

REFERENCE CM004

# Executive Report

Notice of decision: 20 June 2011

Decision to be announced on: 4 July 2011

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## Kerbside Recycling

Decision to be taken by: City Mayor & Cabinet  
Lead director: Director of Environmental Services

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## Useful information

- Ward(s) affected: All
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## The executive decision making process

Stage	<b>1 “Policy development”</b>	<b>2 “Defining our approach”</b>	<b>3 “Giving notice”</b>	<b>4 “Announcing the decision”</b>
	Private meeting	Private meeting	Public	Private/Public meeting
What happens	Initial briefing of City Mayor, Deputy or Assistant Mayor/s or Cabinet about new policy or decision that is needed	Officers draw up options paper for City Mayor etc.	We give 5 clear days notice of our decision	We let you know what our decision is and seek final comments questions from press, public, other Councillors
Where you can find out more	Informal notes Briefing documents Forward Plan  Scrutiny may start to help develop the idea	Agenda, report, minutes Forward Plan  Scrutiny may start to define our approach	Agenda, report  Forward Plan	Decision record Press release  Forward Plan  Scrutiny may start to ask for a “pause” of the decision or to make sure our decision works as we said it would.

### “Key decisions” are defined as:

An executive decision which is likely:-

- (a) to result in the Council incurring expenditure which is, or the making of savings which are significant having regard to the Council’s budget for the service or function to which the decision relates; or
- (b) to be significant in terms of its effects on communities living or working in an area comprising on or more Wards in the City.

Expenditure or savings will be regarded as being significant if:-

- (a1) in the case of revenue the expenditure/savings are outside the approved revenue budget and are greater than £250,000
- (a2) in the case of capital, the capital expenditure/ savings are £1,000,000 or more.

Not all decisions to be taken by the Cabinet will be key decisions.

**PLEASE COMPLETE SECTIONS 1, 2 and 3 ON THE NEXT PAGE. IF YOU SUBMIT FURTHER INFORMATION, PLEASE USE CLEARLY MARKED APPENDICES**

## **1. Decision Summary:**

Whether or not to change the kerbside recycling arrangements in the City.

## **2. Why it is needed:**

Since the integrated waste management contract with Biffa was awarded in 2003 recycling and composting rates have increased from x% to 40%. However, despite significant efforts to increase participation rates (i.e. the number of people who recycle) this has remained fairly consistent at 50%. Residents have also expressed a desire to recycle a wider range of materials than the current green box scheme allows.

Biffa and the City Council wish to increase recycling and composting rates beyond the 40% rate. As well as reducing our carbon footprint, there will also have financial benefits if we can recycle and compost more and landfill less. Furthermore, unless we can reduce the amount of bio-degradable waste that we send to landfill will fail to meet our statutory targets and incur significant penalties from 2014/15.

Biffa proposed new kerbside recycling arrangements for the city and these have been piloted in 4 representative areas of the city - the Orange Bag Trial. Full details of the trial & results are appended. But the key findings from the trial are:

- Participation rates increased by approx 20% (from 63% to 83%)
- The weight of recyclable materials collected at the kerbside increased dramatically
- If the scheme was extended to the whole of the city it could increase overall recycling & composting rates for the city from 40% to 48%.
- The new arrangements were generally very popular with residents involved in the trial.

A decision on whether or not to extend the scheme to the whole of the city is now required. These new recycling arrangements have continued in the four pilot areas pending this decision.

## **3. Options:**

### **Option 1 Extend the Orange Bag scheme to the whole of the City**

#### Advantages:

- This will increase the range of materials recycled at the kerbside, increasing the overall amount of waste recycled & composted in the city to approximately 50% and thereby helping to reduce our carbon footprint.
- These new arrangements should be popular with most local residents, many of whom wish to recycle a wider range of materials, with increased kerbside recycling participation rates
- This will help us to achieve our future statutory landfill diversion targets, avoid financial penalties and reduces our future landfill liabilities

#### Disadvantages:

- Introducing new recycling arrangements to over 100,000 households could cause confusion and disruption. An effective promotion and education campaign would need to be implemented beforehand and the introduction of any scheme would ideally need to be carefully timed (ideally in September or October, i.e. after the

summer holiday period, in time for the new student arrivals and before the winter/Christmas period).

- Although the orange bags themselves are recyclable, they are not re-useable like the current green boxes and there is a cost associated with them.
- Introducing a scheme that is likely to increase the volumes of recycled materials will present some challenges to flats, where storage space is limited. For this reason the introduction of these new arrangements to flats would need to be phased-in from December, as and when an individually tailored solution for each location has been identified.

## **Option 2: Maintain the Existing Green Box scheme**

### Advantages

- This would avoid the disruption and confusion arising from any new scheme.
- It would enable re-usable green containers to continue to be used for the storage of recyclable materials.

### Disadvantages

- It is unlikely that we would be able to significantly increase participation and recycling rates.
- We risk failing to achieve our future statutory landfill diversion targets, incurring consequential financial penalties and increasing our future landfill liabilities.
- The green boxes have only a relatively limited capacity and this makes it hard to make changes that would allow residents to recycle a wider range of materials.
- Any changes to the recycling arrangements need to be linked to the renewal of Biffa's fleet of vehicles, which is overdue. Hence, if changes are not made now it may be difficult to introduce changes until the next renewal takes place.
- We would need to end the trial within the four pilot areas, losing the benefits that have been achieved over the course of the trial.

## **4. Tell us how this issue has been externally scrutinised as well as internally?**

As detailed in the appendix to this report, the proposed new scheme has been the subject of a detailed trial in four representative pilot areas of the city, thereby involving a wide range of local residents and ward councillors.

## **5. Financial, legal and other implications**

### 5.1 Financial implications

1. The change in method of kerbside recycling improves operational economies of scale and will increase the amount of waste diverted from landfill. This will save the Council landfill tax at the current rate of £56/tonne. The savings will rise as land fill tax increases to £80/tonne by 2014/15.
2. The increase in the percentage of household waste recycled from 40% to 48% means that the Council and Biffa will meet their recycling targets. Biffa should not incur financial penalties as a result of not meeting these contractual targets.

Martin Judson, Head of Finance

## 5.2 Legal implications

The Council has a duty under Section 45 of the Environmental Protection Act 1990("the Act") to collect and dispose of household waste from residential properties within the city. Section 45A of the Act requires the Council to arrange for separate collections of recyclable waste. The duty is for the collection of at least two types of recyclable waste together or individually separated from the rest of the household waste.

The Council already meets its legal duty. If the Council decide to change the kerbside recycling arrangements then this should be notified to the occupiers of premises detailing the new changes to waste collection as per Section 46 of the Act.

The Landfill (England and Wales) Regulations 2002 as amended brought into force the European Landfill Directive and set out to reduce the landfilling of Biodegradable Municipal Waste this includes food waste, paper cardboard and textiles.. The Council has statutory targets to meet and failure to do so can incur statutory penalties. The Appendix 1 background details this.

As stated in the report the introduction of the changes will require a variation of the contract and the Contract and General team within legal services should be instructed accordingly so as the variations can be discussed and agreed should it be decided to extend the Scheme citywide,prior to its implementation

Jamie Guazzaroni, Solicitor.

## 5.3 Other Implications (You will need to have considered other implications in preparing this report. Please indicate which ones apply?)

Policy: None

Crime & Disorder: None

Human Rights Act: None

People on low income: None

Corporate Parenting: None

Health inequalities Impact: None

Equal Opportunities and Elderly: One of the criticisms of the green box scheme is that some older and/or disabled people find carrying the green box difficult, in that it can be heavy and require two hands. Some people may find carrying an orange bag easier.

Sustainable & Environmental: Inherent to this matter. The estimated impacts of each option on our recycling & composting rates are fully detailed. Whilst the Orange Bag scheme would help to reduce our carbon footprint it is extremely difficult to quantify this in terms of CO2 reduction. One reason for this is that unlike most other councils, materials that are not recycled at the kerbside and end-up in wheelie bins will not

automatically go to landfill. Instead, wheelie bin waste will continue to be processed through the Bursom ball mill, where metals, organic material and floc (paper and plastics) will be extracted, with the organic material being used as a soil conditioner (compost) and floc being used as a refuse derived fuel. Whilst it has been possible to quantify increases in kerbside recyclables it is very difficult at this stage to quantify how this will affect overall levels of organic material and floc.

**6. Background information and other papers:**

None

**7. Summary of appendices:** Appendix 1: The Orange Bag Trial

**8. Is this a confidential report (If so, please indicated the reasons and state why it is not in the public interest to be dealt with publicly)?**

No

**9. Is this a “key decision”?**

Yes

## **APPENDIX 1     The Orange Bag Trial**

### **Background**

Following the award of the 25 year PFI contract to Biffa in 2003, the system for kerbside recycling collection adopted was a green box scheme collecting glass, paper and plastic bottles. The decision not to include metal drink/food cans and cardboard in the kerbside recycling collections was taken on the basis that the Bursom Ball Mill separates all metals for recycling and cardboard for refuse derived fuel (sometimes referred to as “floc”) from the collected wheelie bin waste.

Since 2004, the collected kerbside recyclates have been found to contribute approximately 9% of our annual 40% recycling & composting rate with an average of 50% of households participating in the scheme.

Despite significant efforts to increase participation in the kerbside recycling scheme, the level of participation at 50% of households has remained relatively consistent. One of the key problem areas is our high level of transient population (10%), but feedback from surveys indicates that households want to recycle wider range of materials. In particular cardboard is often high on the wish list and residents are often confused over which plastics they can recycle.

Integral to our kerbside recycling policy is the extraction of refuse derived fuel (floc) from the wheeled bin waste processed at the Bursom Ball Mill. This is currently used in a Combined Heat & Power (Energy from Waste) Facility in Rotterdam within a contract framework sourced by Biffa as they are directly responsible for finding an outlet for this material. The UK market for floc is currently very limited, but Biffa, along with other major Waste Management Companies are investing energy from waste schemes and Biffa expect to have one built within the next 5 years. Floc represents a significant proportion of our waste (20%) diverted from landfill, which is critical for the Council's statutory targets for diverting bio-degradable waste from landfill as set out within the Landfill Allowance Trading Scheme.

Service review dates are incorporated within the PFI contract and the first one was due in 2010. This not only gave the opportunity to market test the current contract rates for the existing operational arrangements, but also to evaluate existing performance against potential service changes that could bring about an improvement.

In order to meet the requirements of the contract market testing evaluation and to improve the kerbside recycling performance, Biffa proposed to change the existing kerbside box to a co-mingled collection of recyclates using an orange plastic sack. In August 2010 the council agreed to the trial of the proposed scheme covering parts of 4 Wards as representative areas of the City and required a full evaluation report at the end for discussion and decision to go city wide or not.

### **The Trial**

Four representative areas of the City were chosen to trial an alternative method of kerbside recycling in comparison to the existing kerbside recycling box scheme. The existing weekly scheme requires residents to place paper, plastic bottles and glass bottles/jars within a 55 litre green recycling box, which is emptied at the kerbside by the collection crew directly into a 3 compartment vehicle and the 3 recycled waste

materials are bulked up at the Bursom Recycling Centre for onward transport for reprocessing. The alternative used for the trial areas was orange recycling bags, in which residents could place mixed paper/cardboard, mixed plastics, glass bottles/jars, metal tins, cans & aerosols and foil. The collection crew collect these co-mingled recycling waste orange bags and rather than sort at the kerbside, they are bulked up at the Bursom recycling Centre for onward transport and sorting at a Material Recovery Facility into the various recycling streams. The trial scheme has been well received by residents and the results show a significant increase in both households participating in the revised scheme and the tonnages of the recyclable waste collected. It is estimated at this stage that the current recycling & composting rate could increase from 40% to 48%.

Households were provided with orange sacks that included instructions and advice on the materials that can be included, together with a contact number for further advice and more orange sacks. Residents placed their orange sack out each week for collection on the same collection day next to their wheelie bin as they do now with the green box. A separate kerbside collection vehicle (as now) collected the orange sacks including any flattened cardboard that could not easily be accommodated within the plastic sack.

The following recycling materials were collected within the orange sack:

- Plastic bottles
- Mixed plastics including plastic film
- Cardboard
- Paper & envelopes
- Foil
- Tetrapak cartons
- Glass bottles/jars
- Tins, cans and aerosols (even though they could still be separated from wheelie bin waste at the Ball Mill)

It was essential that the trial was representative of the City in order for the results to be indicative of the success or otherwise of this alternative system so, parts of 4 Wards were covered which are broadly representative of the socio-economic and household demographics across the City:-

Tuesday	Eyres Monsell ward – the area covered by the trial includes 45 roads south of the A563 around Saffron Lane
Wednesday	Evington ward - the area covered by the trial includes 51 roads around Evington Park
Thursday	Belgrave ward - the area covered by the trial includes 32 roads east of the Melton Road along Gipsy Lane
Friday	Braunstone Park & Rowley Fields ward - the area covered by the trial includes 25 roads to the west and south of Braunstone Park.

The trial commenced on Tuesday 14 September 2010 (and is still ongoing in those areas). During the initial scheduled trial period of six months (w/c 14/09/2010 - w/c



08/03/2011), daily monitoring of the trial areas was carried out. This included monitoring which properties took part in the new recycling scheme, contamination issues and the tonnages of recycling and refuse collected.

## Trial Results

### Household Monitoring: Set Out and Participation Rates

This took the form of recording which households took part in the recycling scheme each week and from this data we have determined two rates:

Set out rate: This rate indicates the percentage of households which take part in the recycling scheme on a weekly basis, and is a 'snapshot' of the recycling at one point. This rate indicates operation levels which will need to be serviced on a weekly basis.

Participations rate: This rate indicates the percentage of households which take part in the recycling scheme at least once over a consecutive 3 week period. This rate provides a more realistic estimation of the uptake in the new recycling scheme as it takes into account households' individual recycling patterns i.e. small households may only recycle when they have a full bag (e.g. every few weeks); holidays etc.

### Overall Trial Results

The following are the average rates for the full trial period and area:

- Pre trial average weekly set out rate = **37.76%**
- Trial average weekly set out rate = **61.78% (increase of 24.02%)**
- Pre trial average participation rate = **62.82% \***
- Trial average participation rate = **82.96% (increase of 20.14%)**

\* Note: a previous study carried out in Leicester in Spring of 2009 found that the recycling participation rate for Leicester as a whole was 49%

### Detailed Results for Each Trial Area

Ward		Average Set out rate	Increase in Set Out %	Average Participation Rate (adjusted)	Increase in average Participation Rate
<b>Eyres Monsell</b>	Pre Trial	41.7%	<b>19.11%</b>	64.73%	<b>18.66%</b>
	Trial	60.82%		83.38%	
<b>Evington</b>	Pre Trial	45.21%	<b>16.91%</b>	79.00%	<b>10.68%</b>
	Trial	62.12%		89.68%	
<b>Belgrave</b>	Pre Trial	37.37%	<b>17.01%</b>	60.27%	<b>20.26%</b>
	Trial	54.38%		80.54%	
<b>Braunstone</b>	Pre Trial	33.30%	<b>24.57%</b>	50.79%	<b>30.01%</b>
	Trial	57.87%		80.80%	

## Tonnage Monitoring:

This took the form of monitoring the weight of both recycling and refuse collected for each round. To ensure these figures were comparable during the trial the recycling collections were tailored to mirror those of the refuse collections. For the data collected we have been able to determine a localised recycling rate.

Recycling rate: This rate indicates the percentage of all the materials collected from the kerbside that is recycled. This rate is not directly comparable to the city's overall recycling rate as it does not take into account any recycling collected through our recycling bring banks, community recycling centres or recycling removed from the wheelie bin waste via the 'Ball Mill'.

## Overall trial results

The following are the average weekly weights for the full trial period and area:

- Recycling collected pre trial = **8.245 tonnes**
- Recycling collected during the trial = **18.786 tonnes (increase of 10.5 tonnes)**
- Refuse collected pre trial = **98.13 tonnes**
- Refuse collected during the trial = **83.076 tonnes (decrease of 15 tonnes)**

## Detailed Results for Each Trial Area

Change in average weekly recycling and refuse tonnages and associated recycling rate; including average weekly tonnages and recycling rate pre trial and during the trial.

Ward		Average weight (tonnes) of recycling collected	% increase in weight of recycling collected	Average weight (tonnes) of waste collected	% change in weight of waste collected	Average Recycling %	Increase in Recycling %
Eyres Monsell	Pre Trial	2.490	107.01%	26.160	-17.88%	8.69%	10.68%
	Trial	5.155		21.482		19.37%	
Evington	Pre Trial	2.670	96.76%	23.645	-24.28%	10.10%	12.78%
	Trial	5.254		17.904		22.88%	
Belgrave	Pre Trial	1.530	168.78%	26.455	-13.51%	5.51%	9.78%
	Trial	4.112		22.882		15.29%	
Braunstone	Pre Trial	1.555	174.25%	21.870	-4.85%	7.07%	9.97%
	Trial	4.265		20.808		17.04%	

## Summary & Conclusions

It is estimated at this stage that the overall current recycling & composting rate could increase from 40% to 48% with the introduction of these new arrangements.

The increase in recycled materials collected at the kerbside by the orange bag scheme is predominantly cardboard and mixed plastics. Previously, these would have been processed by the Bursom Ball Mill to produce floc used for the CHP facility. Recycling is a better option for such materials.

Flats are currently serviced by colour-coded communal bins, picking up source segregated paper, plastic bottles and glass jars/bottles. From the initial assessments in relation to enabling flat dwellers to recycle the additional materials for collection, to mirror the proposed new co-mingled scheme, there are a range of significant issues (e.g. the need for additional bins and associated civil engineering works to expand the bin storage areas) that still need to be addressed. This may prove to be impossible in some situations due to the physical restraints of the location. As with the current scheme, each flat situation needs to be individually assessed and bespoke arrangements made to avoid problems of overflowing bins and waste on the ground. It is therefore proposed that flat dwellers should continue as they are (with the existing range of recyclates) at the general launch of the new scheme. New arrangements for flats could commence at a later stage, once the new co-mingled bag scheme is settled down.

The proposed introduction of these new arrangements has been the subject of detailed negotiations with Biffa, as this will represent a significant change in the contract. There is broad agreement that this scheme can be introduced, though some fine details will need to be clarified over the coming weeks, if it is decided to extend the scheme city-wide.

The City Council has always expressed the view that September or October are the optimum months for implementing any new arrangements. Based on this, the following provisional timetable could be adopted:

Early July	Decision made
Mid July	Education campaign begins
Late July	First direct notification to householders
August/September	Roadshows throughout the city
September	Major LINK article
September	Information packs and bags to households
Late September	Information at University Fresher's week events
Early October	<b>New Scheme comes into operation</b>
December>	New arrangements for flats implemented