

Transport and Environment Committee

10.00am, Tuesday, 7 June 2016

Expansion of Recycling Services in Tenements and Flats

Item number	7.4
Report number	
Executive/routine	Executive
Wards	All

Executive summary

This report describes the two pilots carried out to test new recycling arrangements for areas of high density housing (tenements and flats) and the lessons learned for enhancing communal recycling provision.

However any future roll out of new recycling provision will only take place once the detail of the Scottish Government's Code of Practice on Waste Management has been finalised.

The lessons learned from the pilot schemes are:

- The placement of recycling bins next to landfill bins reduces issues around contamination of recycling;
- The amount of recycling collected is influenced by convenience for residents; and
- Changes in the ratio of landfill to recycling capacity does not correlate in increased dumping.

Links

Coalition pledges	P44 , P49 , P50
Council priorities	CP8 , CP9
Single Outcome Agreement	SO4

Expansion of Recycling Services in Tenements and Flats

Recommendations

It is recommended that Committee:

- 1.1 notes that the tenement recycling pilots have been successful; and
- 1.2 notes that a further report will be brought forward in due course with a detailed proposal on enhancing recycling provision, including the mix of materials, for tenements and other flats, once the Council has fully considered the implications of the Scottish Government's Household Recycling Charter.

Background

- 2.1 Proposals to pilot enhanced recycling services in communal bin areas were approved by Transport and Environment Committee ("Enhancing Communal Recycling Services", 18 March 2014).
- 2.2 The main aims of the trial, as set out in the original report, were to provide an improved capacity for recycling compared to that for landfill, and to improve the availability of on street glass recycling.
- 2.3 These pilots have been successfully carried out and a number of lessons learned which will shape future strategy. Whilst they concentrated on areas with on street bin collections, some of the principles (specifically the mix of materials collected for recycling) can be replicated in other areas which use communal bin collections (e.g. flats with off street storage), and can therefore act as a blueprint for the collection of recyclable materials where communal bins are used.

Main report

- 3.1 The pilots took place in two distinct areas: Hillside and Bellevue, which allowed the testing of approaches using different bin types, as well as proximity to tipping points. These are summarised in Appendix 1.

Pilot 1: Hillside area

- 3.2 This pilot used existing wheeled bins. There was no change to the landfill bin capacity but the existing paper (blue lid) and packaging banks (green lid) were rebranded as mixed recycling bins, with green lids. These accepted paper and

cardboard (including drinks cartons); plastic bottles, pots, tubs and trays; and steel and aluminium cans, tins, aerosols and trays. This is the same mix of materials used in areas of the city which receive the new kerbside collection service.

- 3.3 The existing fortnightly blue box glass collection was replaced with on-street glass bins with purple lids (again used elsewhere in the city). These were sited alongside other communal bins, and were designed to be more convenient so that householders did not have to store glass between collections. This is the same principle applied to other waste collections from flats.
- 3.4 The results of this pilot are set out in Appendix 1: Collection crews measured how many glass boxes were presented before the pilot and an average weight was applied to these (provided by the collection contractor). A similar study was carried out by the glass collection contractor on the glass bins to assess how full each bin was on collection days (and therefore the weight).
- 3.5 On average it was estimated that glass collection in this area increased from 1166 kg per fortnight to 3692 kg (approximately 300%). However this assumes that each glass collection box was full - in reality this would not be the case, and therefore the improvement can be assumed to be greater.

Pilot 2: Bellevue/ Broughton Area

- 3.6 This pilot used the larger side loading bins to collect landfill, and for the first time mixed recycling. The overall capacity for waste remained the same, but the capacity for recycling increased. A capacity of approximately 30% recycling to 70% landfill was provided for the trial.
- 3.7 The same mix of materials was collected in the mixed recycling as in Pilot 1, and replaced an existing blue and red box kerbside collection system. Three glass banks were sited in the pilot area.
- 3.8 A similar methodology as that undertaken in Pilot 1 was carried out to assess weight of recyclable materials before and after the changes. This suggested that over a two week period the old box collection diverted 1519 kg of mixed materials from landfill.
- 3.9 The mixed recycling bins collected an estimated 1051 kg per week (i.e. 2102 kg over two weeks). This represents an increase of 583 kg (38%) through using communal bins instead of the kerbside box collection. Once again it should be noted that this would represent the minimum improvement as in reality the boxes would not all be full.

Challenges and barriers

- 3.10 While the pilots were designed to test different approaches to improving recycling services in tenement areas, the limits of the pilots should be noted.
- 3.11 In particular because the pilots covered approximately 2200 households it was not possible to use dedicated collection rounds which would have been

desirable from the point of view of data gathering. However this was overcome by using the methodology outlined in Appendix 1.

- 3.12 While no operational issues were reported in the Hillside pilot, two issues arose of collection crews in Bellevue collecting the recycling bins at the same time as the landfill. On one occasion this was managed as a crew training issue, while the other was due to a vehicle breakdown. Nevertheless this is unacceptable but would not be expected to occur in a situation where recycling was routinely being collected in this type of bin. Rolling out the communal recycling scheme would allow the service to dedicate a side loading vehicle to this stream of recycling.

Contamination /bin types/recycling lids

- 3.13 Waste Services' experience is that where recycling bin lids are broken the materials are more prone to contamination by black bags, etc, and it is important to mitigate this by ensuring damaged bins are swiftly repaired.
- 3.14 The size of the aperture used on the recycling bins in the Bellevue pilot was wider than would normally be the case- sufficient to allow for a black bag of general waste to be deposited. Although there were some instances of contamination recorded in bins it was of a level that would be considered to be manageable by recycling processors.
- 3.15 Nevertheless on a wider scale this would represent an unacceptable risk to the integrity of the recycling service and therefore side loading bins will only be used where the bin lids can be adapted to keep contamination of the recycling to a minimum.

Outcomes and principles

- 3.16 While the two pilots achieved their objectives of increasing recycling and testing different approaches, it should be noted that neither can be applied in a blanket approach across the relevant parts of the city.
- 3.17 In particular the existing road layouts, number of bins in place already and other streetscape issues would mitigate against a blanket approach. Nevertheless the principles to be used have been developed as follows:
- Both types of bin will continue to be used at on street locations but in some locations recycling may be collected in side loading bins to increase the capacity required, provided that the issues around the lids can be resolved (and that the bins can be specified with a suitable recycling lid);
 - Paper and packaging will be merged into a single stream in line with the pilots and as collected in kerbside collection areas (i.e. collecting paper, card, cans and tins, plastic bottles, pots, tubs and trays) subject to the Household Recycling Charter;
 - Glass and food will also be collected using on street bins; and

- Where possible the existing number of bins on any one street will remain. The ratio of recycling and landfill bins will however change. Waste Services will seek to increase the mixed recycling capacity to a minimum of 30% of the total capacity provided in the first instance, with the ultimate aim of increasing this to no less than 40% of the total capacity if it can be shown that this will not adversely affect the amenity of the surrounding area. Glass and food bins will be provided in addition to this.

Code of Practice

- 3.18 The Scottish Government has recently worked with Zero Waste Scotland and CoSLA to develop a Household Recycling Charter and associated Code of Practice. This is a wide ranging project but one element has significant implications for the Council's approach to recycling in flats (and elsewhere in the city).
- 3.19 One element of the Code deals with the range of materials which are collected for recycling, and the extent to which these are separate from each other.
- 3.20 At present the Code envisages that paper and cardboard will be collected separately from cans, plastics and drinks cartons (e.g. Tetrapak type containers), which is contrary to the approach adopted in these trials.
- 3.21 This runs contrary to most existing Scottish (and UK collections) and it is not clear at this point whether this element will change in the coming months.
- 3.22 In effect the Government's strategy would instead require a realignment of the current paper/ mixed packaging (card, cans, Tetrapak type containers, plastics) split, into paper and card/ mixed food and drinks containers (cans, plastics and Tetrapak type).
- 3.23 Adopting the Charter, and therefore the Code of Practice, is voluntary but would represent a commitment to introducing the type of services outlined above. A separate report will be brought before Committee to consider whether the Council becomes a signatory.

Measures of success

- 4.1 The roll out of an enhanced recycling service will be deemed successful if it results in an increase in waste recycled, and delivers a high level of customer satisfaction with the recycling and waste collections offered.
- 4.2 A survey is currently being designed for those residents within the pilot areas.
- 4.3 As outlined within the report the amount of recycling collected during the trial increased significantly from the baseline.

Financial impact

- 5.1 Diversion of waste from landfill will result in a reduction in waste disposal costs. The audit of communal bin provision in 2015/16 cost approximately £48,000 and was met from external funding secured from Zero Waste Scotland. A further application will be made for funding to complete the roll out in 2016/17.
- 5.2 Waste Services is currently tendering the mixed recycling contract, but a conservative estimate is that each ton diverted from landfill would save in the region of £50-60 per ton, with greater savings still from diverting glass from landfill to recycling.
- 5.3 In terms of funding the Capital element of this project, an Outline Business Case has been submitted to the Council's Asset Investment Group for consideration. Talks are also ongoing with Zero Waste Scotland regarding funding arrangements.

Risk, policy, compliance and governance impact

- 6.1 The roll out of an enhanced recycling service will allow the Council to comply with the Waste (Scotland) Regulations in particular with the provision of facilities for the collection of glass and plastics (the new service will collect a wider range of materials than the existing service).
- 6.2 The implementation of a mixed recycling system, as per the trials, would be contrary to the Scottish Government's Household Recycling Charter.

Equalities impact

- 7.1 The Public Sector Equality Duty (PSED) general duties will be accommodated through the provision of a service which is easier to use, and by enhancing the access to recycling facilities in areas which use communal bins.

Sustainability impact

- 8.1 The provisions of the Climate Change (Scotland) Act 2009, and the Waste (Scotland) Regulations 2013 will be met in the following ways:
 - The provision of an enhanced recycling service will divert additional waste from landfill, reducing the carbon impact of managing this waste;
 - In particular, residents in flats will receive enhanced services for the recycling of mixed plastics and glass; and
 - The diversion of waste from landfill will ultimately provide wider environmental, social and economic benefits and so contribute to sustainable development.

Consultation and engagement

- 9.1 Waste Services are working with Strategy and Insight to design and run a customer experience survey in the trial areas. The results of the survey will be included part of the further report on enhancing recycling provision in tenemental areas.
- 9.2 As with the roll out of the new service in kerbside areas, the implementation of enhanced recycling for flats and tenements would be accompanied by a programme of customer engagement and clear communication.

Background reading/external references

None

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Links

Coalition pledges	P44 Prioritise keeping our streets clean and attractive. P49 Continue to increase recycling levels across the City and reducing the proportion of waste going to landfill. P50 Meet greenhouse gas targets including the national target of 42% by 2020.
Council outcomes	CP8 – A vibrant, sustainable local economy CP9 – An attractive city
Single Outcome Agreement	SO4 Edinburgh’s communities are safer and have improved physical and social fabric.
Appendices	Appendix 1: Summary of Pilots and Outcomes.

Appendix 1: Summary of Pilots and Outcomes

Hillside Pilot	Bellevue Pilot
<ul style="list-style-type: none"> No change to landfill capacity Existing wheeled paper and packaging bins combined into single stream mixed recycling bin, on street Communal glass bins sited on street to replace blue box glass only collection withdrawn. Existing on street food collection 	<ul style="list-style-type: none"> Rebalance capacity (70% landfill, 30% mixed recycling) Side loading static bins used for both landfill and mixed recycling on street Existing blue and red box (mixed materials) kerbside recycling collection withdrawn Communal bins sited on street to collect glass

Hillside Pilot: Replacement of blue box glass collection with on street communal glass banks, general waste collected in existing communal wheeled bins.

Prior to commencement of the pilot a set out study was carried out on the flatted properties to assess the number of boxes presented on the collection day.

An average weight was allocated to each box (11Kg), as provided by our contractor. Each box was deemed to be full. The set out number and weight collected are as follows:

Date	Properties Surveyed	Blue Box Presented	Estimated Weight (11Kg per box)
15/01/2015	1519	109	1199
29/01/2015	1519	103	1133

After installation of the glass banks, the extent to which the banks were filled was monitored on the day of collection by our contractor and a weight allocated to each bank. The average total weight of the glass banks collected was 1846Kg per week.

Collection Method	Weight (Kg)
Blue box collection per fortnight (averaged)	1166
Glass bank collection per fortnight (average)	3692

This would indicate an increase of 2500 Kg of glass collected over a fortnightly period.

Bellevue Pilot: Replacement of blue and red box mixed material collection with on street communal dry mixed recycling banks, using side loading bins for both landfill waste and dry mixed recycling. Glass collected in communal bins.

A set out study was carried out on the flatted properties and an average weight allocated to each box (blue box 11Kg & red box 4Kg), as provided by our contractor. Each box was deemed to be full.

Date	Properties Surveyed	Blue Box Presented	Blue Box weight (11Kg)	Red Box Presented	Red Box Weight (4Kg)
06/01/2015	613	105	1155		
13/01/2015	613			91	364

The total weight collected from the recycling box collection over the fortnight was 1519Kg.

The Dry Mixed recycling banks were installed and weight data was provided from the weighbridge at Powderhall Transfer Station.

The average weight per weekly collection from the Dry Mixed recycling banks in the pilot area was 1051Kg. (2102 kg per fortnight).

This would indicate an increase of 583Kg collected per fortnight in the Dry mixed recycling banks in comparison with the recycling box service, with glass collected in addition to this.