The Highland Council

Agenda Item	12
Report No	COM 38/14

Community Services Committee
6 November 2014

Update on Waste Compositional Analysis Project

Report by the Director of Community Services

Summary

This report gives Members more information on the interim results of the waste compositional survey and gives an indication of the potential level of savings that an increase in recycling can generate by adding more materials to the blue bin.

1. Background

1.1 A waste compositional analysis study was carried out on household kerbside collections in June 2014 in five locations in the Inner Moray Firth Area. A second phase is scheduled for the end of October/beginning of November to be complete by 11 November.

1.2 Waste compositional studies are by their nature a snapshot of waste arisings from a small sample of households. The results whilst open to interpretation do give useful information particularly when they are carried out regularly to the extent that trends rather than absolute figures are derived.

1.3 The results from residual waste samples from the first phase are shown in Figure 1. The biggest fractions (by weight) of waste in the residual bin are food waste, garden waste (particularly from areas where there is no brown bin service) and healthcare waste (disposable nappies, and pet litter and excrement).

1.4 Using other key data (tonnage information from all other collections), the total household waste collected can then be analysed to illustrate where materials arise and where potential additional tonnage might be usefully extracted.

2. Residual Household Waste Composition

2.1 Around 43% of household waste is collected through the green household bin service; 24% through the recycling “bring” network (Recycling Centre and Points); and 13% in the residual waste skips at recycling centres, totalling 80%.

2.2 The remaining 20% comprises kerbside recycling services (blue, brown and food waste collections where available). Figure 2 summaries these figures.

2.3 The current capture rates for materials are shown in Figure 3. In general where services for materials are available, capture rates are close to two thirds or more. The exceptions are food waste which only achieves a capture rate of just under half in the Inverness area and textiles where two thirds of material is still left in the residual bin.

2.4 These capture rates do not take account of any recyclate that goes into the residual skips at recycling centres as good quality data is difficult to obtain. The variability of waste going into the residual waste skips is particularly high, due to the nature of the material that is collected as well as the location and time of year. Items tend to be a mixture of bulky goods and black bags and getting a representative sample to cover the average contents of a skip would require taking numerous samples which is prohibitive in cost. Nor does it take account of the textiles which never enter the waste stream but are diverted directly to charities and textile purchasing shops.

2.5 Whilst the provision of services are vital to capture recyclates, the value of the information provided by compositional analysis illustrates that behaviour change through intervention and education and awareness is important if capture rates are to increase.

2.6 By way of illustration, if capture rates could be increased to at least 75% a further 2,700 tonnes of material (glass, paper, card, metals and plastic bottles) would be diverted from landfill with a concomitant saving in costs. Figure 4 summarises the data by illustrating the captured tonnage with the estimated available tonnage based on the compositional analysis.

3. Interventions

3.1 The food waste service in Inverness has been operational for only 1 year and around 50% of the available food is captured. Work will focus on increasing the capture rate of available food and in encouraging the public not to waste food in the first place.

3.2 A framework arrangement through Scotland Excel for Scottish local authorities has now been concluded.

3.3 This arrangement makes it easier and quicker to identify the costs of processing different mixes of recyclables and of putting in place a contract.

3.4 We will use this framework arrangement to procure a service which allows us to add new materials to the blue bin in 2015. These materials are likely to include: aerosols, tetrapaks, and plastic pots, trays and tubs.

3.5 Where the capture rate of these materials equals the average capture rate of existing blue bin materials then we should expect to see a rise around 1,000 tonnes per annum providing savings of around £70k at current market prices.

3.6 Our glass capture through bottles banks is high. However if we are to increase capture then we need to add banks closer to households. This in turn risks

complaints through noise and litter/fly-tipping.

3.7 We can also only service banks using our existing fleet in a relatively small number of areas (ie close to the drop off point/depot). However we will endeavour to maximise the roll-out of banks in these areas.

3.8 We will also campaign with our social enterprise partners to increase the diversion of textiles from the residual waste stream.

3.9 We also intend to roll-out an intervention programme at recycling centres which is based on the Alness pilot. Members will consider a paper on this topic at this Committee.

3.10 Policy interventions such as a tightening on the rules around 2nd bins and litter bins will be the subject of a separate paper to Committee in due course.

3.11 As ever any potential savings associated with these and other measures are contingent on public acceptance and behaviour change. We have a good record of working with the public and there is no reason to suppose that this will not continue where change is introduced sensitively and with the appropriate levels of support.

4. Implications

4.1 Resource; Where more recycling is achieved and less waste going to landfill, savings will be achieved

4.2 Climate Change/Carbon Clever – As with above when less waste is generated or sent to landfill, there will be consequently less carbon emissions

4.3 Legal; Equalities; Risk and Gaelic and Rural – There are no Legal, Equalities; Risk and Gaelic and Rural implications affecting

Recommendation

Members are invited to:

(i) Note progress to date and the outcome of the interim waste compositional analysis; and

(ii) Approve the addition of a number of recyclable materials to the blue bin in 2015 subject to the successful conclusion of a procurement exercise through the relevant Scotland Excel framework agreement.

Designation: Director of Community Services

Date: 23 October 2014

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Figure 1

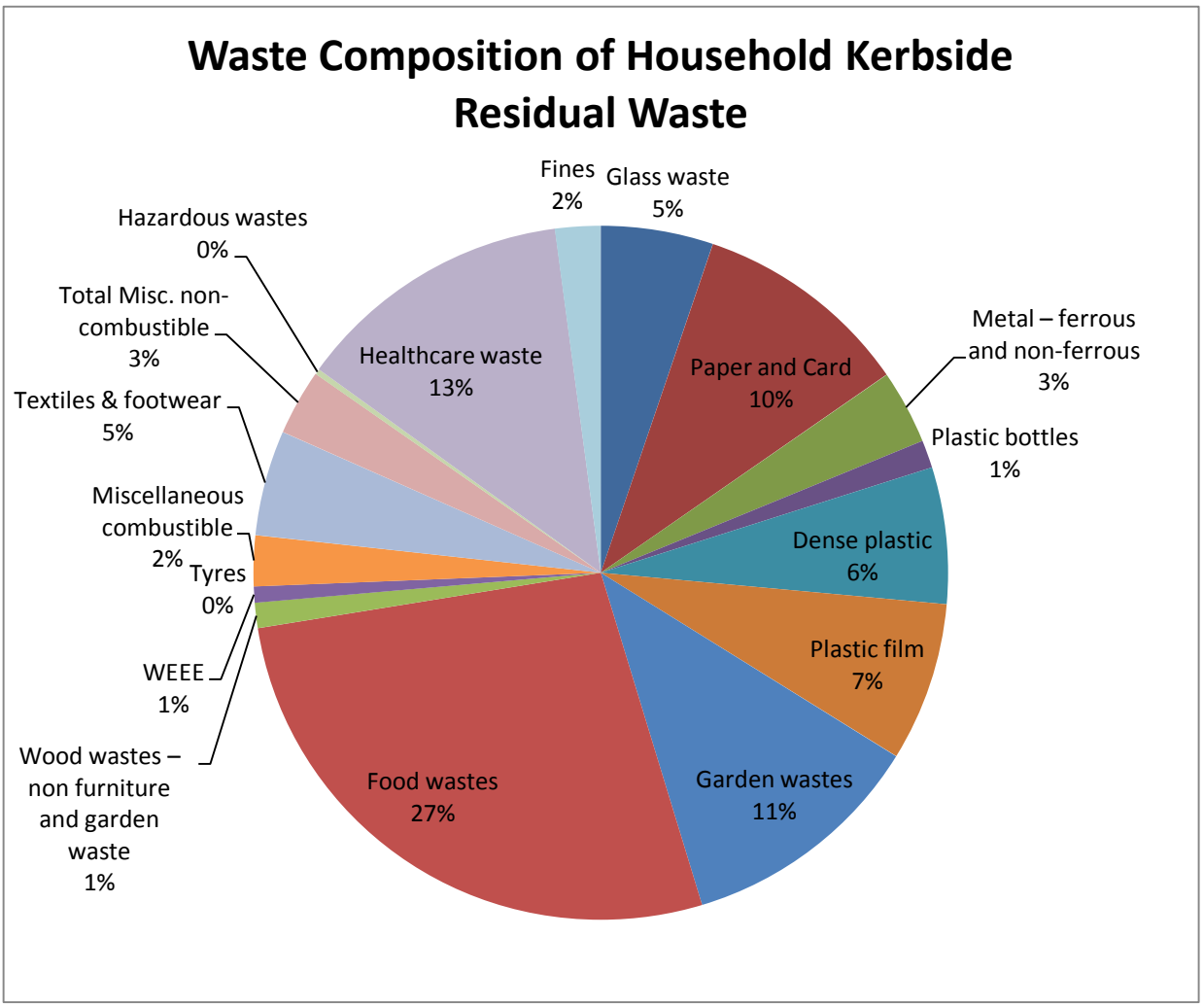

Waste Composition of Household Kerbside Residual Waste
Fines 2%
Glass waste 5%
Hazardous wastes 0%
Total Misc. non-combustible 3%
Textiles & footwear 5%
Miscellaneous combustible 2%
Tyres 0%
WEEE 1%
Wood wastes – non furniture and garden waste 1%
Healthcare waste 13%
Paper and Card 10%
Metal – ferrous and non-ferrous 3%
Plastic bottles 1%
Dense plastic 6%
Plastic film 7%
Garden wastes 11%
Food wastes 27%

Figure 2

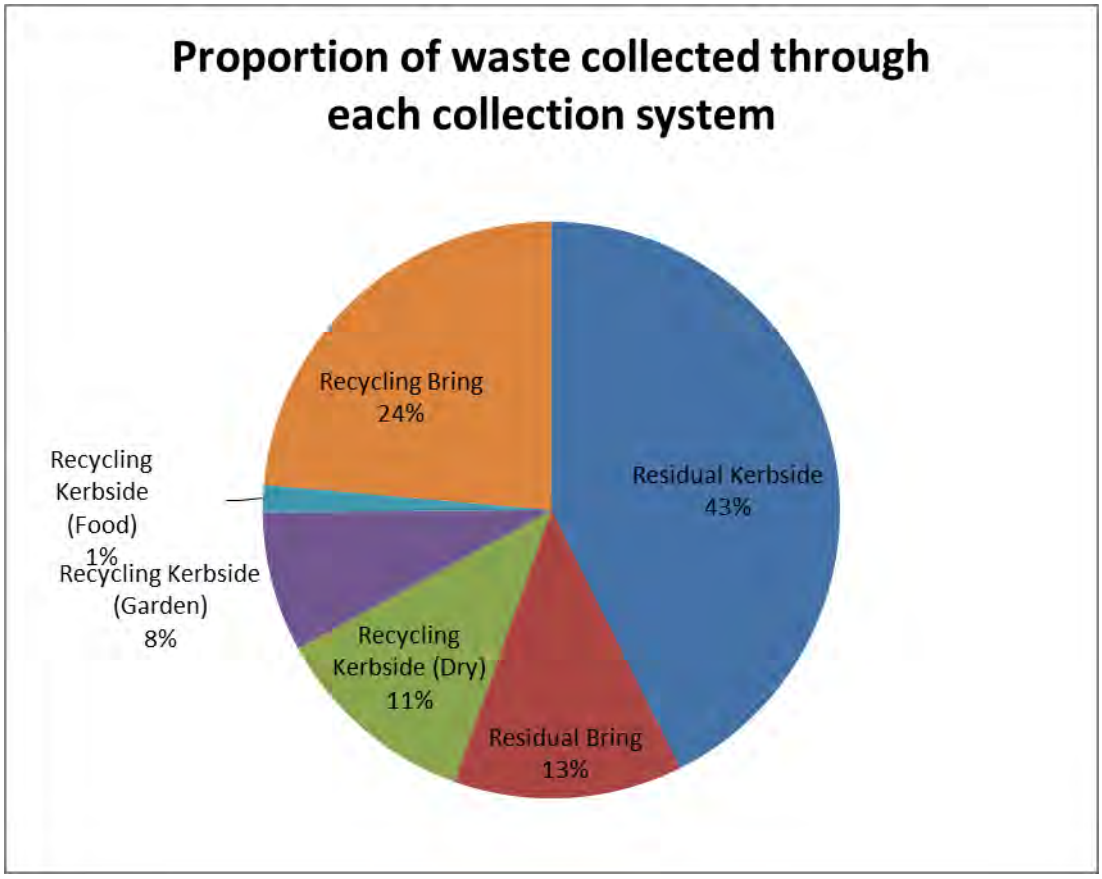

Proportion of waste collected through each collection system
Recycling Bring 24%
Residual Kerbside 43%
Recycling Kerbside (Food) 1%
Recycling Kerbside (Garden) 8%
Recycling Kerbside (Dry) 11%
Residual Bring 13%

Figure 3

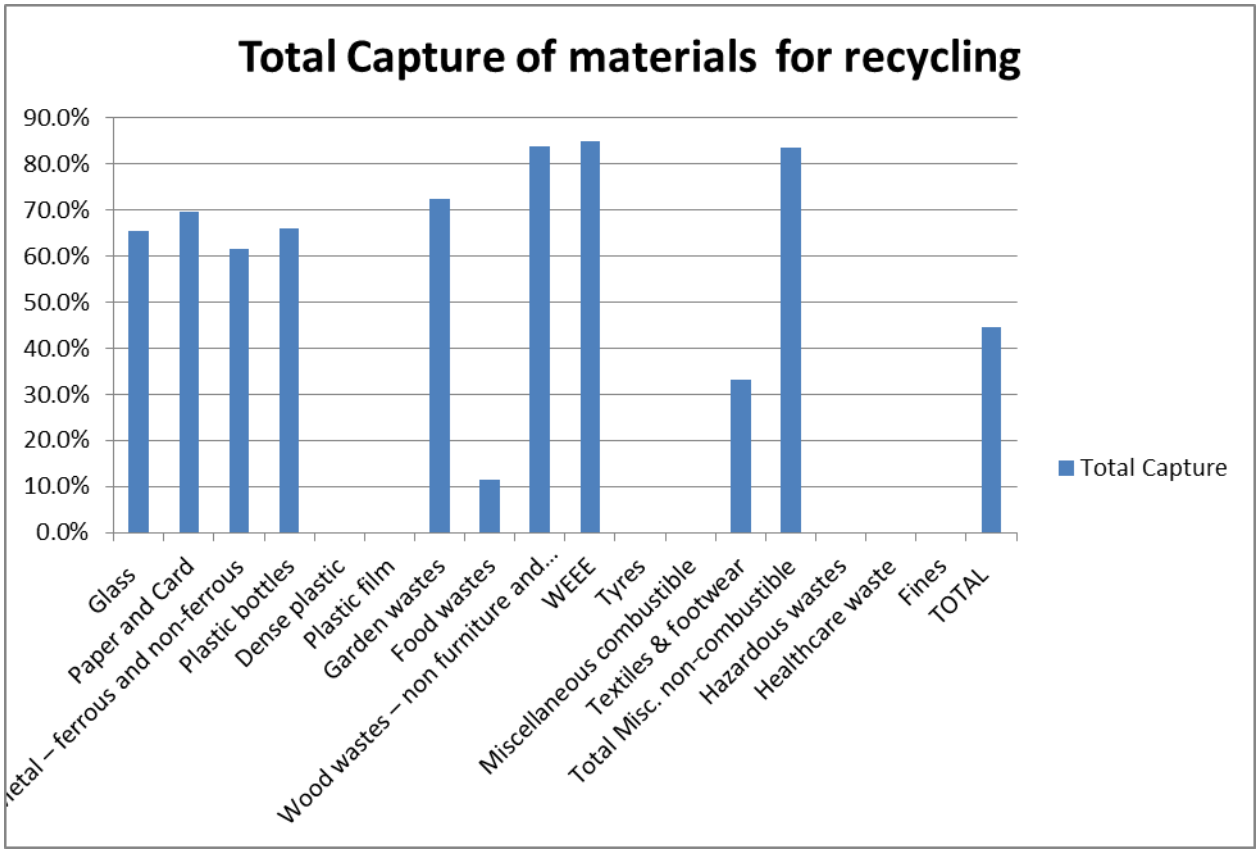
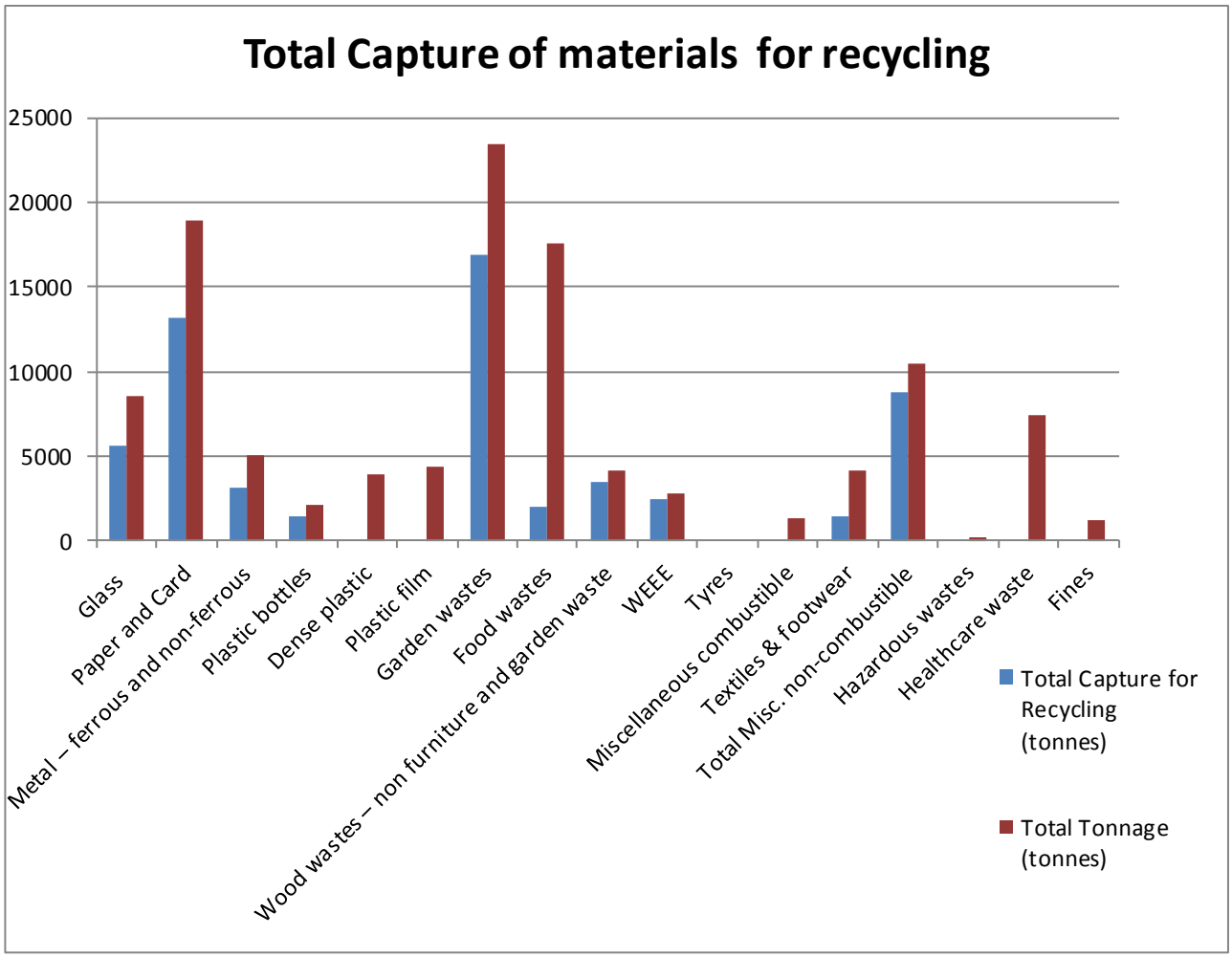

Total Capture of materials for recycling
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
Glass
Paper and Card
etal – ferrous and non-ferrous
Plastic bottles
Dense plastic
Plastic film
Garden wastes
Food wastes
Wood wastes – non furniture and...
WEEE
Tyres
Miscellaneous combustible
Textiles & footwear
Total Misc. non-combustible
Hazardous wastes
Healthcare waste
Fines
TOTAL
Total Capture

Figure 4


Total Capture of materials for recycling
25000
20000
15000
10000
5000
0
Glass
Paper and Card
Metal – ferrous and non-ferrous
Plastic bottles
Dense plastic
Plastic film
Garden wastes
Food wastes
Wood wastes – non furniture and garden waste
WEEE
Tyres
Miscellaneous combustible
Textiles & footwear
Total Misc. non-combustible
Hazardous wastes
Healthcare waste
Fines
Total Capture for Recycling (tonnes)
Total Tonnage (tonnes)