

# Evaluation of the Household Waste Incentives Pilot Scheme

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Final Report to Defra (Waste Strategy Division)  
Appendix 1: Yorkshire and Humberside

July 2006

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# Yorkshire and Humberside

## Calderdale

### Aim of scheme

The aim of the pilot was to encourage residents to use the full range of waste recycling and minimisation services currently offered by the authority. For every tonne of recyclate collected above a pre-determined baseline (4 tonnes) the community in the pilot area was rewarded £25 per additional tonne. In addition there were 2 £100 prize draws for individual householders participating in kerbside recycling. The campaign concentrated on raising awareness and improving participation in kerbside recycling as well as providing information on home based waste management, including home composting and possible use of real nappies.

### Area features/demographics

The area includes a high proportion of young families and the housing stock is predominately inter-war and post war social housing. The area covers eight lower level super output areas on the 2001 census, four of which are ranked in the worst 10% nationally.

Calderdale has a deprivation index of 80 (in the upper quartile for all English districts), and achieved a recycling rate of 17% in 2004/05.

### Scheme description

The pilot area covered approximately 5,000 households, and a control area of similar size and demographics was also selected. The pilot and control areas had a dedicated crew for the collection of individual collection round data for both residual waste and recyclables.

A prize draw of £100 was offered for the first 3 collections of the trial to increase publicity with the main incentive being offered for sustained community involvement. The second £100 prize draw was offered after 2 collections prior to a local community event in February 2006.

A real nappy campaign also targeted the areas with a relatively high proportion of young families, with the authority subsidising the laundering of real nappies for 10 families.

In addition to publicising the incentive via website information, leaflet drops, newsletter and newspaper articles, a doorstepping exercise was conducted during the pilot. Community centres also put up posters, as did local shops, and word of mouth also proved to be a successful way of communicating the scheme.

## Defra Funding

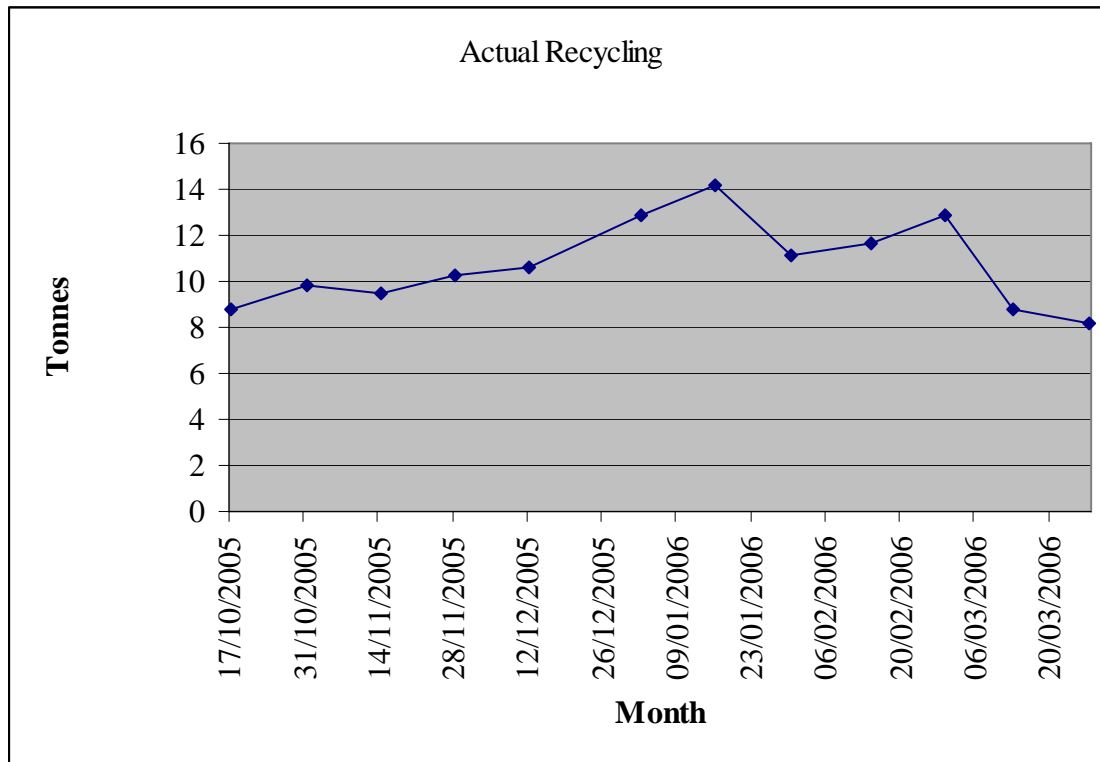
Defra funding for this project was £18,040 of which around half was for the dedicated collection round monitoring and £3,000 was for incentive payments to the community. This equates to £1.80 per household for the houses in the pilot and control areas.

## Monitoring mechanism used

Data on the weight of recyclables and residual waste collected, for both a control and pilot area, was used to monitor this project. Against a pre-determined baseline of 4 tonnes per fortnightly recyclables collection the primary incentive was to reward communities £25 for every tonne over that benchmark.

## Key results

The following graph shows the weight of recyclable material collected in the trial area. Data on weights of material in the control area are not available at this time.



It can be seen that the amount of recyclable material collected in the trial area initially rose dramatically (an increase in excess of 50%). However, in March 2006 levels fell away to figures similar to that at the start of the trial.

The authority has recorded a total increase of 26% in the amount of recyclable materials collected over the duration of the pilot and a corresponding decrease in the amount of residual waste.

## **Conclusions**

Data for the control area is required in order to be able to assess the specific impact that the incentive contributed to the increased recycling levels recorded. Further feedback is also required to investigate the reasons for an apparent tailing-off at the end of the campaign. This might be due to a waning interest in the incentive scheme or could just be an annual seasonal variation that is common between Christmas and Easter holidays.

## **Key lessons learned**

- The authority officers' understand that word of mouth and recognition of winners within the localised area of the pilot has helped significantly in spreading awareness and provided residents with the reasons to participate.
- The pilot scheme benefited enormously from the work of Ovenden Initiative staff. Their local knowledge and additional time and commitment to carry out the door-stepping exercise proved useful both to the waste management section and to the Ovenden Initiative.

# City Of York

## Aim of scheme

The aim of this multi-authority project, led by City of York, was to encourage householders in York and the County of North Yorkshire, to minimise and recycle their waste. Incentives, including prize draws and community rewards, were offered to promote increased use of household waste recycling centres, reuse initiatives, kerbside recycling collections and bring recycling sites.

## Area features/demographics

The scheme covered 5 authorities in North Yorkshire (Craven, Hambleton, Richmondshire, Ryedale and York). The recycling rate and Index of Multiple Deprivation for each of the districts is provided below: -

	Recycling rate (2004-05)	Index of Multiple Deprivation
Craven	21%	284
Hambleton	35%	292
Richmondshire	12%	270
Ryedale	25%	302
York	18%	232

## Scheme description

There were 4 different types of incentive, which were each employed in up to 6 areas. Each area operated 2 or more of the incentives, and thus there were a total of 12 distinct Pilot Areas. The 4 incentives were focussed around Household Waste Recycling Centres (HWRCs), reuse, kerbside collections and bring sites:

- HWRCs - Residents using the Household Waste Recycling Centres (HWRCs) were rewarded for recycling identified targeted materials at those sites. Monthly prize draws were arranged at five sites. Prizes comprised of gift vouchers (6x£50 per site). One major prize (to the value of £1,000) was awarded across the partnership area at the end of the pilot period.
- Reuse - Reuse was encouraged and promoted through the promotion of existing reuse schemes, and residents were given the chance to be rewarded for using one of the reuse services through receiving vouchers for local stores (6 rewards at £50 per scheme).
- Kerbside - In order to increase the participation and tonnages collected from the existing kerbside recycling collections, properties that took part on a given collection day were randomly selected for a monthly prize draw (prize value £50 per month per authority). The trial areas were individual collection rounds.

- Bring Banks - The use of bring recycling sites was promoted and a cash incentive offered to local community groups linked to nominated bring sites. The reward was based on the percentage increase in total tonnage of material recycled at that site compared to the same period the previous year (total incentive of £1,000).

Each individual authority operating a pilot managed the publicity for that particular incentive trial. A mixture of communications were used, comprising press releases, photo opportunities, use of local newsletters for editorial, posters for mini banks, reuse and HWRCs, flyers/leaflets to households in kerbside areas, and banners at HWRCs.

### **Defra Funding**

The total funding supplied by Defra for the four schemes was £6,394, which was allocated as follows: -

<b>Expenditure Item</b>	<b>Cost (£)</b>
HWRCs	1841
Re-use	891
Kerbside incentive	2662
Bring site	1000

The cost per household of this support funding for the kerbside scheme (which covered a total of 7,183 households) was £0.37 per household.

### **Monitoring mechanisms used**

The following methods were used during the trial period:

- HWRCs - the tonnages of waste recycled, composted and landfilled were measured and compared to baseline data.
- Kerbside - where possible a participation or set out rate was measured, and the tonnage of waste collected for recycling was measured on each collection day. Comparisons can be made to baseline data.
- Bring site - the tonnage of material collected was measured and compared to baseline data.
- An estimate was made of the tonnage of materials recycled by the reuse scheme, but there was no baseline data available for comparison.

### **Key results**

The results show that the overall impact of the incentives piloted has been positive. Further detailed analysis is required to fully explore possible displacement effects between, for example, householders recycling more materials at the kerbside but making less use of HWRCs and bring sites. Overall there has been little impact on HWRC tonnages but a number of the kerbside schemes show improvements in recycle tonnage collected. One bring site recorded a 159% increase in the amount of material recycled

(against the 2004/05 baseline) however the total amount of material collected at bring sites in 2005/06 was 27% lower than that collected in 2004/05.

A summary of headline impacts for pilot trials undertaken in specific authority areas is provided in the following table:

<b>Trials</b>	<b>Area</b>	<b>Impact of incentive</b>
HWRC	York	Impact of incentive not clear from data – further analysis required to explore possible displacement effects and performance against baseline data.
	North Yorkshire	
Kerbside	York	20% increase in recycling tonnages recorded (this coincided with the introduction of alternate weekly collections in other parts of the city)
	Hambleton	Impact of incentive unclear from the data – comparable performance to 04/05 baseline
	Richmondshire	Tonnages show increases of more than 50% compared to levels when the kerbside scheme was introduced in May 2005.
	Craven	Impact of incentive not clear from limited weight data availability.
	Ryedale	Small (~2%) increase in recycle tonnages recorded. Some evidence that the pilot has attracted new recyclers
Bring banks	Hambleton	Overall annual tonnage down compared to previous year but tonnages rose at nearly all sites following incentive pilot. One site went up from 0.6 to 1.6 tonnes to win the prize.

### **Conclusions**

- Comparing the results with baseline data (2004/05) for the same time of year showed that there was evidence of an increase in the amount of material collected by the kerbside pilot incentive schemes. Success varied between collection authorities and is likely to be a result of the degree of publicity that the incentive received in those areas.
- To be able to compare the impacts of the kerbside incentive between districts, information on the effectiveness of any of the methods of communication that were used to raise awareness of the schemes is required. This should include details of any publicity regarding the actual award of the incentives.
- There appears to be no evidence of an increase in the amount of recyclables collected at the HWRC sites and the overall amount of recyclables collected at bring sites in 05/06 reduced with only 6 of 38 sites improving on 04/05 performance. However, this is likely to be as a result of increased use of the kerbside recycling service displacing a proportion of the recyclables collected. Following the launch of the bring site incentive in November 2005 nearly all sites recorded monthly increases in recyclables collected.

- The 2004/05 recycling rates in the districts ranged from 15% to 35%. The incentive schemes have increased the amount of material collected by the kerbside schemes, but it is not yet clear what degree of impact this will have on the overall recycling rate figure for 05/06.

## **Key lessons learned**

- Workloads for all partner authorities meant that less staff time than originally anticipated was devoted to supporting this project and this will have meant some opportunities for promoting the incentives were missed and consequently the impacts were not as great as they might have been.
- The incentive schemes were not launched until mid-November 2005 so the actual time for them to have contributed to 05/06 recycling rates was nearer 4 months than the anticipated 6-month pilot period.
- Commitment to funding for incentive schemes by the individual authorities is unlikely to be made unless 'the business case' can be presented that demonstrates the potential benefits that might be achieved compared to the financial cost and staff time required to administer the scheme.

# **East Riding Of Yorkshire**

## **Aim of scheme**

The project aimed to increase kerbside recycling tonnages by increasing participation rates through sending text message reminder messages to householders the day before their collection. The authority offered an incentive of a £500 monthly prize draw for residents who had submitted their mobile phone numbers to the Council's database.

## **Area features/demographics**

The scheme ran across the whole borough and thus covered a wide range of socio economic groups and housing types. The Council ranks in the middle of the Multiple Indexes of Deprivation for English authorities at 168 out of 354.

## **Scheme description**

In early 2006 East Riding completed the roll out of a wheeled bin kerbside collection system to all 140,000 properties, having achieved 78% coverage in October 2005 but with a participation rate of only 60%. The scheme has been well received by the majority of households, but the Council considered that the 40% who are not participating are predominantly made up of residents who simply forget to put out their wheeled bin for collection, as well as some residents who may not be interested in recycling. Thus the aim of the scheme was to primarily target the households who forget to put out their recycling container.

Residents were asked to send in their mobile phone numbers to the authority to receive a reminder to put out their bin before collection day. These numbers were then held on a database from which a monthly prize draw winner was chosen at random. Prizes were worth £500 in various forms, including holiday vouchers, mountain bikes and cash.

The initiative was promoted via the Council's monthly publication – East Riding News, plus targeted leaflet drops to households who had not placed their recycling bins out for collection. Residents had a variety of ways in which they could log their mobile numbers onto the database; options including e-mail, the Council's website, visiting one of the 11 Customer Service Centres, or phoning the Customer Call Centre.

Once mobile numbers have been received, prompt messages, coupled with a sustainable message of the month were sent out to phones on the night before collection.

## **Defra Funding**

Defra funding for this scheme was £6,400, which covered the prize fund, all publicity and promotional material. This funding support from Defra equates to support of around £0.07 per household.

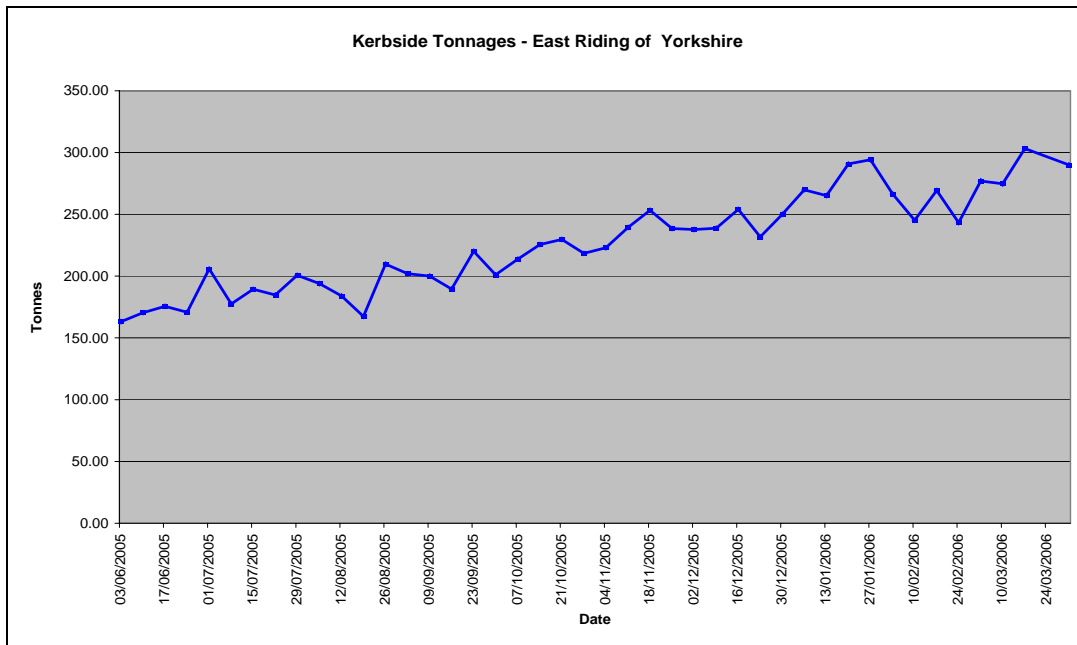
The total funding from Defra was forecast to be between £6,500 and £7,500, depending on the number of households signing up to the scheme (at 5p per text message). This funding support is also equivalent to about £0.05 per household during the trial period.

### Monitoring mechanism used

The total tonnages of recycle collected and the number of households signing up for the services were used to measure the success of this scheme.

### Key results

The graph below shows the tonnage of recyclable material collected since June 2005. It shows an increase in tonnages as the recycling scheme was gradually rolled out. The text messaging reminders were first sent in November 2005 when collection rates were around 225 tonnes/week. Towards the end of the trial the figure had reached 300 tonnes/week, over 30% higher.



Over the course of the trial 4,270 people signed up to the text message reminder service out of a total of 144,000 households. This equates to a 3% take up rate.

To assist in raising the publicity of the scheme, monthly prize draw winners were featured in 'East Riding News' and also in other local newspapers.

Although a baseline participation rate of 60% was recorded in October 2005, no figures have are currently available for the duration of the incentive pilot.

## **Conclusions**

- The take-up rate for the reminder service was 3% but it is not yet clear what increase this has led to in terms of increased participation rates. It is also possible that if the majority of the 3% put their bins out on the correct day that other residents could be reminded to recycle by seeing the bins being put out.

- The Council's recycling rate in 2004/05 was 19% and this will have increased following the expansion of the kerbside recycling scheme. Without detailed weekly figures of both the number of households on the expanded kerbside collection scheme and the participation rate (to analyse in conjunction with the weight data) it is difficult to calculate the degree of impact that the text message service has had.
- East Riding Council considered that the text-messaging scheme has been a qualified success, receiving many compliments from residents. They would like to keep the scheme going and are exploring the possibility of also sending messages to landlines and via e-mail.
- The scheme has targeted age groups that do not always engage in recycling, especially young adults and students.

#### **Key lessons learnt**

- More detailed monitoring data (particularly local participation rates) is required to assess the specific impact of this type of incentive when it is applied to a kerbside scheme that is being extended.
- A trial involving a pilot and control area would enable an assessment of the scheme's impact to be made. Equally a monitoring of participation rates following the withdrawal of the incentive would provide an indication of its merit.

# Leeds City Council

## Aim of scheme

This ongoing 12 month (Jan 06 – Dec 06) pilot project involves the collection of data relating to the quantities of recycling and residual waste deposited in the wheeled bins at each individual property situated within two target areas. The analysis of this data will enable the identification of those households that:

- increase the weight of their SORT recycling bin waste,
- reduce the weight of their residual waste, and
- present their recycling bin on every occasion throughout the pilot project.

These households are eligible for a number of prize draws at quarterly intervals throughout the twelve-month pilot project.

## Area features/demographics

The pilot project centred on the two contrasting socio-economic districts of Beeston and Wetherby. The inner-city ward of Beeston is an ethnically diverse neighbourhood, with a relatively high percentage in receipt of council benefits, a high proportion of properties classified in council tax bands A and B and a low educational achievement. In contrast, the relatively prosperous ward of Wetherby has a small ethnic minority, a more even distribution of properties amongst the council tax bands and a higher educational achievement.

An area with an intermediate geo-demographic profile is being used as a control region to benchmark the performance of the pilot.

## Scheme description

The project was based on three rewards systems, with each operating in the two trial areas:

- 1) There are two main prizes of £1000 available each quarter to households that recycle (using their SORT recycling bin) at least a specific percentage of their total waste. There are ten other prizes of £100 available each quarter for those households that improve the weight of their SORT waste over each quarter. In addition, all those households that achieve a recycling target throughout the pilot project will receive a token gift at the end of the project.
- 2) There are quarterly prize draws for those households that reduce the weight of their residual waste. There will be two prizes of £500 available each quarter to those households that achieve a 5% reduction in their residual waste over the quarter.

(3) All those households that present their SORT recycling bin at the kerbside on every occasion (thirteen) throughout the pilot project will be entered into a prize draw. Ten prizes of £100 are available at the end of the pilot project.

A range of media are being used to raise publicity for the Financial Incentive Scheme including:

- an initial A4 letter and A5 double-sided colour leaflet delivered directly to all eligible households,
- publicity on the web site of Leeds City Council,
- delivery of posters to primary schools, one-stop centres and local libraries in the target areas,
- presentations by Groundwork Leeds and the British Trust for Conservation Volunteers in primary schools, and
- a number of press articles including publicity in the Yorkshire Evening Post, Environment Leeds and About Leeds.

### **Defra Funding**

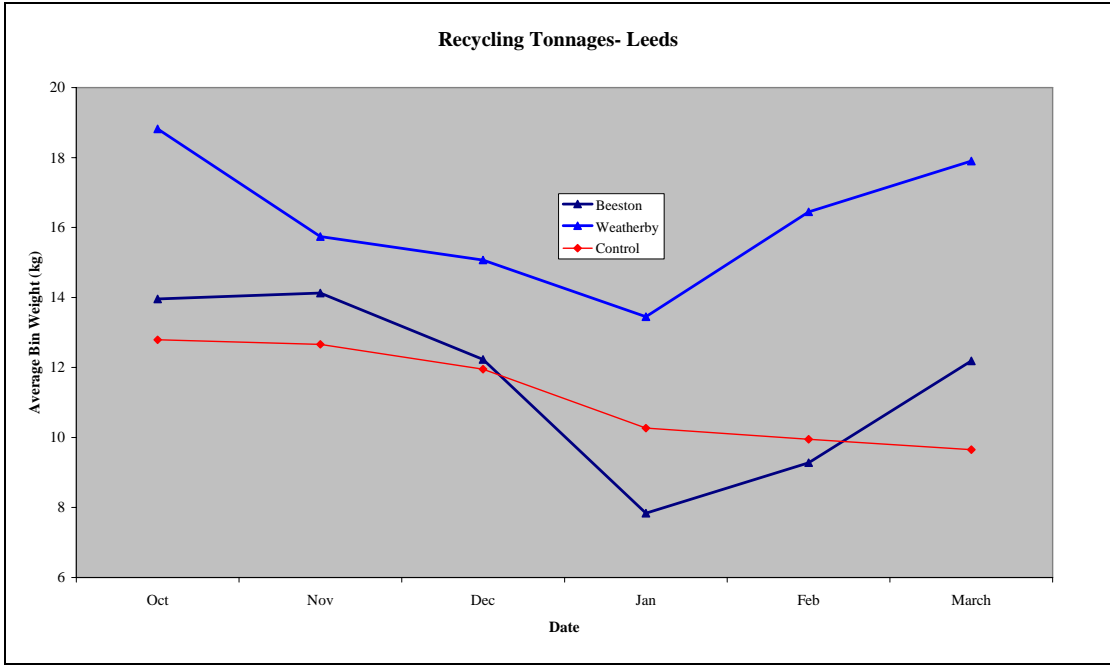
The overall cost was £97,846, of which £51,000 was for bin tagging, £30,000 was for staff time, £6,000 was for publicity and £8,000 was for incentives. This represents a cost of around £4.07 per household (there are approximately 16,300 households covered by the recycling schemes in the pilot areas and 7,700 in the control area).

### **Monitoring mechanism used**

Onboard weighing systems are being used to monitor the weight of both recyclable and residual waste bins of individual households in the trial and control areas. Baseline data was collected from October to December 2005 prior to the launch of the incentive prize draws in 2006.

### **Key results**

The graph below shows the tonnages of recyclable material collected in the two pilot areas and the control area. This suggests that the tonnage of recyclable materials has increased in both of the pilot areas since the start of the incentive scheme in 2006.



The authority has had problems with missing data for some bins in the trial. This has affected the overall tonnage data and the ability to issue individual household prizes. The missing data is from bins that have not been chipped, have lost their chips or where bins have not been presented or collected. These problems are thought to be temporary so once the full years' pilot is completed the results should become clearer.

## **Conclusions**

- The data from the first two months suggests that the scheme has increased the amount of material that is recycled in both the areas in which the incentives are being offered and by similar orders of magnitude.
- Leeds City Council plan to run the scheme until December 2006. Prizes will be awarded to eligible households in both target areas in April, July & October 2006 and January 2007.
- No decision has yet been made in relation to the possible extension of the cash incentives scheme to other areas. However, unless the project proves to be self-financing, in terms of the savings from improved recycling tonnages paying the scheme's expenses, it is unlikely that the scheme will be expanded.

## **Key lessons learned**

- Anecdotal evidence from officers suggests that the incentive had more of an impact in the Wetherby area (more affluent).
- The problems with installation and operation of the tagging system suggest that it would have been better to issue new tagged and labelled black/grey and green-wheeled bins to all the properties in the target areas. However, this would have incurred higher financial expenditure.
- The availability of Council staff to support this project has been limited because of other commitments. As such the team responsible for initially designing the project and proposing timelines is different from the team now responsible for day-to-day management of the trial.
- A full report will be available from Leeds City Council at the end of the 12-month trial.