interventions should take this into account when supporting and encouraging residents to reduce waste at home.

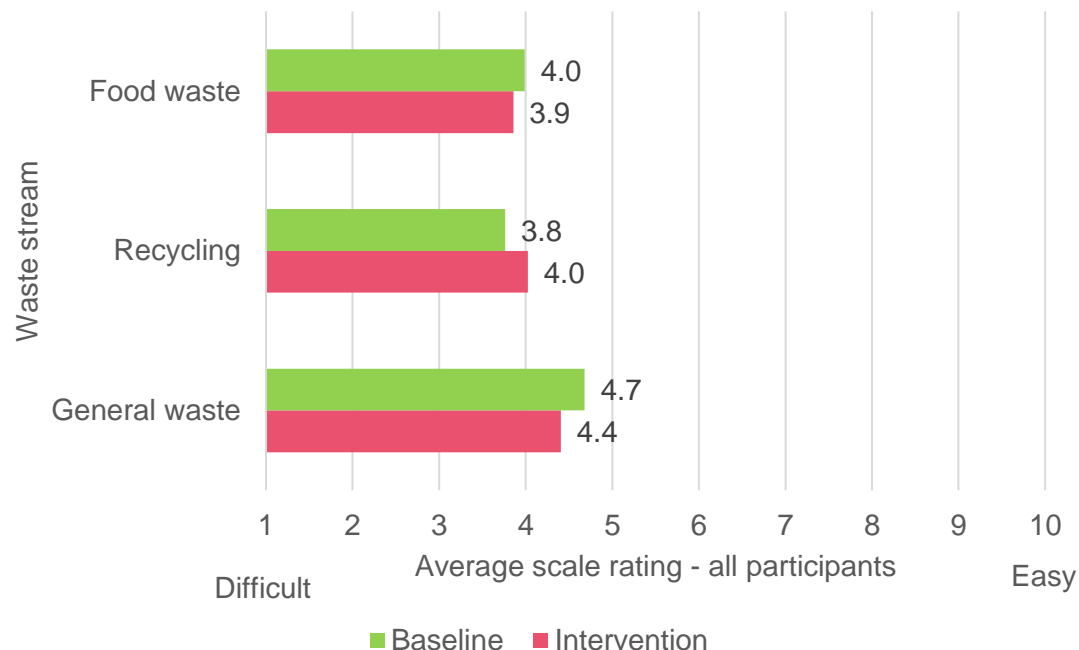


Figure 8: Perceptions of how easy or difficult it is to prevent waste – average scale ratings pre and post intervention

RESIDENT WASTE DIARIES

Changes in behaviour

Overall, four out of the eight participating households recall the detail of the intervention communication materials and provided feedback on how far it encouraged them to adapt their behaviour. Three out of the four households each tried meal planning as a result of the intervention, or organising their fridges and cupboards to help them better see the food they have to use up.

Two out of the four households said they tried using up what they have already, tried using less packaging, and used refill version of household products or food items. One of the four households also said they began to use reusable alternatives to single-use products as a result of the intervention.

Factors influencing waste

In their diaries, residents mentioned a number of factors that influenced the amount of waste they were producing each week, and reflected on how they

could change this behaviour in future. These factors included events such as birthdays, unforeseen events such as being ill, and changes in routine such as going back to school and work. Often food was wasted due to participants forgetting to use it up before it went 'off' or out of date. One participant also talked about preferring purchasing items, particularly food, to be in packaging due to hygiene.

"My daughter takes a packed lunch to school but doesn't always eat all of it... she brings back soggy or bruised scraps. I could possibly put less food in her lunch box."

"We binned a whole pack of diced beef, it was out of date. [I should have] popped it in the freezer sooner."

"It's my daughter's birthday coming up so we have lots of Amazon deliveries and lots of boxes. In the future I could order all items at the same time."

"We have packaging from new school items... bags, stationery etc. for the start of the school year. [We could] reuse items, the new bags and stationery were not needed, just wanted."

"With Coronavirus, I have found at this moment in time I prefer things totally wrapped up with lots of packaging. I know it's bad but that's how I feel."

Some residents, although taking some positive steps to prevent waste, such as buying larger bottles of water rather than individual ones, could go further still, such as avoiding buying bottled water and using tap water instead. Such examples indicate that residents can often take small steps, at first, to prevent waste, and interventions should acknowledge this and support and encourage residents to build on the steps they have taken, over time.

RESIDENT WASTE DIARIES

“We are trying... because of this project we are buying larger items like yoghurts in a large tub instead of singles, and large bottles of water instead of a six pack.”

Other barriers to preventing waste included having a busy household where it is difficult to plan meals and amounts of food that should be prepared, often leading to increased packaging and food waste. Many participants also mentioned how food is packaged by manufacturers being a particularly difficult aspect of their waste to address.

“I think we do find it difficult to meal plan just because as a family we are all in at different times and we all seem to eat different things so we have ready meals with various packaging as well as cooked meals.”

“Being such a busy family and working all the time I try to go always for the quick easy options.”

“I think honestly the biggest problem is the food manufacturers themselves, and then households need to change bad habits because of convenience.”

Overall, many participants said they enjoyed the process of keeping track of their waste, and that keeping the diaries, along with receiving the information, has increased their awareness of the issue of waste and motivated them to make changes to reduce it.

“It made me think about what I was doing and the waste our household produces.”

“We have really enjoyed this, it’s been an eye opener to what we do in our house.”

FEEDBACK FROM PARTNERS

The following comments provide feedback from partners on the intervention and how it could be improved in future iterations.

Impact of the intervention

In Oxford, where general waste decreased but recycling did not, there was some suggestion that this may have been due to recyclable items being more difficult for residents to prevent than items that tend to end up in general waste, and that the necessary changes in behaviour may take longer to occur.

“[I’m] not sure on the results for mixed recycling – not sure if there has been as much impact on those. It’s more difficult because it’s asking people to prevent waste and not buy things to begin with... it would be good to track this over time, as it is a big shift and a longer term change in behaviour.”

No resident comments were recorded following delivery of the communication materials, although positive feedback

was received from council staff living within some of Oxford’s target collection rounds.

“No residents contacted us based on the comms. Normally they get in touch if they have a complaint rather than for a positive reason, so it’s positive that we didn’t get any resident enquiries.”

“We do have some colleagues who live in the areas and had positive comments from these when they received the communications through the door.”

Feedback on the communications

Feedback from partners on the intervention materials themselves was positive, with suggestions that they appeared different to communications used before and few suggestions for how these should be altered to increase their impact in future. ODS also suggested that the follow-up ‘nudge’ postcards are something that could be incorporated into much of their work to further encourage positive waste and recycling behaviours.

“I like the design of the communications, it looked sharp and snappy and is not like stuff we’ve done before. In general, there are approaches in this pilot that we’ve never tried before, like the household panel and surveys. It was good that it took a different approach to what we normally would do, it’s good to try something different.”

“The nudge postcard is a really good idea. We send letters but then it sometimes doesn’t resolve the issue, and then don’t necessarily follow up. Using the nudge idea to follow up could be taken forward in a lot of what we do.”

Future scaling

Recommendations from partners for how the intervention could be improved in future to increase its effectiveness in changing behaviour included targeting it in other high-wasting collection rounds across the borough, and supporting it with online content delivered via council websites and social media channels.

FEEDBACK FROM COUNCIL PARTNERS

“I could see it working well at scale and perhaps targeting it at worse performing collection rounds.”

“I think definitely do the printed information, but potentially could follow up with social media and website posts e.g. ‘have you seen this delivered through your door’ etc. We would probably do some promoted posts on social as well, perhaps promoting posts in target areas, which does have good results for us if you have the budget to spend.”



CONCLUSION & RECOMMENDATIONS



CONCLUSION

With waste reducing in two of the six collection rounds, equating to an average of 2.28 tonnes per fortnight, there is some evidence to suggest that this intervention has been successful in supporting and encouraging residents to make changes to reduce the amount of waste they produce at home.

Coupled with these actual reductions in waste, residents' self-reported changes in behaviour are hugely positive, with more than nine out of ten people putting into practice at least one of the five rules-of-thumb for preventing waste, after seeing the intervention.

Looking at the different messages tested during the pilot, there is some indication that a social norming message, highlighting that others in the local area are successfully preventing waste at home, is particularly effective in changing behaviour. The area where this message was tested in Oxford saw the biggest decrease in waste, as well as greater

proportions of residents reporting feeling more motivated to reduce waste at home.

Messages to communicate the impact of waste on the environment, although there is some indication that these are more difficult to understand, were most successful in conveying the importance of waste prevention to residents. There is therefore evidence to suggest that a combination of messages is required in future interventions, in order to successfully educate and motivate residents.

If this intervention was delivered at a borough-wide scale, or in targeted high-wasting collection rounds, these results suggest it has potential to create significant changes in behaviour and reductions in waste. This would also lead to significant, tangible cost savings for local councils. While further testing is necessary to fully understand how the intervention can be implemented most effectively at scale, this pilot provides some very positive initial indications.



RECOMMENDATIONS

Overall, Keep Britain Tidy recommends that this approach is tested more widely to build on the results of the pilot and understand the impact this intervention can have at scale, and over a longer period. Below are a number of considerations that should be made for any future testing, and if shown to be effective, further roll-out of the intervention at scale.

1. While results from this pilot suggest that a combination of messages is required in future interventions, in order to successfully educate and motivate residents, further testing is required to better understand the effectiveness of the different message types. With environmental messages best conveying the importance of waste prevention, it is recommended that future pilots include this in all communications, and then further test the differences in impact of social norming and cost of waste disposal messaging.
2. Run the intervention over a longer period to allow time for residents to make initial small steps to preventing waste, and to then build on these. For instance, pilots could run for three months instead of one, and be followed by longer term monitoring after a period with no engagement.
3. Identify the costs and benefits to implementing the intervention to all households across a borough, versus targeting it in high-wasting collection rounds only.
4. Identify to what extent the through-the-door communications used in the intervention are effective for communal properties and, if necessary, how they can be adapted to better reach this group of residents.
5. With the greatest reductions in waste occurring within the general waste stream, future iterations of the intervention should explore how residents can be further supported to prevent food waste and reduce the amount of recyclable items of waste they are producing.
6. If the intervention is rolled-out at scale in the future, consider how it can be supported by online content via council website and social media channels. This activity could also be aimed at increasing engagement with the hashtag and sharing ways in which residents' are preventing waste.
7. On any longer-term roll-out, also consider how the intervention could be combined with other approaches to increase its effectiveness, such as feedback loops (e.g. a personalised note or door knocking) to households struggling to reduce their waste further.



KEEP BRITAIN TIDY.

Wigan office

Elizabeth House
The Pier
Wigan
WN3 4EX

01942 612621

London office

Tintagel House
92 Albert Embankment
London
SE1 7TY

020 8076 9262

keepbritaintidy.org

 /keepbritaintidy

 @keepbritaintidy

 /keepbritaintidy

36

Printed on 100% recycled material.

This document was first published in 2021 by Keep Britain Tidy

Copyright © 2021 Keep Britain Tidy

No part of this report may be reproduced in any form whatsoever without prior permission in writing from the publisher. Permission will normally be given free of charge to charitable and other non-profit making organisations.

Keep Britain Tidy is a registered charity. No. 1071737.

