

Kerbside Recycling – Experiences from authorities receiving funding from the National Waste Minimisation and Recycling Fund

Appendix IV: Broxtowe Borough Council

Broxtowe Borough Council

Introduction

Broxtowe Borough Council (BBC) received Round 2 funding to extend a dry recyclables kerbside collection to a further 28,500 properties in the Borough. Round 1 funding awarded in 2002 funded a kerbside dry recyclables and a garden waste collection from 9,500 households. Funding for the remaining households was attained through a PSA award. Prior to the introduction of the Round 2 funded collection, BBC achieved a combined BVPI recycling and composting rate of 10.8% in 2002/03 through bring recycling facilities, fortnightly collection of paper from 95% of properties and the Round 1 funded collections (only operating for 6 months in this period). The combined recycling and composting rate has increased to 27.7% in 2004/05.

This report describes the detail of the collection and its performance together with a discussion of the lessons learnt in implementing the collection.

Description of the collections

Recycling and refuse collections before the Round 2 funding

BBC has a population of 108,000 comprising 47,329 households that form either part of the Nottingham conurbation or lie within the rural green belt south of the city. The authority was the first to introduce wheeled bins for refuse collection back in 1983. The standard bin size is 240L. Refuse is transported to the incinerator at Eastcroft.

In April 2002 BBC invited Cheshire Recycling (now Abitibi) to introduce a fortnightly collection of newspapers & magazines from about 95% of households. This was operated at zero cost to BBC because of the payment of recycling credits from Nottinghamshire County Council (NCC) the WDA.

BBC received Round 1 NWRf funding to introduce an alternate weekly collection of dry recyclables using a 240L bin on the Friday collection rounds. The collection day was cherry picked to allow garden waste collections on the Saturday using existing staff and vehicles. The first trial phase of implementation was rolled out in October 2002. Any areas which were considered difficult properties, i.e. warden aided properties, were reallocated to different collection days.

BBC negotiated the outlet for the dry recyclables without the involvement of the WDA. However, difficulties in securing contracts with materials reprocessors resulted in a number of changes to the list of materials householders could include in the recyclables bin and of course additional work communicating the changes.

In March 2003, BBC introduced a garden waste collection on Saturdays to the households that were on the alternate week collection scheme. Householders were informed they could place garden waste in the wheeled bins used for refuse once they had been emptied on the Friday, for collection the following day. The collection was offered between March and October, and in its first year 760 tonnes of garden waste was collected, equivalent to approximately 80 kg/household/year. Participation was estimated at 56%. The garden waste is bulked at BBC's own depot and then taken to South Anston.

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BBC wished to extend the recyclables collection to the rest of the Borough and bid for Round 2 funding to achieve this.

Collections funded from Round 2 NWMRF

BBC received Round 2 funding of £783,420 to extend the alternate week collection of dry recyclables using 240L wheeled bins to a further 28,500 households (the remaining 9,500 properties were funded through the PSA award) such that 99.8% of households in the Borough are included on the scheme. The funding covered the purchase of the bins, design and construction of a transfer station, promotion and temporary staff salary costs.



Extension of the garden waste collection at this time was not considered as it was only possible to carry out this collection using the existing vehicles if it was carried out on a Saturday. Thus, it could only be offered to residents having their recyclables collected on a Friday.

The other three collection days (Tuesdays to Thursdays) were targeted for alternate week refuse and recyclables collection as part of the bid (Monday collections were funded through PSA money). The materials included were cans, paper, card (any type) and plastic bottles. Plastic containers were not included at this point e.g. yoghurt pots and margarine containers. Glass is not included and BBC encourages householders to take their glass to bring sites.

BBC no longer has its own contracts with material reprocessors, as was the case following Round 1 funding. Instead, materials are taken to a transfer station at Giltbrook

operated by Nottingham County Council's (NCC's) waste management contractor. From here the materials are taken to WRG at Alfreton before being bulked and exported. Due to the ongoing contract with Abitibi for separate paper collection, paper was not initially promoted as being part of the mixed dry recyclables collection, indeed BBC informed householders to continue to place paper in the blue sacks. Paper was only accepted in the recyclables bin from April 2005 as a result of a joint agreement with NCC that all the WCAs should provide the same materials to the MRF. In October 2005, BBC ended the separate paper collection and residents are requested to include the paper with the other dry recyclables.

BBC did not spend all of the Round 2 funding allocated to it and was granted permission to transfer this underspend to another project to improve communal bin stores. Combinations of bins, tailor made for each block of flats (e.g. 5 refuse bins + 2 recyclables bins or 3 refuse bins + 3 recyclables bins) has been possible.

Round 3 funding enabled BBC to extend the garden waste from the households served by Monday to Thursday collections using a similar method to the Round 1 funded collections. Concerns were raised of possible contamination of the garden waste by food products remaining in a refuse bin led to householders being asked to put garden waste in the same bin as the dry recyclables, after it has been emptied. These concerns delayed the implementation of this scheme until 1 April 2005.

The Round 3 bid had been to purchase caged vehicles to collect dry recyclables allowing the transference of the standard refuse collections vehicles over to the garden waste scheme. However, trials showed that the volume of material was too high to collect this way. Standard refuse collection vehicles are now used to collect garden waste from April to November borough wide. Additionally, some residents have opted to purchase a third 240L wheeled bin from BBC for £20 to collect their garden waste in (these bins now cost £25).

Roll-out of the collection

Roll-out of the collection took place between October 2003 and March 2004. It was organised according to the collection days such that new bins were delivered and separate collection started in:

- October 2003 for households on collection day Thursday;
- November 2003 for households on collection day Wednesday;
- January 2004 for households on collection day Tuesday; and
- March 2004 for households on collection day Monday.

Officers delivered the project as part of their existing roles and the team comprised 3 Officers, the Waste Management Director and Director of Technical and Works Services. In addition, BBC employed an "enforcement" or liaison officer to assist with queries from the public and any problems adjusting to the twin bin scheme. This post was temporary but has become permanent due to reallocation of BBC funding from a student's bursary assisted post, to create a full time position. Officers stated that as many meetings as were necessary were held during the project implementation period. The roles of client and waste collection contractor have been combined and the waste management and recycling teams are now located together at the depot.

Since August 2004 BBC has implemented a no-side waste and bin lid closed policy.

Refuse, recyclables and green waste are all collected by BBC's DSO.

Communications and promotion of the collection

Approximately one month prior to implementing the Round 1 funded collections, BBC delivered a leaflet to households informing them of the new collection scheme. Bins were delivered by the bin supplier approximately two weeks before the first collection. Attached to the bin was an information leaflet and collection calendar contained in a pouch. The delivery went smoothly and one member of the collection crew accompanied the delivery operatives.

As stated before, due to problems finding reprocessors to take the materials collected, BBC had to change its message to householders on which materials were acceptable in the recyclables bin.

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Prior to implementing the Round 2/PSA funded collections, BBC sent out a leaflet informing householders of the change approximately one month before the service was implemented. The leaflet described the changes and advertised road shows. The road shows were designed to enable residents to obtain further information on the scheme on a face-to-face basis. The delivery of the bins followed the process of the Round 1 funding.

BBC devised a "recycling wheel" which is a circular card with many materials listed in segments (like a pie chart), as the wheel rotates, there is a small window cut through the centre to show where each material can be recycled e.g. bring site, green lidded bin, garden waste collection. Two versions of the wheel have been distributed to each household due to changes in the materials collected through the twin bin scheme. The approximate cost for 50,000 wheels is £7,000.

For Rounds 1 and 2, the distribution of recycling leaflets was undertaken by external contractors. However due to problems encountered during these rounds the Council used an alternative delivery method for Round 3. Refuse collectors were paid a price per leaflet with the distribution being done in the operatives' own time.

The move to a no side waste policy received particularly bad press; however, due to two unfortunate stick (or hypodermic syringe) injuries to crew members from bins which were overflowing, Members decided to support Officers and to promote the policy. Officers feel that the no side waste policy forces householders to recycle.

Stickers are issued on bins that are too full or when garden waste or recyclables bins are contaminated. A log is kept by crews of the bins that do not conform. For the first weeks of the scheme contaminated bins were emptied and warnings issued. However, the bins are no longer emptied.

BBC has found that the various permutations of collections and hence collection days has led to the production of ten different collection calendars. This is costly so BBC is trialling new calendars which are more generic. Householders are currently issued with two recycling leaflets a year.

Collection crews will answer queries from the public but are encouraged to ask the public to direct their questions to Officers.

Contractors of new build properties are required to pay £25 per bin for the administration and delivery of the bins. These are usually passed on to the new occupants. Officers in the Waste Management Department are working with Planners to ensure that there are adequate storage facilities within new build schemes for wheeled bins and have sought national guidance on this matter.

BBC has recently conducted a satisfaction survey of 9,000 householders and within two weeks of sending out the forms 4,500 householders have replied. Early analysis of the responses suggests that householders are pleased with the waste and recycling collection service. A survey carried out 2004 found that 90% of households were satisfied with the service.

Performance of the collection

The collection was launched mid way through the financial year 2003/04 and rolled out over six months. During 2004/05, the first full year of operating the collection, BBC collected 4,419 tonnes in the co-mingled collection from approximately 47,000 households (this includes Round 1, Round 2 and PSA funded collections), equivalent to 94 kg/household/year. In addition it collected 3,629 tonnes of paper in the separate paper collections, equivalent to 77 kg/household per year.

Participation in the dry recyclables collection was surveyed using the WRAP method, earlier in the year and is estimated to be around 90%. Thus, the quantity of paper and dry recyclables collected per participating household is approximately 190 kg/household/year.

The garden waste collection, implemented with funding from Round 1 collected 847 tonnes in 2004/05 from 10,573 served properties, equivalent to 80 kg/household/year. Participation in this scheme has been surveyed and is estimated at approximately 39%. Thus, on average each participating household is collecting 205 kg/household/year.

Overall, the quantity of waste collected from households rose between 2002/03 and 2003/04 from 40,850 to 42,873 tonnes per annum. However, between 2003/04 and 2004/05 it has decreased to 39,218 tonnes equivalent to -8.6%.

Standard collection costs

It is difficult to compare collection costs between authorities for many reasons including contracting out versus in-house service, lease versus purchase of capital equipment, accounting practices, etc. Therefore, for the purpose of the case study analysis, Kerbside Analysis Tool (KAT) has been used to estimate a standardised cost for each collection. It should be stressed that the use of KAT is to overcome difficulties in comparing a service that is operated and paid for in a number of different ways across authorities and not as a reflection of perceived inaccuracies in the audited or declared costs for individual authorities.

KAT uses information on the infrastructure actually employed to carry out the collection, for example the number and type of vehicles, and applies a unit cost, uniform depreciation and financing. **The standard costs calculated by KAT are not the same as the price paid to a contractor for operating the service or the same as the costs that appear in the audited accounts of the authority.** However, they enable a fair comparison between authorities of the costs of running kerbside collections.

Standard costs have been estimated for all the kerbside collections operating in the authority including refuse collection, regardless of if they were funded by Round 2 or not. It is sometimes impossible to separate out the elements funded by Round 2, for example if it only covered part of a collection or if it replaced an existing collection. Therefore, the cost analysis can only be undertaken at an authority wide level. Refuse collection costs are included as well as those for recyclables collection because it provides a useful base reference against which to compare the costs of the recyclables collections, refuse collection costs not being uniform over the country.

The cost analysis is for the financial year 2004/05 and can therefore be directly related to the performance above.

The standard collection costs for the refuse and kerbside collections in BBC are presented in Table 1. All the costs are **gross** i.e. do not include any benefits from the sales of materials or from the receipt of recycling credits if payable.

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Table 1: KAT standard gross collection costs for household waste collected at the kerbside

Collected stream	Round 2 funding	Total households served	Collection frequency	Tonnes collected 04/05 (T)	Collection cost per tonne (£)	Collection cost per household (£)
Refuse		47,329	Fortnightly	27,055	41	23
Dry co-mingled	For 28,500 households	47,000	Fortnightly	4,419		
Green		10,573	Fortnightly	847	71	6
Total	–	47,329	–	32,321	36	25

When considering the costs presented in Table 1 it is essential to remember that they cover the collection of household waste/recyclables only, i.e. trade waste is not included, and additional costs for spare vehicles, depots and other support costs relating to collection are not included. Post collection costs, such as gate fees for refuse, MRF processing and composting, and ancillary costs such as for promotion, education, call centres and communications are also not included. Depending on the extent of these facilities and activities, and also the level of recycling credits or sales revenues, the standard KAT cost may be lower or higher than the audited accounts and a direct comparison is impossible with BVPI 86.

Lessons learnt

Overall, Officers feel that the collection has been well accepted and is successful. There are a number of reasons for this, including:

- using a phased introduction which made managing the project easier, but it was still rolled out more quickly than Officers would have liked, because not all problems from one roll out phase had been dealt with whilst another phase was being rolled out;
- working with an in house contractor which provided Officers with greater control (e.g. over education of the crews);
- producing the recycling wheel which the public liked and which promoted all the recycling services and not just the kerbside collections, although BBC are not updating it this year;
- tailoring education of householders in communal properties so that local solutions can be found for local problems, particularly if one householder refuses to co-operate with the waste collection policies;
- using black wheeled bins for all types of collections, the colour of the lid differentiating between the collection types, proved cost effective and reduces the storage requirements;
- carrying out visits to schools to promote recycling using mascot Brock the badger.
- strong Member support; and
- Liaison Officer to assist residents experiencing difficulties with the alternate week collection and recycling service.

Some of the less positive aspects of the collection are:

- having to change the messages to the public as to which materials could be included in the recyclables bin;
- the short timescale to roll-out the collections;
- subcontracting of the leaflet delivery leading to problems in that not all residents received the information;
- Round 1 was implemented with few difficulties so the difficulties encountered with Round 2 had not been anticipated; and
- it would have been better to implement the no-side-waste policy at the same time that the recycling collections were rolled out and the alternate week collections introduced rather than delaying this until later, making it harder to enforce.

Developments following the Round 2 funding

Having introduced the collection BBC now wishes to reschedule its collection rounds to optimise the efficiency of the vehicles.

BBC will be collecting mixed glass during 5 months of the year from November to March when no garden waste is collected. This collection will be along the same lines as for garden waste, although householders will be putting out glass in their black bin one day after it has been emptied.

Higher density housing is creating planning problems for the authority. Collection crews need kerbside access to properties to collect refuse, garden waste and recyclables but often developers do not make adequate plans for this. Officers believe that government guidance issued to developers, planners and waste collection authorities would help to ensure that all the parties' interests are met.

Additional bring sites have been introduced in some areas and in other areas bring facilities have been withdrawn, mainly due to vandalism. The tonnage of glass collected at bring sites has increased since the introduction of kerbside collection. BBC may consider establishing large bring sites at a few sites and having glass banks only at the smaller sites.