

## SOUTH CAMBRIDGESHIRE DISTRICT COUNCIL

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**REPORT TO:** Environmental Services Portfolio Holder 30 June 2011  
**AUTHOR/S:** Executive Director (Operational Services) / Corporate Manager.  
Environmental Services

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### BLUE BIN RECYCLING SERVICE – EVALUATION REPORT

#### Purpose

1. To report on the evaluation of the Blue Bin recycling service during its first seven months of operation (October 2010 – April 2011) following on from the Interim Report considered on 10 March 2011.
2. This not a key decision because the report is an information item presenting the findings of the full blue bin evaluation.
3. It was first published in the January 2011 Forward Plan.

#### Recommendation

4. That the Environmental Services Portfolio Holder:
  - (a) notes the evaluation of the blue bin recycling service during its first seven months of operation (October 2010 – April 2011)

#### Reasons for Recommendations

5. The new blue bin service represents a major service change and reconfiguration of the council's kerbside recycling service. It is essential to understand how the service has performed against certain key criteria during its first seven months of operation (October 2010 – April 2011) in order to identify areas for improvement and ensure that the service continues to make a significant contribution to the delivery of the council's strategic aims.

#### Background

6. The blue bin service was introduced in October 2010 following Full Council approval on 26 November 2009.
7. The service was developed based on the premise that any future recycling service configuration should aim:

“To obtain the best quality of service that the Council can afford”

Whilst attaining a number of benefits and outcomes, listed below in priority/weighted order:

- A cost effective and efficient service
- A high level of customer satisfaction/perception
- Providing future flexibility to respond to external influences
- Minimising environmental impact

8. A number of factors contributing to the above benefits and outcomes were considered as part of the evaluation of the service:
  - (a) Increasing capture rates
  - (b) Improving on the dry recycling rate
  - (c) Reducing the cost of collection through changes to collection configuration
  - (d) Ensuring high quality recycled material is delivered to the re-processors/end market, thereby reducing the risk of rejection, price reduction and effects of market volatility
  - (e) Ensuring that future health and safety risks are considered and either eliminated or reduced so far as is reasonably practicable
  - (f) Maintaining flexibility to respond to change and external influences
9. The interim report presented to the Portfolio Holder on 10 March 2011, concluded that, based on the first four months of operation, the new service had been successfully implemented on time and on budget and was performing well.
10. Since that time resident participation monitoring has continued and it is intended that this will continue throughout the summer months. This will enable an accurate assessment to be made of the use of the new service and its impact on the use of the black and green collections so that any further efficiency can be identified. This assessment will be the subject of a separate report later this year, 2011.
11. A waste analysis of a sample of black and green bins was carried out in April 2011 to identify how much target blue bin material remained in the black and green bins and which materials it would be most appropriate to target, based on maximising the recycling rate and income. This is considered in paragraphs 423– 45.
12. A Customer Satisfaction Survey<sup>1</sup> was conducted in April/May 2011 to measure resident satisfaction levels with the new service. 2,000 paper surveys were sent out to a random sample of households. Visitors to the South Cambs website were encouraged to complete an online survey and social media was utilised to promote the survey (Facebook and Twitter) by prompting residents to complete the online survey. Over 1,000 residents took part in the survey representing a response rate of over 50%, one of the highest such responses recorded for a survey of this type. The survey findings were then compared against results from the Place Survey conducted in 2009. This is considered in paragraphs 26 – 31.
13. An analysis of historical and current waste data was also carried out to identify trends and estimate future performance. This is considered in paragraphs 38 – 42.
14. This report uses the results of the further work carried out since the Interim report to evaluate the performance of the service during the period October 2010 to April 2011 against the key criteria listed in Paragraphs 7 and 8 above. It also identifies Actions for further improvements, listed in paragraph 47.

## **Considerations**

### **A cost effective and efficient service**

15. The new service achieved significant savings during the period October 2010 to March 2011 of c£305,000 when compared against the green box scheme for the same period in 2009/10. This was as a result of lower operational costs through using fewer collection vehicles and a lower Materials Reclamation Facility (MRF) gate fee

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<sup>1</sup> SCDC Customer Satisfaction Survey April/May 2011

due to the competitive pricing mechanism of the contract. The gate fee charged is made up of two elements; a fixed price processing cost less a rebate for the value of materials collected, based on composition, weight and market price, and is reviewed every six months.

16. The savings also included additional income achieved by collecting paper separately in the caddy, so maintaining its quality and value, and then entering into a favourable fixed price contract for its re-processing, separate from the MRF contract.
17. Additional savings over and above those factored into the council's Medium Term Financial Strategy (MTFS) of c£20,000 have continued to be made during the period April 2011 – May 2011 due primarily to a favourable outcome from the six-monthly MRF price review in April.
18. Whilst the council benefited from the April price review due to increased material values, most notably aluminium, future savings will still to an extent be dependant on world commodity prices. The MRF pricing mechanism and the fixed price paper contract have reduced the council's exposure to market volatility but it must be remembered they have not eliminated it.
19. Future savings will also be dependant on maximising paper tonnages to take full advantage of the favourable paper contract. Paper tonnages throughout the RECAP area have reflected a long-term national downward trend as a result of falling newspaper circulation and reduced paper densities. This has not to date been reflected to any significant degree in South Cambs, due it is believed to the recycling stimulus provided by the introduction of plastic bottle recycling in 2008. Against this context, however, maximising paper tonnages will present an additional challenge.
20. To date the service is on target to deliver the savings envisaged in the council's MTFS. The service also contributed to a reduction in the annual cost of the council's refuse and recycling services from £25.48/person (2009/10) to £24.76/person (2010/11)<sup>2</sup>. The full year effect of these savings will result in a further reduction in the 2011/12 costs.
21. Waste analysis carried out at the MRF confirmed a very low contamination rate i.e. material not specifically targeted, of just over 2%, indicating a very good understanding by residents of materials that should not be put in the blue bin. The Environment Agency<sup>3</sup> estimates that the average contamination rate for similar schemes is over 10%. Maintaining a low contamination rate is essential in ensuring high quality recycled material is delivered to the re-processors/end market, thereby reducing the risk of rejection, maximising income generation and reducing processing costs.
22. Operationally, the anticipated health and safety benefits have been achieved. There has been a reduction in manual handling for both residents and collection crews. The switch in collecting glass from kerbside sort to co-mingled i.e. with other materials, has reduced the exposure of the collection crews and residents to kerbside noise.
23. Operationally, the TUPE transfer and integration of the green box external contractor's workforce into the SCDC workforce has been more challenging than originally anticipated, as the crews have had to learn new round structures and new ways of working.

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<sup>2</sup> SPARSE Revenue Estimates Analysis 2010-11

<sup>3</sup> WYG Review of Kerbside Recycling Collection Schemes April 2010

24. Service efficiency has been monitored through analysis of missed bin statistics collated on a weekly basis across all collections, black, blue and green bins. As anticipated, given the nature of the service change for both residents and the council, there was an initial significant increase in missed blue bin reports. These have however been progressively managed downwards but still remain on average higher than green and black missed bin reports. They currently average 39 per week compared with 15 and 13 for black and green bins respectively. To put this in context the council now empties 90,000 bins every week and whilst it is disappointing that blue bin levels remain higher than the other bins overall missed bin reports are still very low. Nonetheless, further measures have been put in place to continue to actively manage down missed blue bin numbers.
25. In summary, the service is demonstrably delivering a cost effective and efficient service to residents. It has reduced the cost of collection, ensuring high quality recycled material is delivered to the re-processors and reduced so far as is reasonably practicable health and safety risks to both residents and collection crews

### **A high level of customer satisfaction and perception**

26. Continued participation monitoring has confirmed that levels of participation have increased from an already high 87% to 93%. The highest participation rate previously reported for a rural authority operating a fortnightly refuse and recycling service was 90%<sup>4</sup>.
27. The Customer Satisfaction Survey<sup>1</sup> indicated that 94% of residents were satisfied with the range of materials collected, 91% felt that the introduction of the blue bin had improved the recycling service and 90% were satisfied with the blue bin service.
28. Whilst 81% of residents were satisfied with the level of street cleanliness following blue bin collections compared with 78% in 2009 for the green box, satisfaction with street cleanliness following collection of the paper only caddy was lower at 77%, possibly caused by shredded paper blowing out of the bin during emptying in inclement weather.
29. The Survey also asked residents how the service could be improved. Whilst the majority of respondents made no suggestions, a number suggested providing extra capacity for their recycling, although it is believed that this indicates a lack of awareness of the council's side waste policy to deal with extra capacity issues.
30. Residents also suggested more detailed and accessible information on accepted materials, which could indicate why targeted material remains in the black bin, even though contamination rates in the blue bin are extremely low – residents know which materials not to put in the blue bin, but are not sure of all the materials that can go in it.
31. Operationally, residents highlighted several areas for improvement, notably ensuring that battery bags are replaced, bins are placed back at the collection point after collection and litter dropped by crews is cleared.
32. In summary, the service is demonstrably delivering a high level of customer satisfaction and perception. However, a number of areas for improvement have been identified and measures are being taken to further enhance the already high satisfaction levels

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<sup>4</sup> WRAP, Kerbside Recycling: Indicative Costs and Performance. Technical Annex

### **Providing future flexibility to respond to external influence**

33. Once again it should be noted that the MRF pricing mechanism and the fixed price paper contract have reduced the council's exposure to market volatility, but they have not eliminated it. The six-monthly price review provides detailed compositional analysis of the materials collected in the blue bin and so does enable a flexible response to changing market conditions and resident use of the scheme.
34. For example, if aluminium and steel prices increase, although cans make up a very small proportion of the total material collected, they can be specifically targeted through communications and publicity to maximise capture rates, so helping to minimise MRF costs. Similarly, if the compositional analysis indicates blue bin materials remain in the black bin, these can be similarly targeted.
35. In summary, the service does therefore provide a degree of flexibility to respond to future external influences.

### **Minimising environmental impact**

36. The degree to which the new service has contributed to minimising environmental impact has been evaluated by reference to the change in CO<sup>2</sup> equivalent from the previous green box scheme.
37. Overall fuel usage during the period October 2010 to April 2011 reduced by <1% following the introduction of the new service resulting in a small CO<sup>2</sup> saving. Although the new service uses fewer vehicles, the total number of vehicle miles has not decreased significantly, given that collections are still being made from all households throughout the district, participation rates have increased and more recycled material is being collected.
38. Analysis of black bin, green bin and green box/blue bin waste data indicates that there was a very gradually increasing trend in recycling prior to the introduction of the new service, undoubtedly helped by the introduction of kerbside plastic bottle collections in 2008. When the new service was introduced there was a step change increase in the amount of recycled material collected, from just over 18% (2009/10) to an indicative full year effect of nearly 27%.
39. Green bin material was relatively stable prior to the introduction of the new service and has since decreased to an indicative full year effect of around 35% as paper, card, and cartons have been successfully diverted from the green bin to the paper caddy and blue bin.
40. Black bin waste has declined between October 2010 and April 2011 by 11% compared with the same period in 2009/10, a reduction that has not been reflected by any other council in Cambridgeshire, as paper, food and drink cans and cartons have been successfully diverted from the black bin to the paper caddy and blue bin.
41. The waste data analysis suggests that if current performance and trends are maintained throughout the year a blue/green bin diversion rate of around 62% could be achieved. However, it should be noted that this analysis did not include mechanical street sweepings, litter and bulky household waste, which have to be included when calculating the overall diversion rate. If these are included the overall diversion rate is likely to be in the region of 60%. This compares with a 2009/10 diversion rate of 53% prior to the introduction of the new service.

42. Whilst these figures are extremely encouraging, they are based on only seven months data and limited sampling and need to be treated with a degree of caution as diversion rates tend to be seasonal and influenced by outside factors such as weather conditions. Had a 60% diversion rate been achieved throughout 2009/10 SCDC would have been in the top five performing councils in the entire country, although it should be noted that other councils may well have moved on as well since then.
43. Compositional modelling, based on the waste analysis of a sample of black and green bins carried out in April 2011, suggests that there is still a significant amount of blue bin targeted material remaining primarily in the black bin.
44. In particular, an estimated 84% of all food waste remains in the black bin. If all this was transferred to the green bin for composting, it would result in a 7% increase in diversion rate. Similarly, an estimated 87% of all non-recyclable but compostable paper e.g. kitchen roll etc. remains in the black bin, representing a potential 4% increase in diversion rate. 10% of all recyclable paper also remains in the black bin representing a potential 1.5% increase in diversion rate.
45. Whilst it is unrealistic to expect to capture all available recyclable and compostable material it can be seen that there is potential to increase the overall recycling and composting rate by targeting specific materials, in particular food waste, kitchen roll and paper, that remain in the black bin. In the absence of any further major change in service configuration a dedicated communications plan is being developed to specifically target these materials
46. In summary, the combination of fuel usage reduction and increased levels of recycling, including the diversion of paper and card from the green bin to the blue bin, has resulted in the production of 24% less CO<sup>2</sup> equivalent<sup>5</sup> during the first seven months of the blue bin service, making a positive contribution to minimising environmental impact.

### **Next Steps**

47. The evaluation has highlighted a number of Actions for further improvement that will be undertaken throughout 2011/12 in order to improve performance, namely:
  - (a) Continue resident participation monitoring as part of impact assessment on black and green bins
  - (b) Develop and implement a dedicated communications and publicity plan to include:
    - (i) Targeting specific material types in the black bin based on maximising recycling rate and income e.g. paper, including kitchen paper, food waste, aluminum cans
    - (ii) Increasing awareness of the council's blue bin side waste policy
    - (iii) Increasing awareness around the range of materials that can/cannot be recycled in the blue bin and paper caddy and composted in the green bin.
  - (b) Continue to actively manage operational aspects of the service, including:

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<sup>5</sup> Guidelines to DEFRA/DECC's GHG Conversion Factors for Company Reporting, (2009)

- (i) Missed blue reports, aiming to reduce these to comparable black/green levels by September 2011
- (ii) Battery bag replacement
- (iii) Bin replacement at collection point
- (iv) Minimising litter after collections

### Options

48. The Portfolio Holder has the option of noting or not the contents of this report.

### Implications

49. Financial	The service is on target to deliver the budgeted costs within the Medium Term Financial Strategy. Costs associated with the improvement Actions will be funded from within the service
Legal	None identified at this time
Staffing	None identified at this time
Risk Management	Market Volatility – control measures as contained in this report
Equality and Diversity	None identified at this time
Equality Impact Assessment completed	A full EqIA was completed as part of the development of the blue bin service A negative impact was identified. An Action has been included in the H&ES 2011/12 Service Plan to address this impact
Climate Change	Positive impact – see paragraph 46 above

### Consultations

50. SCDC Customer Satisfaction Survey - Refuse and Recycling, April/May 2011.

### Effect on Strategic Aims

51. The evaluation of the blue bin service will contribute to the delivery of the council's strategic aims and in particular delivery of the best quality service the council can afford with high levels of recycling and customer satisfaction whilst minimising environmental impact

### Conclusions / Summary

52. The blue bin service was successfully implemented on time and on budget in October 2010. The evaluation has demonstrated that the service is delivering the desired benefits and outcomes, namely:
- (a) A cost effective and efficient service to residents
  - (b) A high level of customer satisfaction and perception.
  - (c) Future flexibility to respond to external influence.
  - (d) A positive contribution to minimising overall environmental impact.
53. In addition there has been a significant step change increase in the recycling rate; customer satisfaction levels are at an all time high; the participation rate has improved from an already high level; significant savings have been achieved; high quality materials are being delivered to re-processors and health and safety risks to residents and crews have been reduced so far as is reasonably practicable.

54. The blue bin service makes a significant contribution to the delivery of the council's strategic aims and in particular achieving a 65% recycling and composting rate by 2012. This remains an extremely challenging target and in the absence of any further major service reconfiguration, its achievement will rely on maintaining a flexible response to changing circumstances, targeting specific materials and changing resident behaviour, particularly in relation to food waste. The new service will continue to be actively managed and the Actions outlined in this report implemented, reviewed and revised as necessary.

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

- Report to Strategic Waste and Recycling Review Task and Finish Group, Review of refuse and recycling service configuration – September 2009
- Interim Blue Bin Evaluation - March 2011
- SCDC Customer Satisfaction Survey – Recycling and Waste Collection Survey 2011

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