

SOUTH CAMBRIDGESHIRE DISTRICT COUNCIL

REPORT TO: Environmental Services Portfolio Holder 15 November 2011

AUTHOR/S: Executive Director (Operational Services) / Corporate Manager (Health & Environmental Services)

REVIEW OF THE OPERATIONAL EFFECTS THE BLUE BIN SERVICE HAS HAD ON BLACK AND GREEN BIN SERVICES

Purpose

1. To report the findings of the review of the operational effect the blue bin service has had on black and green bin services.
2. This is not a key decision.
3. It was first published in the October 2011 Part Two Forward Plan.

Recommendations

4. That the Environmental Services Portfolio Holder:
 - (a) Notes the findings of the review of the operational effect the blue bin service has had on black and green bin services.
 - (b) Approves the round optimization project in order to investigate, identify and access opportunities for any operational efficiencies within the black, green and blue bin services.

Reasons for Recommendations

5. The round optimisation project will help to identify the optimum round configuration for black, green and blue bin services to ensure the council continues to collect waste as efficiently and effectively as possible.

Background

6. In September 2003 the council's weekly sack collection was replaced with the current alternate weekly black and green wheeled service, which was integrated into the existing green box recycling service. This necessitated a complete restructuring of all collection rounds and the changing of all collection days. For operational reasons the rounds were structured such that black and green bin crews worked on both black and green rounds each week; the two waste streams were not separately crewed.
7. In October 2008 plastic bottles were added to the green box dry recycling service, which necessitated the provision of additional collection vehicles to cope with the increased volume of material to be collected. In October 2010 the green box recycling service was replaced with the new blue bin service, which increased the range of materials collected still further.
8. As has previously been reported, the blue bin service has been extremely successful. In particular:
 - (a) Participation rates have increased to 93%, meaning more bins are being regularly put out for collection;

- (b) 91% of respondents to a satisfaction survey feel the blue bin has improved the recycling service;
 - (c) Current diversion rates i.e. the amount of waste being composted or recycled, has increased to over 60%.
9. In addition to the service changes, the 2003 round structures have had to accommodate significant growth, which has not been distributed evenly over the existing rounds. Growth has been concentrated in settlements such as Cambourne, Papworth Everard and Orchard Park. This has created capacity issues within some rounds which have been managed on an ad-hoc basis again with the emphasis on minimising disruption to residents through avoiding wholesale round and collection day changes.

Considerations

10. The review has analysed the current black, green and blue round structures, focusing on the times spent travelling, loading and tipping, vehicle capacities, participation rates, tonnage by waste stream and draws on data from periodic waste analyses. For participation monitoring a sample size of 4160 properties was obtained, closely reflecting the socio-demographic composition of South Cambridgeshire based upon the ACORN classification system. The monitoring was carried out during a carefully selected period to ensure that the data accounted for behavioral patterns associated with warmer temperatures. The data should accurately reflect set-out and participation rates during an average year. The monitoring was also conducted during a period unaffected by school holidays to ensure that the data collected was typical of normal collection conditions.
11. Within the existing round structures there are a number of factors that can affect operational efficiency. The number of times a collection vehicle has to empty its load at the tip, given the size of the district and the single tipping location at Waterbeach, can have a significant impact of total travelling times. Similarly, the participation rate i.e. how many bins are regularly presented, irrespective of whether they are full or not, will affect the loading time. It should also be noted that irrespective of the participation rate, collection vehicles still have to drive by all properties in the district to check whether a bin is presented for collection and property numbers have increased significantly since the rounds were configured in 2003.

Current black bin service

12. Average black bin participation has been found to be similar to that of blue bins, namely > 90%. The number of black bins regularly presented for emptying is extremely high. Participation monitoring has indicated that a significant number of residents are presenting their black bins for every collection even though the bin may only be a quarter or half full.
13. The 10% reduction in black bin waste, previously reported following the introduction of the blue bin service, has been sustained between April 2011 and August 2011 compared with the same period in 2010. However, under the current round configuration this has not significantly reduced the total number of tips required and therefore has had minimal operational effect.

Current green bin service

14. Compositional analysis has shown that cardboard has been successfully switched from the green bin to the blue bin, with cardboard now comprising less than 1% of green bin waste, compared to nearly 10% in 2007/08.

15. Overall total green waste tonnage for the current year appears to be broadly similar to previous years. Historically, there are seasonal fluctuations as tonnages tend to be lower during winter months and higher during spring and summer months. However, even within spring and summer months tonnages and participation rates are heavily dependent on weather conditions.
16. The way rounds and working patterns are currently structured, with black and green bin crews working on both black and green rounds each week, the level of resource required for green rounds is applied irrespective of seasonal fluctuation.
17. As with black bins, the total number of properties that have to be driven by, irrespective of whether a bin is presented for collection, has increased significantly since the rounds were configured in 2003.
18. Green bin loading rates are broadly similar to that of black bins, but less than blue bin loading rates, which are longer because of the extra time it takes for a crew member to remove the caddy, empty it and then replace it in the blue bin.

Route optimisation

19. The RECAP partnership has jointly procured a route optimisation software package, which is currently being used by Cambridgeshire City Council and Huntingdonshire District Council. Route optimisation is a process that allows existing collection rounds to be independently remodelled to achieve optimum efficiency, whilst taking into account factors constraining efficiency such as travelling distances, loading times, vehicle capacities, property numbers, growth etc. The process enables rounds to become more evenly balanced, ensuring growth capacity is allowed for in the right locations and allows for the investigation of the feasibility of taking advantage of seasonal fluctuations in for example green waste.
20. As part of the RECAP project, SCDC was to have used the route optimisation package in late 2012. However, in view of the results of this review this has been brought forward. Licensing arrangements have been put in place; officer training has begun as has the extensive data preparation required to enable modelling. It is anticipated that modelling will start at the beginning of 2012 and a report of the findings will be presented in spring 2012.
21. The cost of the training and licensing arrangements is being met from within existing resources.

Implications

22.	Financial	None other than identified in the body of the report
	Legal	
	Staffing	
	Risk Management	
	Equality and Diversity	None identified at this time
	Equality Impact Assessment completed	Yes A partial assessment has been completed.
	Climate Change	None identified at this time.

Consultations / Consultations with Children and Young People

23. The review process has not required a formal consultation process.

Effect on Strategic Aims

24. The review process should ensure that the Council continues to offer an efficient and effective refuse and recycling service, therefore contributing to the achievement of the council's strategic aims.

Conclusions / Summary

25. The review of the operational effect the blue bin service has had on black and green bin services has highlighted that the current round structures, essentially dating back to 2003, are unbalanced.
26. Capacity and growth issues have been actively managed to date and have successfully minimized the need for major round reconfiguration. However, the success of the blue bin service has exacerbated variations in round size, capacities, travelling, loading and tipping times. If these are not addressed, the ability to cope with growth and provide an effective and efficient service will in time be compromised.
27. The use of the RECAP route optimisation software package does present an opportunity to investigate, identify and access any operational efficiencies that are not readily accessible within the current round configuration.

Background Papers: the following background papers were used in the preparation of this report:

None

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