

Project REDUCE Monitoring & Evaluation

Developing tools to measure waste prevention

Annex 2: Campaign evaluation report

'Test the Water'

May 2007



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Introduction

Project background

Project REDUCE was developed to test waste minimisation and prevention initiatives in France, Belgium and the UK. In Western Riverside, the project aims to develop practical approaches to achieve household waste prevention and re-use. The project is part-funded by the European Union via the INTERREG IIIB North-western Europe programme, the Department for the Environment, Food and Rural Affairs Waste and Resources Research and Development Programme, and the Waste and Resources Action Programme.

Western Riverside Waste Authority agreed for the project to run in the four boroughs of Western Riverside, under the umbrella of the Recycle Western Riverside (RWR) Campaign. Project REDUCE ran from January 2006 to September 2006.

The main objectives of the REDUCE Monitoring and Evaluation (M&E) research project are therefore to develop and to test a common set of tools to measure the relative and absolute impact of a range of waste prevention initiatives. The present report is intended as a practical resource to guide local authorities, central funding agencies, community waste sector groups and other stakeholders in designing monitoring and evaluation methodologies for their initiatives.

The project consists of two major elements. The first is a desk-based research study to assess the range of M&E methodologies used by past and present waste prevention initiatives in the UK. This includes projects and initiatives targeting a variety of different household waste types, which are researched in more detail to provide a portfolio of in-depth case studies. The selection process is described in the Methodology section of the Final Research Report¹.

The second element focuses on developing and trialling different M&E techniques, drawing on the research findings, through two household waste prevention initiatives in the London Western Riverside area. The initiatives formed part of the five-year programme of recycling and waste prevention campaigns run by Waste Watch in conjunction with the four Western Riverside authorities and are being delivered between April and September 2006. This report focuses on the second of these initiatives, the 'Test the Water' (TtW) project².

¹ Please see separate document 'WR0105 "Project REDUCE Monitoring and Evaluation" – Final Research Report' published alongside this document

² For a report of the first initiative please see 'WR0105 "Project REDUCE Monitoring and Evaluation" – Annex 1: Campaign Evaluation Report "What Not to Waste"' published alongside this document

Recycle Western Riverside

Recycle Western Riverside is a Western Riverside Waste Authority five-year initiative within the London boroughs of Hammersmith & Fulham, Lambeth, Wandsworth and the Royal Borough of Kensington and Chelsea.

The campaign aims to increase recycling, reduce rubbish produced and encourage purchase of recycled products. Waste Watch delivers all communication and community education activities and London Remade delivers market development, green procurement and technical support services. The campaign is funded by Cory Environmental through the Landfill Tax Credit Scheme.

The present study reports on the research findings of the second element of the Reduce M&E project.

Project staff

Project staff were drawn from a number of Waste Watch's work areas.

A dedicated Waste Prevention Officer was recruited to coordinate the planning and delivery of the waste prevention initiatives. Specifically, the role included:

- developing the engagement and communication techniques in conjunction with the RWR communications consultants
- liaison with other Waste Watch staff involved in the project and with project partners in the boroughs
- scheduling and coordinating the communications and engagement activities
- supervising project staff
- developing and implementing the monitoring methodology, including data entry and analysis, in conjunction with the Research Coordinator.

Waste Watch's Research Coordinator was responsible for overseeing the monitoring of the waste prevention campaigns, including the development of the monitoring tools and mechanisms, data analysis and final reporting.

Waste Watch employs four Project Support Officers (PSOs) as part of the RWR team. Their role in this project was to directly engage and interact with the public via a range of communication events in the four Western Riverside boroughs.

In addition, a number of volunteers were involved in the publicity event, distributing leaflets and assisting with manning the display.

Other Waste Watch staff, including communications consultants and management team members, contributed to the design and management of the project.

Project aims

The 'Test the Water' waste prevention campaign evaluated in this report was a five-week one-off initiative directly engaging households in waste prevention and minimisation activities. The project formed part of the Recycle Western Riverside communication and education campaign run by Waste Watch on behalf of the four London Western Riverside Boroughs (London Borough of Hammersmith & Fulham, London Borough of Lambeth, London Borough of Wandsworth and the Royal Borough of Kensington & Chelsea) and the Western Riverside Waste Authority.

'Test the Water' is a waste prevention campaign specifically designed to raise public awareness of the benefits of tap water. Its aim was to reduce plastic bottle waste by promoting tap water as a more environmentally sustainable and equally healthy alternative to bottled water and to test whether this was effective in reducing overall waste output and changing waste behaviour. The findings of this campaign are summarised in this report.

Project methodology

The campaign was developed with the intention of recruiting up to 200 volunteers to participate in a two-week long challenge to switch from drinking bottled water to only tap water.

The challenge was aimed at regular bottled water consumers only, which for the purpose of this initiative was defined as those drinking more than 2 bottles per week.

The project consisted of three stages, as shown below:

Table 1: Project stages

Stage	Dates
Recruitment of participants (roadshow events)	5 – 22 August 2006
Tap water challenge (staggered by boroughs)	5 August 2006 – 4 September 2006
Evaluation	4 – 30 September 2006

Recruitment of volunteers

Recruitment took place via a number of roadshow events held at different locations across the four Western Riverside boroughs over a three week period.

A total of 166 people signed up to the challenge, with 163 people signing up at events and an additional three people signing up through the website.

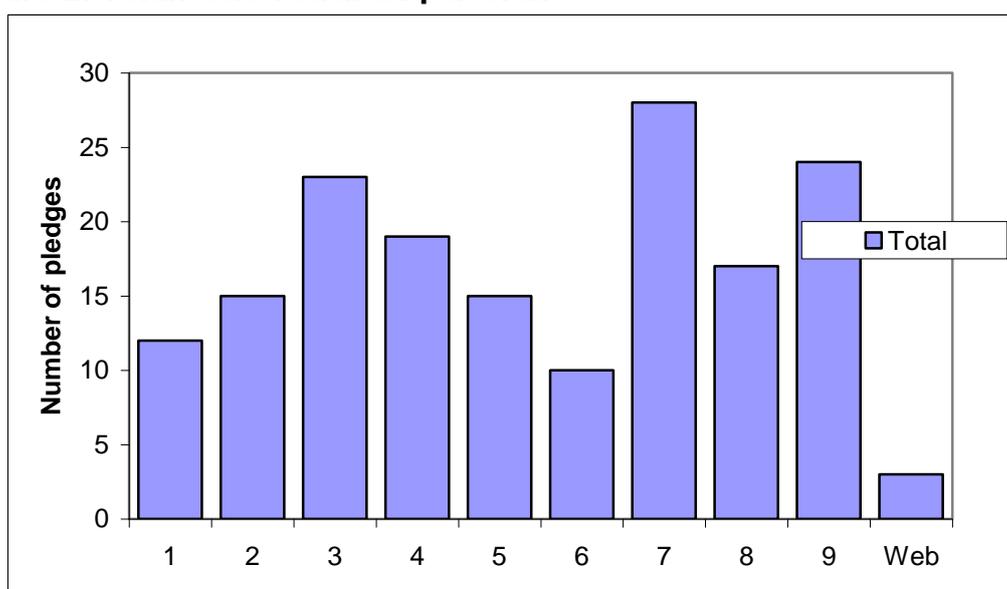
As shown in Table 2, three events were held in Lambeth and two in each other borough, timed to coincide with peak visitor numbers at each location. The dates of each event were coordinated around PSOs' work schedules, the availability of venues and weekends.

Table 2: Event schedule

Date	Event	Location	Borough	Times
05-Aug	1. Brockwell Lido	Brockwell Park	Lambeth	9am-5pm
06-Aug	2. Jamaica Fun Day	Battersea Park	Wandsworth	9am-7pm
09-Aug	3. Portobello Road Market	Outside Tesco, Notting Hill	Kensington & Chelsea	9am-5pm
11-Aug	4. Lyric Square shopping centre	Kings Street	Hammersmith & Fulham	9am-5pm
14-Aug	5. Brixton Recreation Centre	Brixton Rd, Brixton	Lambeth	9am-5pm
16-Aug	6. Clapham Leisure Centre	41 Clapham Manor St	Lambeth	12-8pm
19-Aug	7. Tooting leisure centre	Tooting Bec Rd	Wandsworth	11am-8pm
20-Aug	8. Kensington Leisure Centre	Walmer Road	Kensington & Chelsea	11am-8pm
22-Aug	9. Fulham Broadway Underground Station	Fulham Road	Hammersmith & Fulham	9am-5pm

Figure 1 shows a breakdown of the number of participants recruited at each event.

Figure 1: Volunteers recruited per event



The highest number of participants was recruited at Portobello Road Market (Event 3), Tooting Leisure Centre (Event 7) and Fulham Broadway underground station (Event 9).

One possible interpretation of this is that a higher proportion of regular bottled water drinkers lives in or frequents these areas. Other factors such as stand location, traffic volume and staff availability may have also affected the number of volunteers recruited. For example, Event 6 yielded both a low number of taste tests and challenge volunteers which is thought to be a combined result of the location and restricted staff availability.

Event locations were selected or influenced by the following criteria:

- Areas visited by the four target groups identified by a Mori Survey carried out on behalf of RWR in 2005
- Areas of high footfall
- Available venues
- Even distribution of events across the four boroughs
- Weather conditions

The roadshows consisted of a display with two specially-branded pop-up banners and promotional leaflets. Crucially, a 'Taste Test' was offered to passers-by as a 'hook' to engage with the public and to add a fun element to the roadshows.

Four PSOs attended the roadshows to directly engage and interact with the public. Two PSOs oversaw the taste tests and recorded the results and two PSOs oversaw signing people up to the challenge and completing a registration questionnaire. In addition, volunteers were involved in distributing leaflets and assisting with the display.

Display

Two new branded banners with bold bright logos were produced specifically for the campaign. Two display tables were used to dispense leaflets and promote the tap water taste tests to draw people to the stand. Staff and volunteers wore branded 'Test the Water' t-shirts to further advertise the campaign.

Taste tests

Taste tests provided passers-by with the opportunity to test whether they could tell the difference between tap and bottled water. Participants were offered three small samples of water and asked to identify which was tap water and which was bottled water. For the first half of the recruitment campaign two samples were tap water and one was bottled water. This was changed half-way through the campaign (after Event 6) so that two samples were bottled water and one tap water. The aim of this was to establish whether a variation in the samples would result in a different recognition or preference pattern.

Bottled water used for the tests was one of the leading brands such as Evian, Volvic or Highland Spring. All water samples were chilled and kept

at the same temperature throughout the event. Tap water was stored overnight so that any residue of chlorine would evaporate before the taste test.

Test participants were given the three samples of water and asked to identify what they thought each sample was and what sample they preferred. Results were recorded on Personal Digital Assistants (PDAs) at each event and collated into a database.

Communication material

The campaign communication message was centred on promoting 'five reasons to ditch bottled water and turn to the tap'. RWR contracted Sherry Design to create a new logo and design for the campaign message and communication materials including a leaflet, a sticker for a reusable water bottle and pop-up banners.

The front of the leaflet focused on the incentive for participating in the challenge, which was the opportunity for one participant to win payment of their water bill paid for a year (up to a value of £200). The back of the leaflet contained five reasons for switching from bottled water to tap water.

Reusable water bottles were provided to participants of the challenge. The bottles were intended to act as an incentive and reminder to persist with the challenge. It also provided a convenient way of carrying tap water with them outside of home or work. The bottles distributed were made from food-grade plastic to ensure their safety throughout continuous use.

Information packs provided additional information about tap water and the campaign to participants. These were rolled up inside the water bottle (to become a 'message in the bottle'). It was intended that participants could conveniently take these away and be prompted to read through the leaflet when they use the bottle.

Email alerts were sent to participants over the duration of the campaign to support them in the challenge, to keep them involved and offer further information about the benefits of tap water.

Prize draw

As the campaign relied on limited contact with the challengers, incentives were provided to retain the participants' involvement and keep them motivated in the challenge. The prize draw acted as the main incentive to participate. In addition, only participants who completed and returned the final questionnaire were eligible to enter the prize draw.

Monitoring and evaluation methodology

Monitoring aims and methods

The aim of this aspect of the Reduce M&E project was to trial specific waste prevention initiatives and develop appropriate measurement tools suited to the initiatives.

The 'Test the Water' initiative had three key objectives:

- to investigate participants' propensity for switching from bottled to tap water
- to investigate bottled water consumption patterns
- to raise awareness of other waste prevention activities

The most effective way of monitoring these objectives was deemed to be by undertaking before and after questionnaire surveys with challenge participants to establish attitudinal and behavioural change.

Due to the limitations of this initiative in terms of duration and staff resources available, it was anticipated that the monitoring methodology would have to rely partially on self-monitoring by the challenge participants. The survey therefore had to balance the requirements of being rigorous while not being too onerous to be completed by the participants. The survey questions also had to be phrased to be easily understood without requiring further clarification.

Initial survey

The initial questionnaire survey was completed by all challenge participants, who agreed to give up bottled water for the duration of the challenge (two weeks). It was carried out by PSOs at the recruitment events and results were recorded directly onto a PDA and collated into a database.

The initial survey consisted of a series of short multiple choice questions covering the following:

- bottled water consumption patterns
- reasons for drinking bottled water
- tap water consumption
- disposal of plastic bottle waste

Post-challenge survey

The post-challenge survey was self-completed and sent via email, at the end of the two week challenge, to all participants with an email address. Participants without an email address were telephoned by the Waste Prevention Officer, who carried out the survey over the phone. The survey was similar to the first survey but also included questions about the impact of the challenge on their behaviour and waste prevention activities.

The post-challenge survey aimed to establish the individual experience of

the participants during the challenge including several additional questions on waste prevention

- Whether participants were successful in giving up bottled water for the duration of the challenge
- How much bottled water they consumed during that period and why
- Daily tap water consumption
- Impact on overall water consumption
- Disposal of plastic bottle waste
- Whether the challenge had made participants think about other ways of preventing waste in the home
- If, so which kind of waste prevention activities they undertake
- Whether they will continue drinking tap water instead of bottled water
- Which were the main obstacles to drinking tap water
- Involvement of others in the challenge

Data limitations and problems encountered

The aim of the Reduce M&E project was to trial a number of waste prevention initiatives and monitoring mechanisms to measure their impact on waste generation.

Scope and scale of initiative

The complex funding and delivery arrangements for this project placed a number of constraints on the type and the scale of the waste prevention initiatives it was possible to run. While funds for the research aspect of this project were provided by a grant from the Defra Waste and Resources Research & Development stream, the monies for the delivery of the initiatives formed part of the overall RWR campaign funded through a variety of sources (see Project Background). As a result, the delivery of the initiatives was required to comply with the RWR campaign schedule. These directly impacted on the time available for the project and on the length of the tap water challenge itself.

The recruitment roadshows had to be held within a period of two and a half weeks. In addition, PSO staff availability over this time was only nine days, thereby reducing the number of events it was possible to hold. As a result, only a lower number of volunteers than initially envisaged was recruited to participate in the challenge.

There were a number of days where four PSO staff were not available to work and on these days volunteers and RWR staff were required to step in where available. On two occasions outside staff were hired to cover PSO absences. However, there were at least three events where there was not full staffing of the roadshow. This had an impact on the number of taste tests carried out and the number of challenge participants recruited.

Project methodology

The campaign focussed on signing up regular bottled water drinkers only. Thus the impact of the campaign on consumption patterns and waste reduction behaviour was solely based on one select group of the general public and should not be taken as an indication of overall trends of the overlying community.

There was an unequal distribution between water samples for the events. There were six events with two samples of tap water and one sample of bottled and three events with two samples of bottled water. This may have influenced the outcome of the taste tests by biasing the number of people that preferred tap water to bottled water.

Communication with volunteers

Participants were required to have an email address so that they could gain the full benefit of the email alerts sent throughout the two-week challenge.

There were a number of participants who did not leave any contact details or details that were legible. It is estimated that only half of the participants provided working email addresses.

Participants without email access did not have any interaction with the project team except a phone call at the end of the challenge to complete the final questionnaire. These differences in interaction may have influenced the continued involvement by participants and their successful completion of the challenge.

Response rates

Only 30 post-challenge questionnaires were received back or completed over the telephone. This constitutes a response rate of less than 20%. Thus the results only provide a limited snapshot of the impact that the initiative has had.

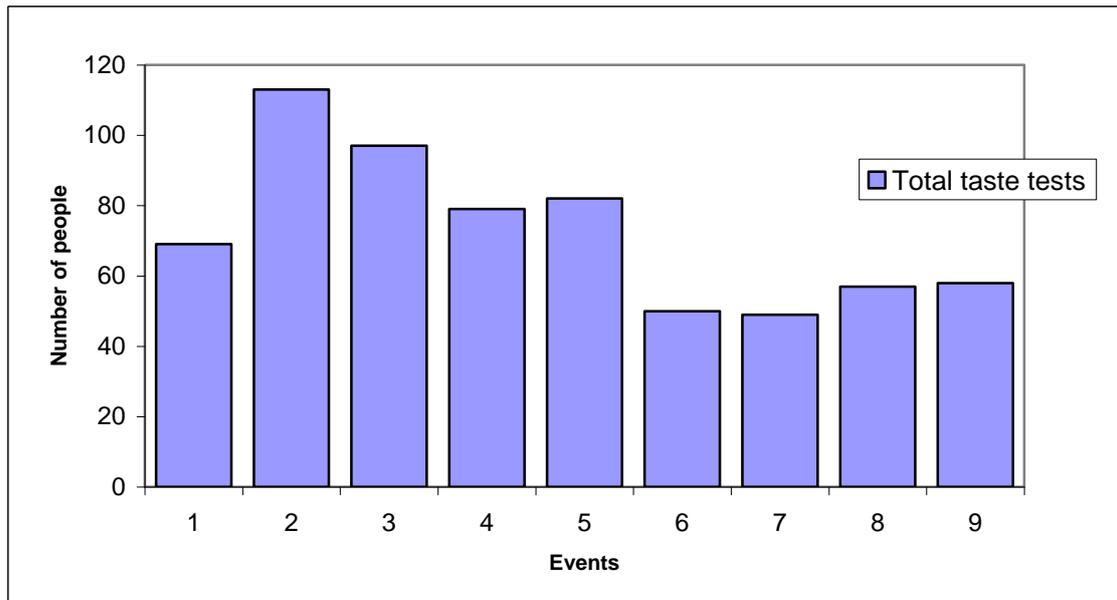
Outcomes and measured results

Taste Tests

A total number of 654 taste tests were performed across the four boroughs, the number of which varied significantly at each event. The highest number of tests recorded was at the Jamaica Fun Day in Battersea Park, at 113 taste tests. The reason for this is thought to be that this event (Event 2) was held at a large festival (Jamaica Fun Day) which attracted a large number of visitors, particularly families with young children.

The number of taste tests performed for each event is shown in the figure below.

Figure 2: Total number of taste tests at each event



The lowest numbers of taste tests came from events six and seven. This may be because these events were both held on rainy days and in leisure centres that were undergoing some sort of refurbishment and with a limited amount of passing traffic.

Water identification

Taste Test participants were given three samples of water and asked to identify whether it was bottled or tap water.

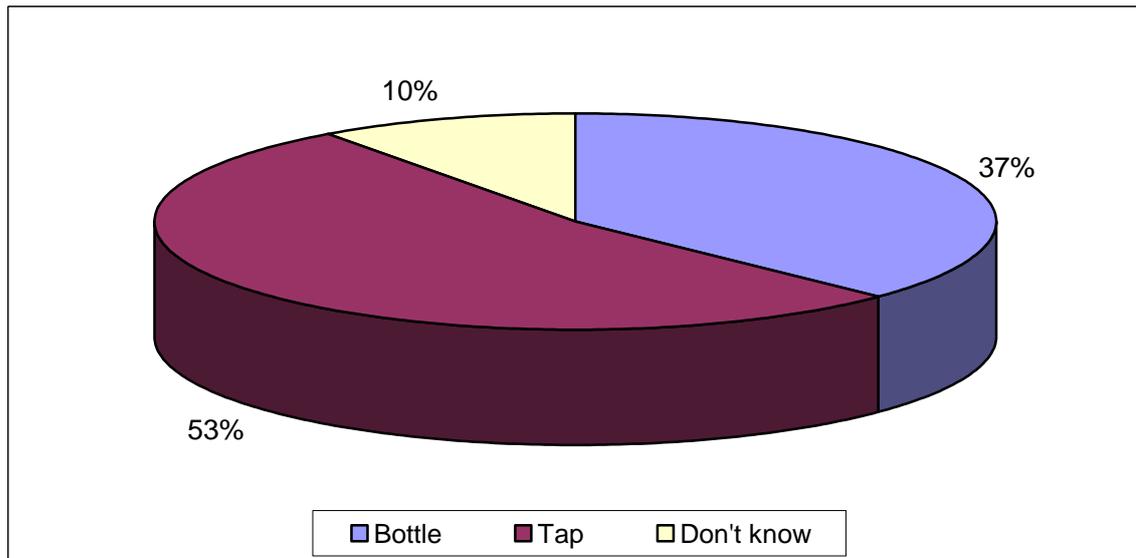
Overall, 22% of test participants were able to correctly identify all three samples of water. For the individual samples, between 49% and 51% of participants were able to make a correct identification.

These figures suggest that tap water and bottled water are not easily distinguished by taste.

Taste preferences

Taste Test participants were also asked whether they preferred the taste of bottled water or the taste of tap water. Out of the total 654 of taste tests, 53% (344) of test participants stated that they preferred the taste of tap water, 37% (244) preferred the taste of bottled water and 10% (66) had no preference.

Figure 3: Total preference for water by type



Behaviour change outcomes

Bottled and tap water consumption

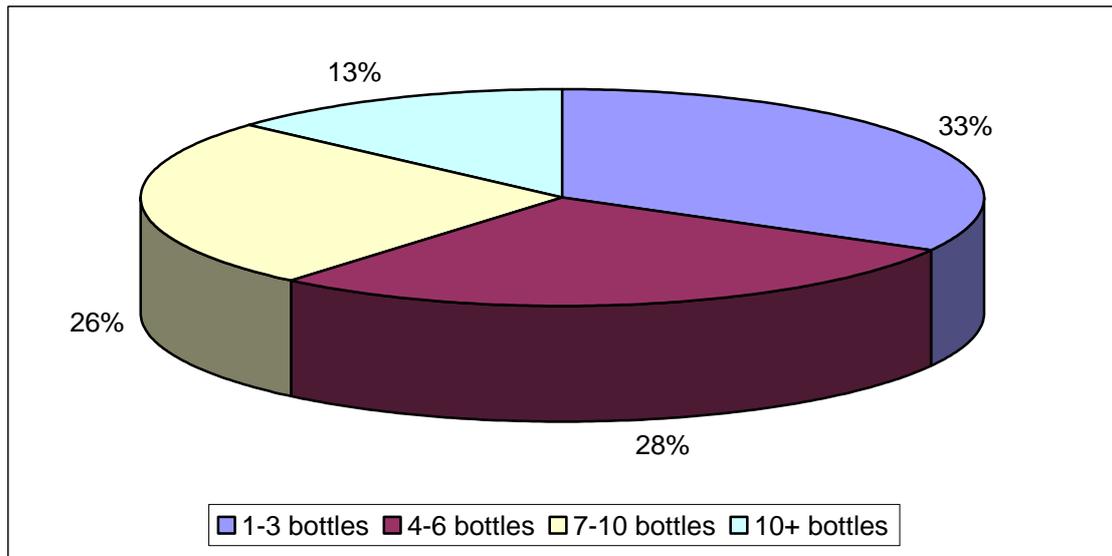
The weekly consumption of bottled water for participants before becoming involved in TtW is displayed in Figure 4 below. As this chart depicts, a third of participants consumed on average 1 to 3 bottles per week, 28% of participants consumed 4-6 bottles per week, 26% of participants consumed 7-10 bottles per week and 13% of participants consumed more than 10 bottles of water per week.

The highest consumers of bottled water were generally female and aged between 31-39 years old.

From these figures, an average of weekly bottled water consumption was taken for all participants signing up to the challenge, as a snapshot for average weekly consumption of residents in Western Riverside. This worked out as approximately 6 bottles per week.

More than half (54%) of challenge participants stated that they most commonly bought 1.5 litre (L) bottles. The next most popular bottle size was the 500ml bottle, selected by 21% of participants. Extra large bottles (2L plus) were purchased by 13% of participants and medium bottles (750ml / 1L) were purchased by 12%.

Figure 4: Bottles of water consumed each week

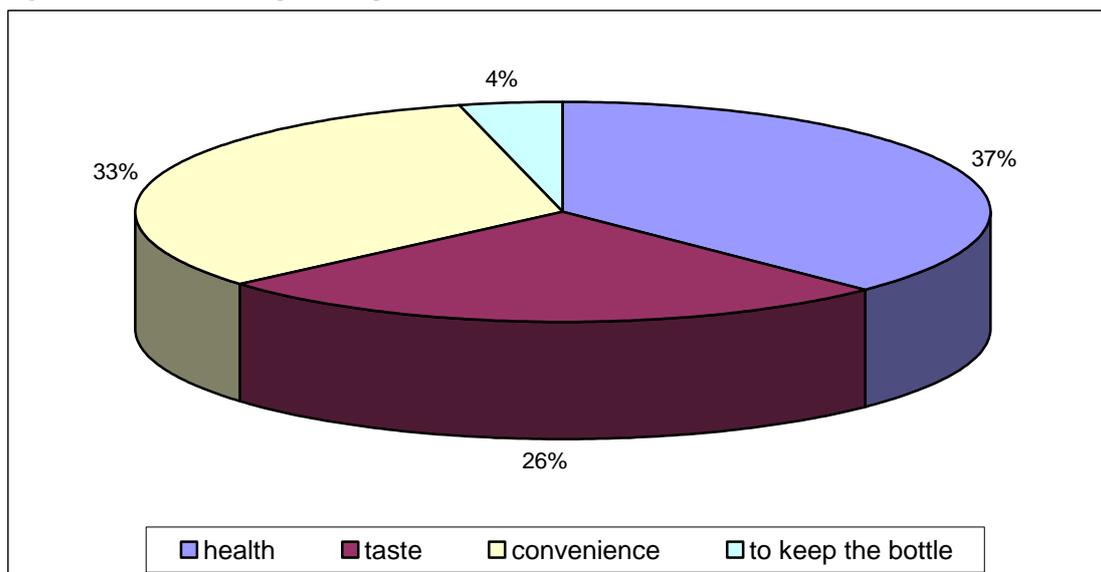


Purchasing habits

Almost half (49%) of participants purchased bottled water during their weekly grocery shop. 36% of participants purchased water when they were thirsty and 5% purchased bottled water when they were on lunch.

The primary reason participants purchased bottled water before the campaign was for health reasons. Almost a third of participants drank bottled water because it is convenient and 26% said they preferred the taste. This is illustrated in the following figure.

Figure 5: Reasons participants consume bottled water



However, over half of participants surveyed claimed to drink tap water occasionally or often. This is usually because they alternate with bottled water or drink tap water when they run out of bottled water.

Completing the challenge

Just over half (53%) of the respondents claimed that they were completely successful at giving up bottled water for the duration of the challenge. A further 27% of participants were successful, with a few exceptions.

The most common reason cited for drinking bottled water during the challenge was forgetting to bring the reusable bottle.

In the post-challenge questionnaire, respondents were asked whether they would continue drinking tap water instead of bottled water after the challenge ended and, if so, which was the main reason for this.

The single most important motivating factor for switching to tap water was the financial savings that could be made as a result, which was selected by 43% of respondents. A desire to 'do their bit for the environment' and being convinced of the benefits of tap water were both stated by 40% of respondents as reasons. Waste reduction features significantly less as a motivation, with 20% of respondents citing this, as do potential health benefits of drinking tap water (16.7%).

Figure 6: Were you successful in giving up bottled water for the duration of the challenge?

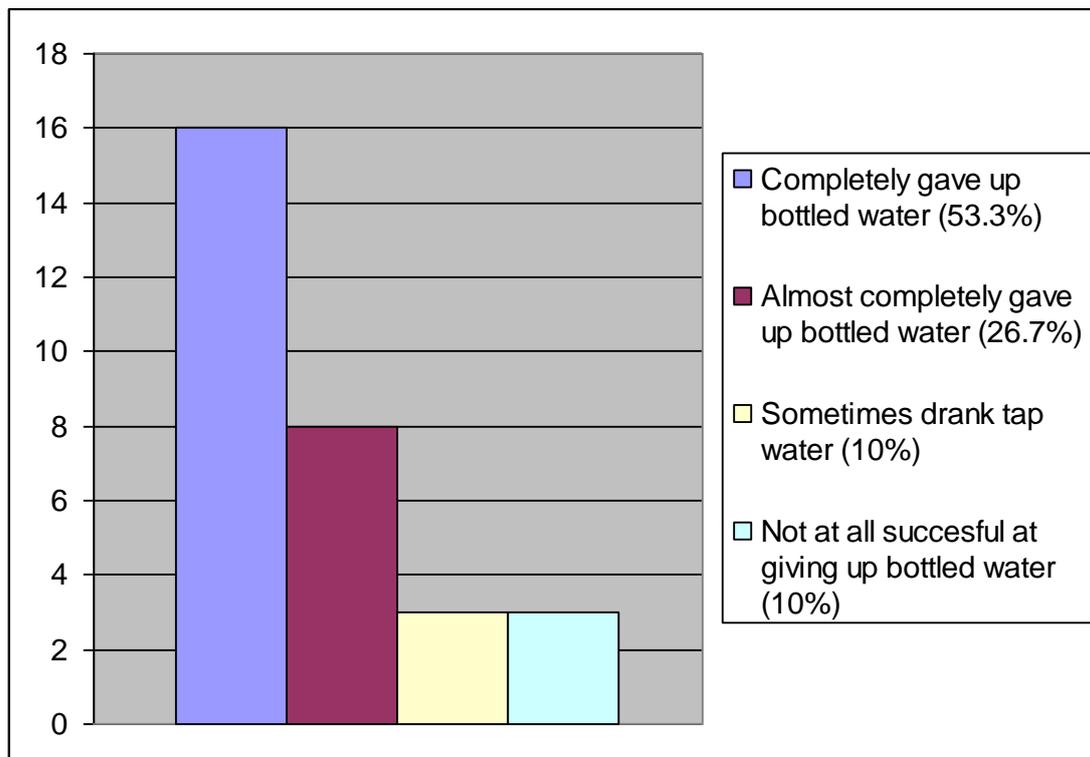
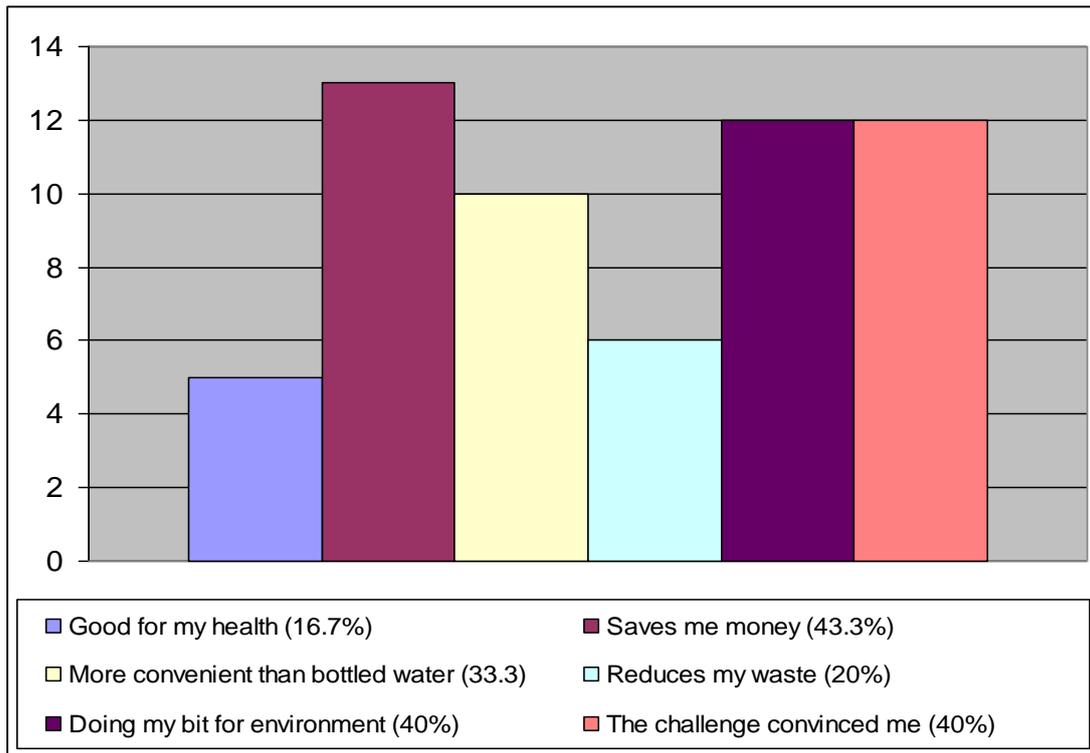


Figure 7: Reasons for continuing to drink tap water instead of bottled water



Of the final questionnaires received, 83% of respondents said that they intended to continue drinking tap water rather than bottled water.

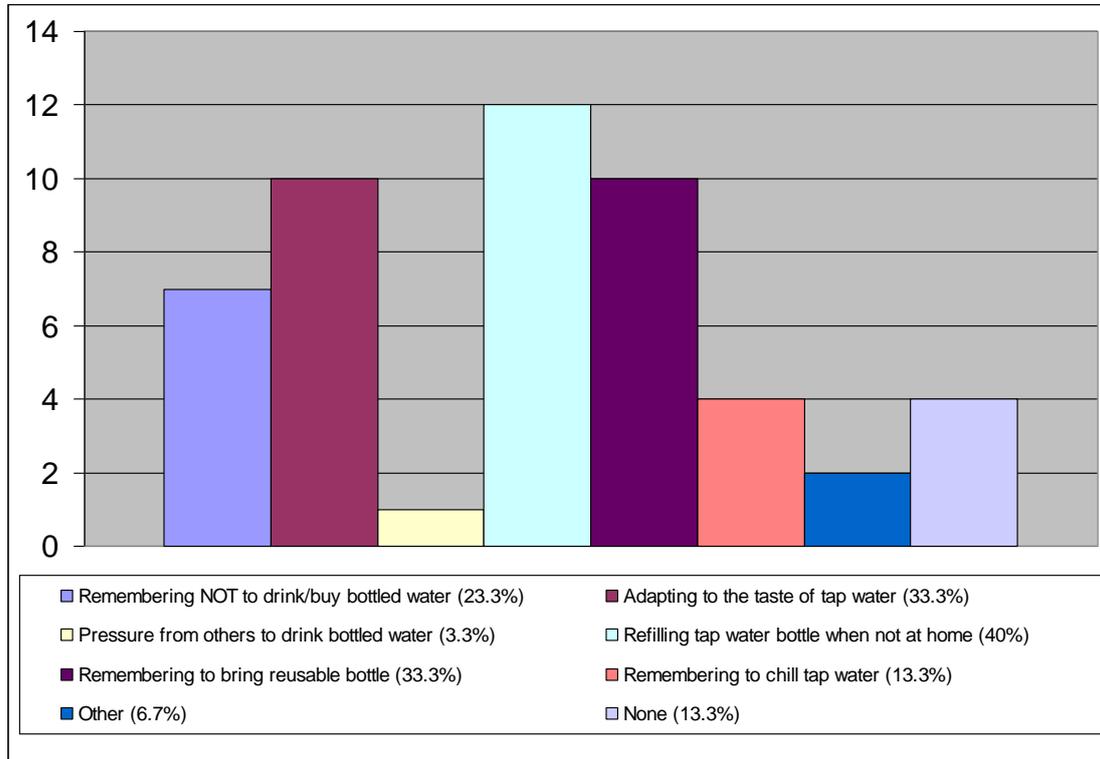
Obstacles faced during the challenge

Participants were asked what the greatest challenges were in giving up bottled water with multiple answers possible.

The greatest difficulty stated by 40% of respondents was the lack of opportunities to refill their water bottle outside their home.

Adapting to the taste of tap water and remembering to bring their refillable bottle was an equal challenge cited in 33.3% of responses.

Figure 8: What were the main obstacles you faced to not drinking bottled water?



Overcoming the habit of buying or drinking bottled water was cited as an obstacle by nearly a quarter of respondents.

Other, more minor, obstacles included remembering to chill their tap water to improve its taste, health and safety concerns about tap water and fitting the reusable bottle into one's bag.

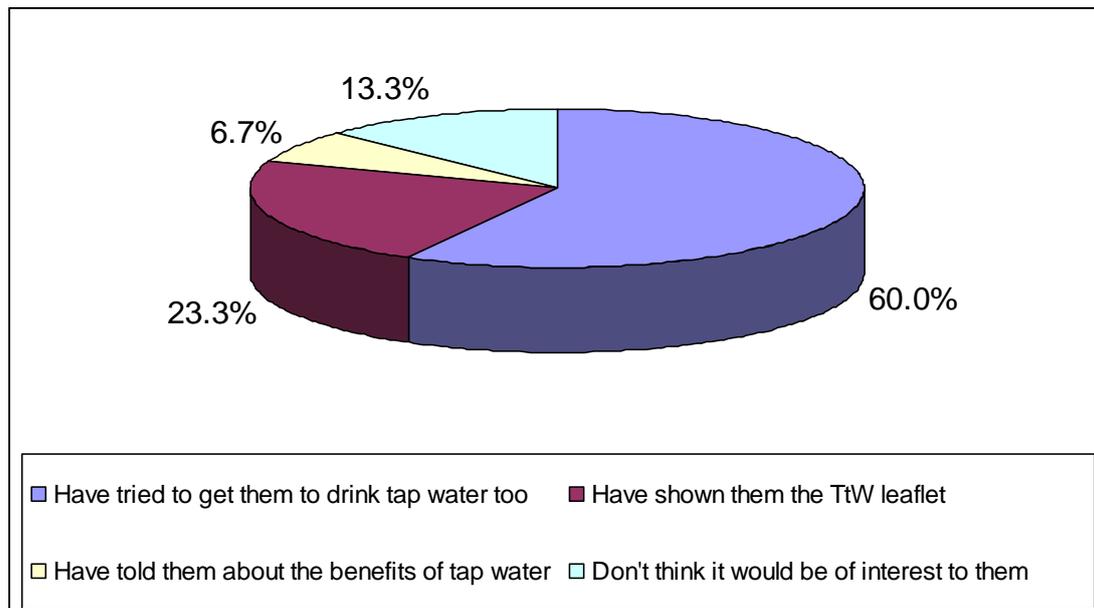
Interestingly, social pressure from others to drink tap water formed only a minor barrier, with only two respondents citing this as an obstacle.

Friends and family

Participants were also asked whether they had tried to involve any friends and family in the challenge in any way.

A majority of respondents (60%) stated that they had attempted to persuade them to switch to tap water too and almost a quarter of respondents had shown the leaflet to family members or friends.

Figure 9: Have you involved any friends or family in the challenge in any of the following ways?



Waste reduction

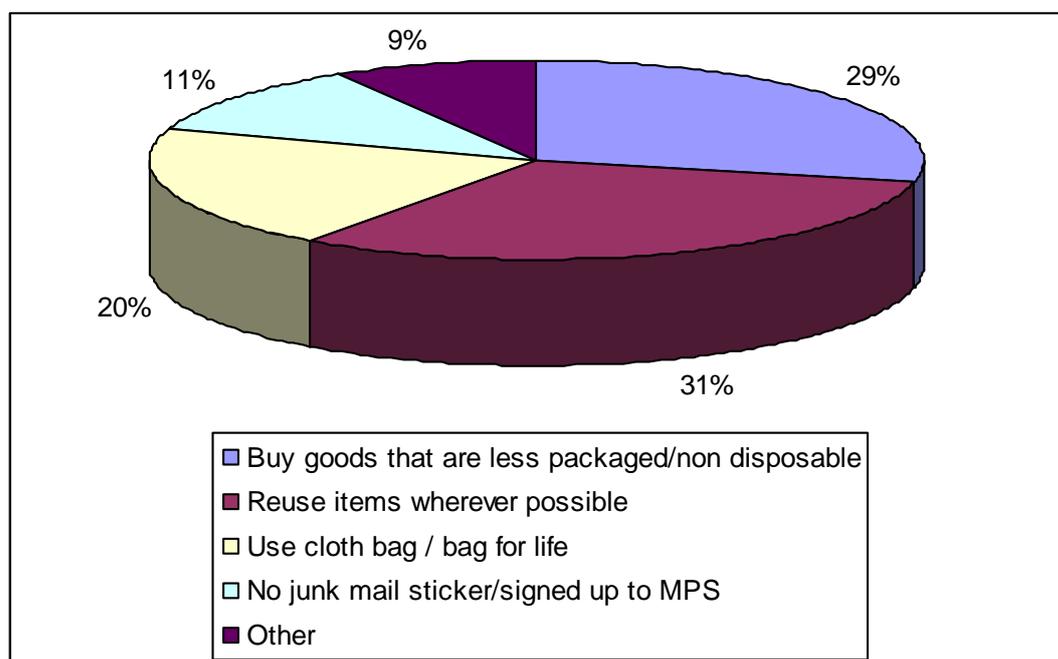
As a result of participating in the challenge, 77% of respondents to the follow-up survey claimed that they now produce less overall rubbish. Almost 20% of participants have started recycling their plastic bottle waste and 10% now reuse their plastic bottles before disposing of them.

In addition, 73% of participants have started to think about other things they can do in the home to reduce the amount of waste they produce. The type of waste prevention activities that participants have undertaken are detailed in Figure 10.

As Figure 10 highlights, participants have undertaken many waste prevention activities as a result of being involved in TtW. Almost a third of participants claim they now reuse items, 29% of participants claim they buy less packaged/non disposable goods and 20% claim they no longer use disposable carrier bags.

The type of waste prevention activity undertaken by participants has a particular plastic or reuse theme, thought to be influenced by the message of TtW. Reusable bottles given out to challengers seems to have resulted in challengers thinking about other materials they can reuse. In addition, as the campaign focused on the implications of plastic bottle waste, this is thought to have prompted participants to start changing other habits that would result in unnecessary plastic waste.

Figure 10: Waste prevention activities undertaken by participants



Waste behaviour

When signing up to the challenge, participants were asked how they disposed of their plastic bottle waste (Figure 11). Respondents were allowed to tick all applicable options, resulting in 184 responses overall.

In percentage terms, more than half (58%) of the respondents stated that they put their plastic bottles in the Councils' orange sack for mixed recyclables. The general waste bin was the disposal method for 24% of participants. Thirty respondents, or 16%, stated that they reused their plastic bottles before disposing of them.

Only a very small number of respondents used public waste bins to throw away their plastic bottles, corresponding with the fact that participants bought most bottled water during the weekly grocery shop rather than ad hoc or 'on the go'.

To test any change in waste behaviour, the post-challenge questionnaire asked participants whether the challenge had made a difference to the way they disposed of their waste plastic bottles. On this occasion, only one answer was permitted (Figure 12).

Out of the thirty respondents, the vast majority (66%) stated that they had recycled their plastic bottles before the challenge and continued to do so. As smaller number than before (10%) claimed to reuse them before disposing of them and only 6.6% still put them in the general waste bin. Almost one fifth (16.6%) of respondents claimed that they now recycled their plastic waste as a direct result of the challenge.

Figure 11: What do you do with your empty plastic bottles?

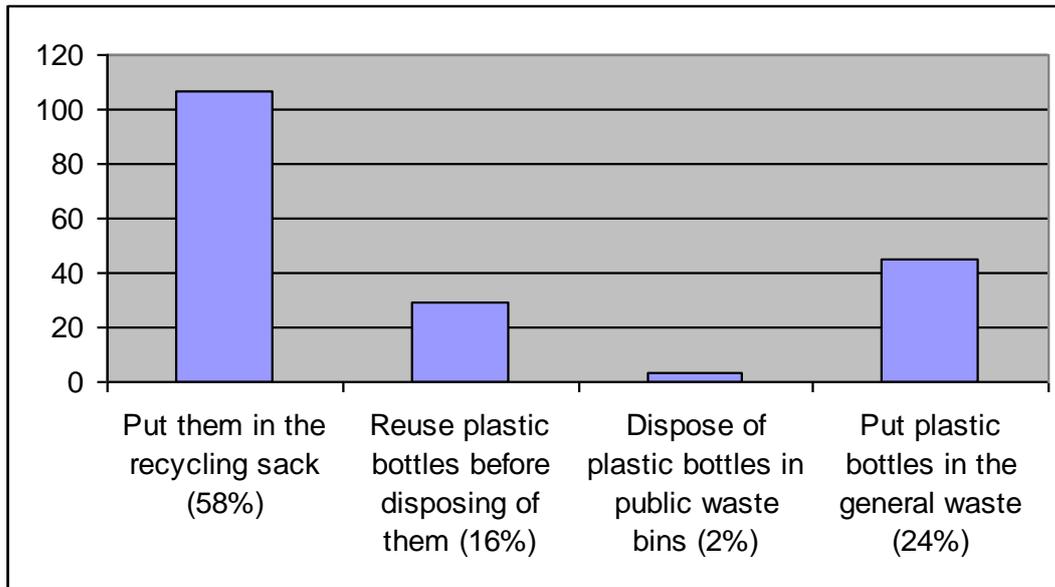
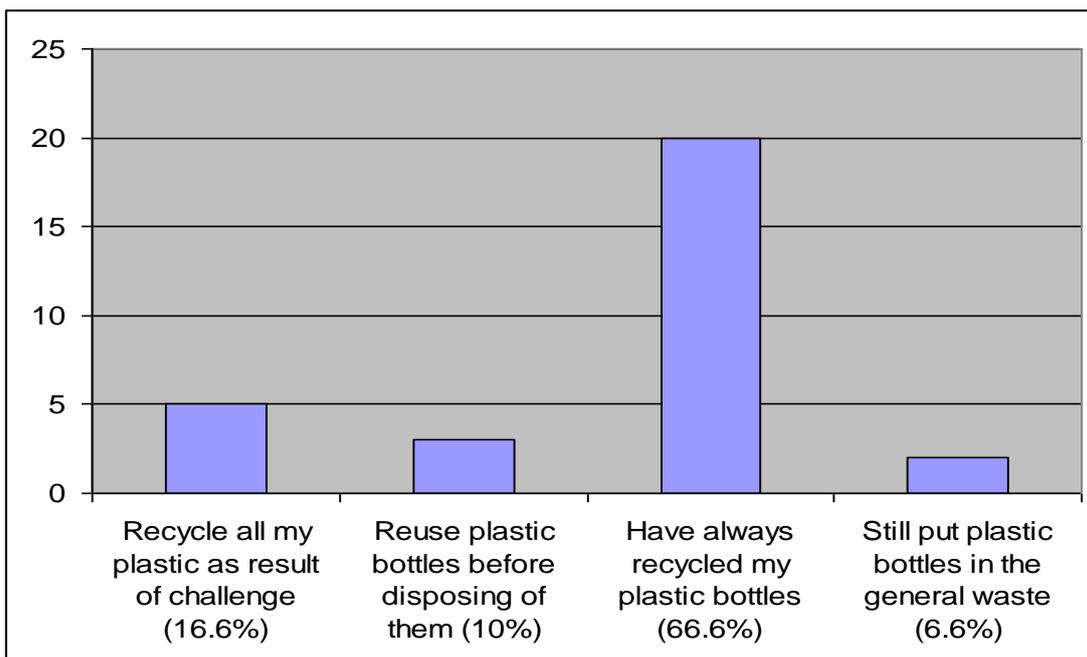


Figure 12: Has the challenge made a difference to how you dispose of your plastic bottle waste?



As only 18% of challenge participants responded to the second questionnaire, it is difficult to judge the exact impact of the challenge on plastics recycling rates. Consequently, the above results represent a sub-sample of the total participant sample.

Due to time constraints during data entry, the recorded responses were not matched to individual participants, so that no direct comparison between the responses of individuals was made.

Conclusions and lessons learnt

As a pilot project, TtW aimed to evaluate whether a single waste prevention activity could be successful at changing waste behaviour and reducing overall waste output. It also set out to evaluate whether a single waste prevention message would result in the uptake of other waste prevention activities by challengers involved in the campaign. The project was developed to achieve three key objectives; to investigate bottled water consumption patterns, to convince bottled water drinkers of the benefits of tap water and to raise awareness of waste prevention activities.

The results of the campaign demonstrate that TtW was successful in achieving its aims and objectives. In all, 654 taste tests were performed and 166 people signed the pledge to give up bottled water for two weeks. Taste tests were offered to prove that most people could not tell the difference between tap and bottled water. Only 22% of people taking the test could tell the difference, which surprised many participants and proved to be an effective method of convincing them that they do not need to drink bottled water.

The 'pledge' of giving up bottled water for two weeks was offered to highlight to regular bottled water drinkers the many other benefits of tap water. 83% of participants taking the pledge were convinced of the benefits of drinking tap water and will continue to give up bottled water, largely because it saved them money and they were doing their bit for the environment. This has had a positive influence on waste behaviour and overall waste output as more than three quarters of participants claim that they now produce less overall rubbish as a result of the campaign and 73% of participants now think about other waste prevention activities they can do in the home to reduce their rubbish.

Due to the limitations experienced, it is recommended that for future campaigns the length of project duration is extended to include more time for monitoring and a longer period for the challenge of giving up bottled water. It is also recommended that participants are asked to give more personal details to include a working email address and telephone number, home or work address. It might also be more beneficial to ring participants throughout the challenge rather than relying solely on email addresses for interaction.

In summary, engaging with the public worked extremely well, and the public were receptive to the message. Follow up and the provision of contact details are issues that need to be addressed for the future. The campaign had an impact, and if reinforced could make a very positive contribution to behaviour change and waste reduction in this field.