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CHANGING RECYCLING BEHAVIOUR: AN EVALUATION OF ATTITUDES AND BEHAVIOUR TO RECYCLING IN THE WESTERN RIVERSIDE AREA OF LONDON

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SUMMARY: Key to improving recycling performance in the UK is the need to more effectively engage the public and improve levels of participation. The research described in this paper combines quantitative and qualitative analysis of attitudinal and behavioural changes as part of an evaluation project to measure the impact of a multi-faceted waste awareness and education campaign in the Western Riverside Waste Authority area of central London. Analysis links attitudinal and behavioural responses to infrastructure provision and performance indicators for each area surveyed, as well as socio-demographic indicators. This paper presents the results and analysis of the attitudes, motivations and behaviours of a representative profile of households from this area of central London, in an attempt to better understand how behavioural change can be achieved and recycling targets met.

1. INTRODUCTION

A key factor in improving recycling performance in the UK is the need to more effectively engage the public and improve levels of participation. Much more needs to be done to learn from individual projects and identify what does and doesn't work to improve public involvement and disseminate this to the stakeholders concerned. This paper describes an evaluation project to measure the impact of the first year of 'Rethink Rubbish Western Riverside', a five year public waste awareness campaign. It was commissioned by Waste Watch to provide evaluation and to inform the development of their campaign which is designed to encourage residents in the Western Riverside Waste Authority boroughs of Hammersmith & Fulham (H&F), Kensington & Chelsea (RBKC), Lambeth and Wandsworth to recycle more, reduce their rubbish and buy more recycled products. Waste Watch is a leading organisation promoting sustainable resource management in the UK by campaigning for all areas of society to reduce resource use, maximise resource reuse and increase the percentage of waste recycled

The research included two quantitative surveys – one baseline carried out in the autumn of 2002 before the campaign or recycling service changes started in the area, and one in the autumn of 2003 after the first year of the campaign – and qualitative focus group research to explore attitudes, behaviours and motivators in more depth. In particular the quantitative research evaluates general awareness and understanding of waste and recycling issues; beliefs and attitudes towards waste and recycling; personal behaviour and responsibility in respect of household waste disposal, recycling, composting and product purchases; and barriers and motivations to recycling and composting. The qualitative research objectives focus on exploring in greater depth understanding and attitudes and in particular issues concerned with translating attitudes into behaviour; probing beyond self-declared attitudes, and exploring public behaviour and understanding. It asks ‘what enables change?’ and ‘what are the perceived barriers to becoming engaged in recycling activities?’

The research, as might be expected, supports and reinforces many of the findings of other attitudinal research carried out recently in the UK. There is a commonality that people consider recycling a ‘good thing’ to do, express a desire to participate, but do not always act accordingly; that many have ‘time and space constraints’, feel their actions would have little effect, or just that they don’t have convenient facilities (DEFRA, 2001; MORI, 2002; SEERA, 2003; Waste Watch, 1998). This research though was not specifically designed to give further insight of peoples’ attitudes about recycling, but by observing and analysing some of the changes and trends apparent during the first year of the Rethink Rubbish Western Riverside Campaign, some examination of what might have encouraged the increased recycling activity apparent between the two surveys, to identify what barriers exist to further increased recycling and who experience them, and what information is needed by those whom the campaign hopes to encourage to recycle more. Further details of the findings can be found in the research evaluation report (Thomas, 2004), which is available on the Waste Watch web-site: www.wastewatch.org.uk.

2. CAMPAIGN CONTEXT

The most significant change to occur between the two surveys was in the recycling infrastructure provided to residents in H&F and Wandsworth. In both boroughs, a weekly kerbside collection using a single orange sack to collect paper & card, glass bottles & jars, food tins, drinks cans and plastic bottles was introduced to all properties except high-rise estates. The ‘orange sack’ scheme replaced existing kerbside collections offered to households, and provided increased opportunities for kerbside recycling for residents. H&F saw the greatest change with a significant increase in the range of materials collected, and the provision of a container for storing recyclables to all households on the scheme. Wandsworth residents were provided with a single sack to replace multiple sacks, and without having to opt-in purposely, which represented a simplified provision. Plastic bottles were also added to the range of materials collected. In the other two boroughs – RBKC and Lambeth – kerbside provision has remained essentially the same, with the exception that in May 2003, RBKC introduced green recycling bins for dry recyclables in addition to the collection container options already in place.

Residents of WRWA have been exposed to a range of communications activities during the period under study, either initiated as part of the Rethink Rubbish Western Riverside campaign by Waste Watch, coming from the individual boroughs in their activities to improve recycling performance, or from the Recycle for London campaign and other less assessable broader media messages. The ‘Recycle for London’ campaign was run by the Greater London Authority (GLA) in partnership with other organisations for two months in September and October 2003, and included advertising in the form of 1000 bus backs, posters in, and in the vicinity of, all London

supermarkets, radio ads and web links. All boroughs have experienced this increased level of publicity for recycling.

3. CHANGES IN RECYCLING BEHAVIOUR

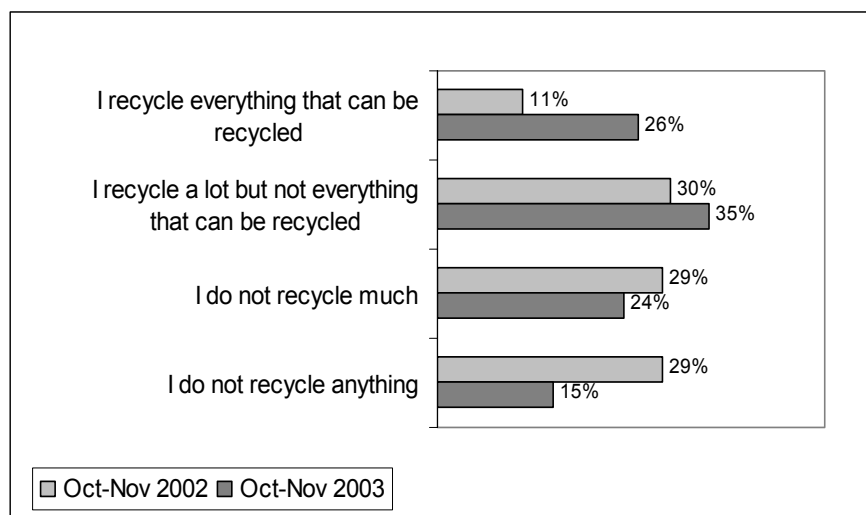
Recycling behaviour as self-reported by respondents in the surveys shows a dramatic shift towards increased recycling between the two surveys carried out in 2002 and 2003. In the 2003 survey, just over a quarter say “I recycle everything possible”, which more than doubled from the 2002 survey; and those claiming not to recycle anything dropped by almost a half. Nearly a third of people interviewed said they recycle more in 2003 than a year ago. Improved facilities was the main reason given for recycling more. Overall, reasons associated with improved facilities for recycling accounted for two thirds of those who said they recycled more in 2003. The most popular reason given by 37% of respondents alone was ‘have been given bins/bags for recycling’. This connection of increased recycling with increased kerbside provision is supported strongly by the strength of the key message which emerged from the focus groups:

*“get the service right, make it convenient and easy, get the facilities in place
... then tell us about it!”*

The biggest changes seen were in the increase in H&F and Wandsworth of those saying they now recycle everything that can be recycled, and there was an average of just under a fifth more people claiming to be recycling frequently in the orange sack areas compared to kerbside schemes in the other boroughs. Of those with access to the orange sack scheme, 82% claim to use it; compared to 50% of those with access to other kerbside schemes. These results support issues raised in focus groups that access to facilities and their convenience is the most important motivator.

It is commonly accepted that people consistently over-claim or over-report their participation in recycling schemes in surveys. This may be due to a number of factors such as wanting to exaggerate a perceived morally good activity and wanting to answer in a way that pleases the interviewer, or just not remembering how much they actually do. This analysis focuses on the comparative trends between 2002 and 2003, the boroughs and different groups of recyclers, rather than the actual percentages claiming to participate. However there is still some need for caution in interpreting these results, as any increased awareness due to the introduction of new

Figure 1: Reported recycling behaviour



kerbside services and increased publicity could lead to a tendency amongst the respondents to over-report more, and hence exaggerate the changes observed.

This increase in reported recycling is supported by the changes in recycling material captured (i.e. how much of the available material that is collected for recycling) by the borough as measured in the waste audits carried out by London Remade as part of the Rethink Rubbish Western Riverside project (London Remade, 2004). Overall the capture rate for WRWA increased from 14% to 21%, but more significant increases were seen for H&F and Wandsworth in 2003 to an overall capture rate of 28%. Clearly participation in recycling is higher in H&F and Wandsworth amongst those with kerbside access, which suggests that the orange sack schemes are encouraging more people to participate. Longer term evaluation will be needed to draw firmer conclusions about this, although the initial indication, supported by the focus group observations that the one bag scheme offers a simple, convenient and easy to use system, is that the orange bag scheme encourages higher participation.

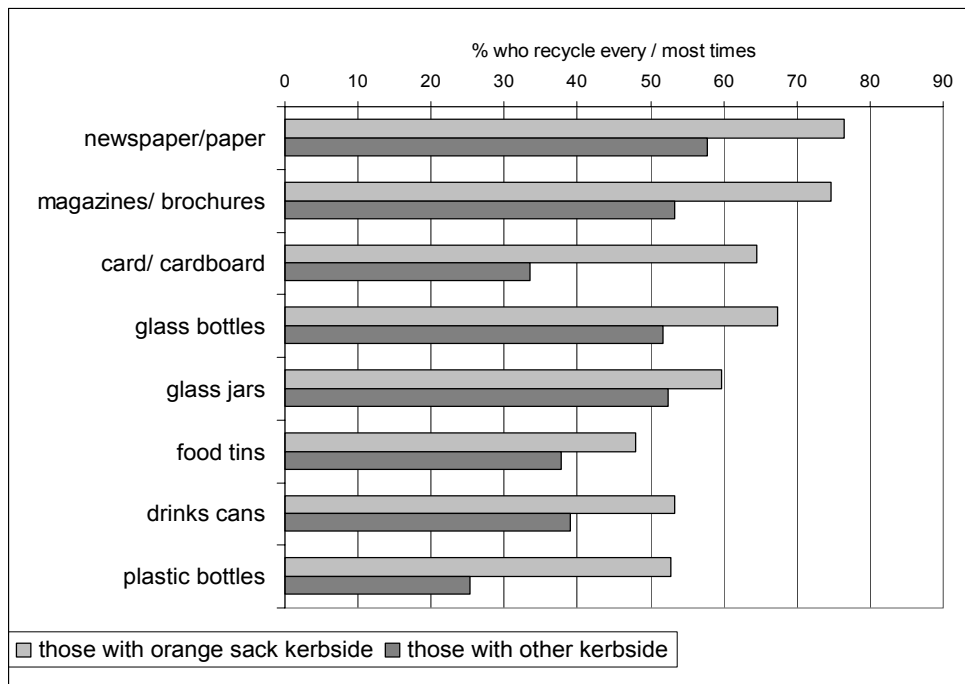
Knowledge of recycling services is also up overall. Asked whether they knew what recycling facilities are on offer in their area, there was an overall increase in awareness of 14 points from 2002 to 2003 with 39% feeling they did know in 2002, and 53% in 2003. The reported recycling activity of specific recyclables in the surveys also shows a growing perception and engagement in recycling a range of materials. Where there was an increase in the number of materials collected for recycling, there was a corresponding increase in the number of people reporting they recycle them. Plastic bottles showed the highest increase in those claiming to recycle them every time/ most times – up 23 points to 36%. Newspaper and magazines though have the highest overall claimed recycling, and particularly for H&F and Wandsworth (at around 70% saying they frequently recycle them).

Comparison of claimed behaviour for recycling different materials between the 2002 and 2003 surveys for each borough shows no significant changes for Lambeth and RBKC, but for Wandsworth and H&F there are very significant increases for most materials. For those collected in the orange bag scheme, an increase of 19 - 40 points was seen in the percentage who claimed to recycle these materials every/most times. Particularly there were big increases in claimed recycling of plastic bottles in H&F and Wandsworth (38 and 40 points up), a new material introduced with orange bag scheme. Also big increases were seen in tins/cans and card – again new materials for kerbside collection in H&F. Increases can also be seen in materials which were collected prior to the introduction of the new kerbside recycling schemes including paper & card and glass in H&F, and paper & card, glass and cans in Wandsworth. All of these are up by more than 17 points in the percentage claiming to recycle them frequently. It is often reported that increasing the range of materials collected through a kerbside recycling scheme can lead to increased capture of not only the new materials added to the scheme but also of existing recyclables collected. Tucker and Speirs (2002) have found that capture of paper generally rose by about 40% when paper only collections were converted to multi-material schemes.

However increased reported recycling was not only restricted to materials which were collected in the kerbside schemes. Lambeth don't collect either card or plastic bottles for recycling either through kerbside or bring sites, and although reported recycling levels for these were much lower than for the other boroughs, 21% though say they recycle card frequently, and 14% plastic bottles. This indicates misunderstanding, over-reporting or 'wishful thinking' in the responses, and emphasises that self-reported data needs to be treated with caution.

Comparing reported behaviour with awareness of what could or could not be recycled in the area showed only a small increase in those who said glass could be recycled in H&F as awareness of

Figure 2: Recycling of different materials by type of kerbside scheme



glass as recyclable was already high in 2002. However reported recycling of glass in 2002 was low, and significant increases were seen in the reported recycling of glass (up from 42% to 61% for glass bottles for frequent recycled for 2002 to 2003), which gives a strong indication that the increased amount being collected by council is due to increased service provision – i.e. making it easier to recycle by providing kerbside collections – rather than awareness.

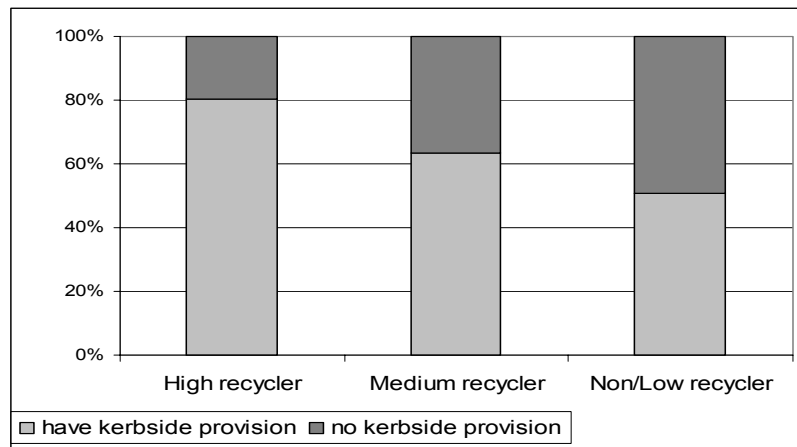
The survey also reported that around a third of those living in high rise flats claim to use a kerbside collection, where the schemes don't actually cover these properties. The focus groups emphasised the lack of facilities for those living on estates and the difficulties they face in order to recycle, and often how excluded they felt. There was general concern from those living on estates that they were not adequately provided for, whilst services were provided to those in houses. There also appears to be confusion about what services they do have.

Overall there appears to have been an increase in the awareness of some materials being able to be recycled, but there are also significant numbers of people not aware of what can be recycled, and considerable mis-understanding about whether some materials are included in collections or not. Increased provision has led to increasing recycling activity, but there is still a need to more effectively communicate the details.

4. RECYCLER TYPOLOGIES

In exploring the extent and nature of residents' participation in recycling in the Western Riverside, the survey identified three main discrete 'segments' or groups within the local population on the basis of their attitudes and behaviour towards recycling: high, medium and low/non recyclers. Comparing the recycler typologies identified in the first survey shows changes in both the proportions of the respondents in each group – with a shift towards more recycling activity showing – and some small changes in the profile identified for each of the groups. In 2003 the survey identified 28% of households in WRWA as high recyclers, 43% as medium and 29% as low/non recyclers. This shows an almost doubling of the number of high

Figure 3: Kerbside Access by Recycler Group in 2003



recyclers since 2002 when only 15% of the population were grouped as high recyclers, and a big decrease in low/non recyclers from the 43% found in 2002.

The recycler typology indicates that those living on high-rise estates are more likely to be low/non recyclers. But the issue of what are the determining factors for people to be low/non recyclers and whether it is housing type, social or ethnic group, or something else that plays the major role, needs further research. It is important to identify what barriers they experience, and to explore their determinants and links between them, as it was clear from the focus groups that there are particular problems of access to easy to use facilities for this group of residents. Experience in the London Borough of Tower Hamlets suggests that ‘kerbside’ collections can be achieved in high-rise estates in very ethnically diverse communities with participation claimed to be over 60% (THCRC, 2004).

More high recyclers (78%) than medium or low/non; and more medium (61%) than low/non recyclers (49%) have access to kerbside recycling collections. However not all those provided with kerbside collections were recyclers and nearly half of the low/non recyclers do have access therefore to convenient facilities, so it is important to identify what are the barriers to their using it. Amongst those without kerbside schemes 16% are high recyclers, and 33% medium recyclers, which indicates a significant group of medium recyclers do not have access to kerbside collection and might become high recyclers with more convenient facilities.

5. ATTITUDES, MOTIVATORS AND BARRIERS TO RECYCLING

The recycler typologies identify who recycles, but the question of why relates to their attitudes, and the drivers, motivators and barriers perceived by them. Creating supportive attitudes is important, but alone can have little impact on behaviour, and research has often concluded that because of the diversity of barriers that exist for any sustainable activity that information alone, although it can be effective in creating public awareness and improved understanding, will be limited in its ability to foster behaviour change. From this premise, community-based social marketing suggests that understanding the barriers to behaviours, and designing a programme to overcome these is a necessary part of any effective strategy to change behaviour (McKenzie-Mohr, 2000). Identifying the barriers to recycling felt by the non, low and medium recyclers is an important aspect in designing a campaign to improve recycling activity, as working to overcome them is necessary before information is likely to be effective.

The perceived value of recycling is unchanged between the two surveys, and remains very high (67% say it's "very worthwhile") and 28% fairly worthwhile. There is very little difference between recycler groups and no difference between the boroughs or those with or without kerbside access. People now believe that more people are recycling; on average this is up from a perceived average of 25% in 2002 to 34% in 2003. There was a big drop in those who felt only one in ten recycled and gains in 5 in 10 and above. When asked how many other people in the area recycles high and medium recyclers tend to think twice as many households recycle (just over 4 in 10) to the low/non recyclers (just under 2 in 10).

"I suppose you do get a warm glow when you see it's not just me, everyone is doing it. But you do need a lot of help like your borough to come and collect it for you." (young medium/low recycler)

The focus groups agreed that an important motivator is recycling being or becoming common behaviour. Recycling is not yet a habit or normalised for most people in the UK, and this behavioural change is needed if we are to achieve the participation and diversion required to both meet UK recycling targets, and achieve more sustainable waste management. Medium/high recyclers and the young medium/low recyclers were more likely to say that it was a habit for them and some felt they were leading the way. However the low/non recyclers saw it more as a hassle for them and not a habit, and that at the moment recycling was not an important enough issue for most of them.

A number of issues around normalisation were explored in the surveys. High and medium recyclers and those with kerbside schemes are more likely to feel that recycling does fit in with their everyday routines; whilst over a half of low/non recyclers felt it didn't. More low/non recyclers agree that they forget or don't think to recycle, whereas the majority of high recyclers said they don't often forget to recycle, implying that it has become a habit for them. Low/non recyclers are also more likely to feel that they would recycle more if everyone else was doing it, and these also think that less people are recycling. Medium and low/non recyclers are more likely to say that recycling is difficult, is a hassle or takes too much time compared to high recyclers. That others do it was also seen as a motivator by many in the focus groups, particularly the low recyclers, and they suggested that extending this to seeing others doing it in public would encourage people to recycle. Recycling in public places and at work, not just in the home, would make it a more commonplace activity.

There are a number of factors here that either singly or more likely in combination create barriers to recycling, and it is important to tackle and remove these otherwise changing attitudes to recycling will not translate into changing behaviour. Recycling is not yet a habit or normalised for most people in the UK, and this behavioural change is needed if to achieve higher participation and diversion rates. In research carried out by Rethink Rubbish into recycling habits they concluded that 'understanding that recycling and waste minimisation can be developed as habits and knowing more about habit forming behaviours can help campaign managers develop more effective messages, media and timescales' (Rethink Rubbish, 2004).

The issue of storage space is undoubtedly a barrier to recycling, although less respondents said they don't have enough space to recycle in 2003 than 2002; a shift in perception. It also came up repeatedly in the focus group discussions. Twice as many low/non recyclers, at nearly two thirds, agreed with the statement that there is not enough space in my home to store recyclables, than high or medium recyclers.

"But I do have a storage issue and that for me is a huge - that's my main reason why I don't. I don't have a place to put it." (low/non recycler)

Those living in flats are more likely to feel that separating rubbish isn't clean and causes smells and clutter in the house with just under 40% of this group agreeing with this compared to 20% of those living in houses. And those who feel that separating rubbish isn't clean and causes smells and clutter are also more likely to not have enough space to recycle. Over three quarters of those who felt recycling wasn't clean also said they didn't have enough space to recycle.

6. COMMUNICATIONS AND INFORMATION

There were increases all round in the perception of how well respondents felt they were informed about recycling, with significantly stronger shifts in most cases in H&F and Wandsworth. The biggest increases were in those who felt informed about 'local recycling services provided' and 'what can and cannot be recycled in the area'. Overall more than two thirds of households in H&F and Wandsworth say they are informed about what can be recycled and what services are provided; increases from between a third and a half previously. Clearly, the introduction of the orange sack scheme had led to a big increase in awareness, but also with an overall 57% feeling informed about services and 65% about what can be recycled this still leaves a significant minority who do not feel well informed. By recycler group, high recyclers had a higher level of respondents saying they were well informed about what materials can be recycled in the area (85%) than medium (72%) or low/non recyclers (33%). Low/non recyclers are much more likely to strongly agree that they don't know what facilities are available in the area, with nearly 70% of those who strongly agree being low/non recyclers, and this lack of information is likely to be an influencing factor in their low level or lack of recycling activity.

Just over half, in 2003, responded saying they needed more information on what can and can't be recycled which was less than the previous survey. There was convergence amongst the focus groups that they wanted more information. The low/non recycler groups exhibited a low awareness of how to recycle, which agrees with the feeling that medium/high recyclers had that people don't understand the issues. All groups felt that they had received insufficient information, and some participants expressed surprise at how ignorant of recycling they had previously been.

More respondents in WRWA felt informed about campaigns/ promotions in the local area in the 2003 survey compared to 2002. There was a 16 point increase in the percentage who felt informed, but this was still only one third of respondents overall. High recyclers were more likely to feel informed; however a half of the high recyclers said they did not feel informed. It is not possible to say what specific activities may have led to these differences, either between boroughs or different groups of recyclers, as even with more specific data it would be hard to separate out different campaigns or elements of campaigns due to the complex interactive effects of exposure to different media.

Overall the recall of written materials was higher than for other media, but this may reflect a range of factors, including when the material was distributed and the exposure to each media. Much of the campaign activity had been quite recent to the survey, and future surveys would be needed to observe whether impact achieved was lasting. The recall of communications that respondents had seen or heard of was highest for leaflets or information through the door at 24%, although this is still less than a quarter of households. Asking whether they had 'seen or heard of' though does not measure what impact that media may have had on the respondents, only that they recall it. However only 1 in 10 of the low/non recyclers said they had seen or heard of leaflets.

After leaflets, the next most remembered media was posters at 13%, which may relate to the poster campaign carried out by the Recycle for London campaign in September/October immediately prior to the survey in 2003. With posters in every supermarket and on 18% of buses it was expected that 95% of the target audience of medium recyclers would be reached by this campaign. Recall of personal approaches, including the doorstepping visits, local events, the 'Giant Motorised Dustbin' at shopping centres and activities in schools was fairly low, although the number of people exposed to such media is probably considerably lower than for written materials, as for instance the doorstepping campaign visited about 7% of the households in the three boroughs. Specific information on the impact of this campaign is detailed in Waste Watch (2003) and Thomas (2004).

Of the whole survey in 2003, 58% said that they had not seen any of the communications that were asked about. Of this group there were more proportionally in RBKC and H&F than in Lambeth or Wandsworth, and those without kerbside schemes more likely than those with. Low/non recyclers were most likely not to have seen any communications at 69%, followed by the medium recyclers at 58%, and then the high recyclers at 45%. In most cases the proportion who hadn't seen any of the communications was more than half of the group, which implies a lot more needs to be done to reach all of, or even most of, the population.

7. CONCLUSIONS

A vast majority of respondents in both surveys considered recycling to be worthwhile or very worthwhile (95%), but there were strong shifts towards increased recycling behaviour – at least as self-reported – between the two surveys. Around two thirds of respondents said that improved facilities was the main reason for recycling more and results show a clear link between improved recycling infrastructure and reported recycling behaviour.

There was a significant increase in the reported level of recycling in areas where the orange sack 'one-bag' scheme for collecting co-mingled recyclables was introduced between the surveys, compared to other areas where recycling provision had remained relatively constant. This implies that the act of increasing provision increases recycling behaviour, although associated publicity is likely also to have played a part.

That recycling behaviour has increased across WRWA is supported by the increased capture rate measured in waste audits, and which also emphasises that recycling has increased much more in H&F and Wandsworth, where the new schemes were introduced. Thus indicating that increased awareness has had some impact on recycling activities, but increased service provision has had more. Whether it is specifically a function of the type of scheme or related to the scheme being only recently introduced is not clear. However the initial indication, supported by the focus group observations that the one bag scheme offers a simple, convenient and easy to use system, is that the orange bag scheme encourages higher participation by removing some of the barriers to recycling.

Looking at the characteristics of the three groups of recyclers identified in this study – high, medium and low/non recyclers – revealed a differentiation of access to kerbside facilities, with 50% more high recyclers provided with kerbside collections than low/non recyclers. It found that low/non recyclers more likely to forget or not think about recycling, and to feel that lack of storage space is a problem. High recyclers felt better informed than mediums, and considerably more so than low/non recyclers. Low/non recyclers were more likely not to recall any communications in the past year than the medium or high recyclers.

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