m·e·l waste insights

Merseyside and Halton Flats Waste Composition Analysis

Merseyside Recycling & Waste Authority (MRWA)

Annual Report January 2022

MRWA

MERSEYSIDE RECYCLING & WASTE AUTHORITY

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Project details and acknowledgements

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Accuracy Statement

Results from the standard M·E·L sampling protocol for compositional analysis can be taken as accurate for each primary material category to within error bands of +/10% at the 95% confidence level (2 standard deviations), assuming a normal statistical distribution for:

Overall percentage compositional makeup by:

- individual flats at Merseyside and Halton level
- local authority
- Merseyside and Halton area overall

At the data entry stage, 1 in 10 parts of data that is inputted are checked with the data sheets and if errors are found all the data is then rechecked

Introduction

Background

Merseyside Recycling and Waste Authority (MRWA) is a statutory waste disposal authority[1]that manages the municipal solid waste produced across Merseyside and Halton on behalf of the five Merseyside District Councils (Knowsley, Liverpool, Sefton, St. Helens and Wirral) and via a separate agreement with Halton Council. The Authority therefore serves the waste disposal requirements of more than 1.5 million people that reside in 630,000 properties. MRWA also manages the sorting of the comingled recycling collected at the kerbside by five of the six District Councils, via its two Materials Recovery Facilities.

On behalf of MRWA, a compositional analysis detailing the breakdown of all waste and recycling types (kerbside collected residual waste and kerbside collected dry recycling) was commissioned for the Merseyside and Halton Waste Partnership area to cover the six associated District council areas. Each of the participating Districts councils also had a compositional assessment of the waste and recycling collected from non kerbside households using shared or communal bins (flats). By assessing all these waste streams from districts, it will be possible to provide compositional estimates for the waste collected throughout Merseyside and Halton as a whole.

MRWA also provides 14 Household Waste Recycling Centres (HWRCs) in Merseyside and two HWRCs in Halton as part its contract with Veolia UK. The local Centres allow for householders to recycle more than 40 different materials. Six of these sites were selected for the compositional analysis of general waste bins.

This report is specifically for the waste and recycling generated by residents living in flats throughout the Merseyside and Halton Waste Partnership area. Findings for kerbside collected waste and recycling and HWRC general waste collected throughout the area will be contained in a separate report.

In 2020, MRWA had a combined recycling and composting rate of 37.2%. Ranges across the District councils are 23.6% for Liverpool up to 37.5% for Halton. As well as giving indications as to the proportion of materials in the waste and recycling being generated, this report also provides observations on the items that are currently recyclable and those which could potentially be recyclable via expanded recycling collections.

[1] *Merseyside Recycling and Waste Authority is the public facing name for Merseyside Waste Disposal Authority, which is a statutory Joint Waste Disposal Authority under the Local Government Act 1985*

This report presents results from the analysis of household waste and mixed recycling waste collected from flats within each of the six District councils surveyed. Each council had bins from two sets of flats sampled which provided the best overall average figures for each. These average figures were then used to provide the best estimates for the flats waste and recycling collected across the Merseyside and Halton Waste Partnership area. The sampling exercise took place across two seasonal periods. Phase one (Spring) took place during May and June 2021 with Phase two (autumn) done in November and December 2021. Figures in this report combine results from both seasonal phases of fieldwork and therefore represent annual estimates for Merseyside and Halton flats waste and recycling.

Objectives

Specific aims of the work were to:

- Understand the mix of materials within the household residual waste being generated by the selected flats to form a picture of this waste collected throughout Merseyside and Halton
- Evaluate the proportion of specific materials collected in the household residual waste that could potentially be collected in dry mixed recycling bins.
- Assess the composition of dry mixed recycling being generated
- Evaluate the degree and types of contamination present within the dry mixed recycling.
- Determine the proportion of residual waste and dry mixed recycling that was formed from packaging
- Determine the proportion of residual waste and dry mixed recycling that was formed from potentially reusable material.

Executive Summary – Compositional Analysis

Key findings – Annual Averages Flats

Residual waste

- Food waste was seen to be the major component of Merseyside and Halton's flats residual waste forming 31.1% of the total. Of this food, 76% is deemed to be avoidable with 53% of all discarded food still packaged.
- The Waste & Resources Action Programme (WRAP) has categorised food and drink waste by how avoidable it is[2]:

  Avoidable – food and drink thrown away that was, at some point prior to disposal, edible (e.g., slice of bread, apples, meat).

  Possibly avoidable – food and drink that some people eat, and others do not (e.g., bread crusts), or that can be eaten when a food is prepared in one way but not in another (e.g., potato skins).

  Unavoidable – waste arising from food or drink preparation that is not, and has not been, edible under normal circumstances (e.g., meat bones, eggshells, pineapple skin, tea bags).
- Paper items made up 8.3% of the Merseyside and Halton's residual waste; 50% of this was of a type that could have been placed into dry mixed recycling bins. 10% of residual paper waste was classified as packaging.
- Card and cardboard items made up 8.3% of the Merseyside and Halton's residual waste; 72% of this was of a type that could have been placed into dry mixed recycling bins. 85% of residual card and cardboard waste was classified as packaging.
- Plastic items made up 14.4% of the Merseyside and Halton's residual waste; 24% of this was of a type that could have been placed into dry mixed recycling bins. 86% of residual plastic waste was classified as packaging.
- Metallic items made up 3.8% of the Merseyside and Halton's residual waste; 62% of this was classified as recyclable packaging. 86% of residual metal waste was classified as packaging.
- Glass items made up 10.4% of the Merseyside and Halton's flats residual waste; 97% of this was classified as recyclable packaging.
- Overall, 26.2% of collected residual waste could have been placed into the dry mixed recycling bins throughout Merseyside and Halton flats.
- Overall, 40.2% of St Helens collected household residual waste was compatible with food recycling bins. This is 4.8% of the Merseyside and Halton area's flats waste.
- Additionally, 0.7% of residual waste was recyclable garden waste. Most flats will not have this service.
- In total 31.7% of flats residual waste collected could potentially have been separately recycled.

[2] *https://wrap.org.uk/resources/guide/waste-prevention-activities/food*

- 35% of Merseyside and Halton's flats residual bin contents was classified as packaging waste.
- 64% of this packaging waste was of a type suitable for separate recycling.
- 10.8% of residual waste was due to single use drinks containers, 68% of which were due to glass bottles.
- 7.3% of residual waste had some reuse potential. Around 50% of this was due to textiles most of which were clothes and shoes.

Dry mixed recycling (DMR)

- Overall, 21.8% of dry mixed recycling collected from all flats was classified as contamination.
- 22% of contamination was due to nonrecyclable plastics with 19% being nonrecyclable paper & card and 18% food and drink waste.
- Just 2% of contamination was formed of WEEE
- From the collected dry mixed recycling, 68% was classified as packaging.
- 62% of this packaging was compatible with mixed recycling collections.
- 28% of dry mixed recycling was due to single use drinks containers, 78% of which were due to glass bottles.
- 4.3% of dry mixed recycling had some reuse potential. Around 44% of this was due to textiles and clothing with 44% furniture.

Sampling

For each of the six surveyed Districts councils , two flat demographic samples (Acorn Types) were selected for the analysis of waste and recycling. Waste that could be safely sampled from larger waste bins at each development was collected. For residual waste, Merseyside and Halton flats generally have waste and recycling collected in communal / shared bins that are used by all residents in the development. These may be collected fortnightly, weekly or more frequently for larger developments.

Merseyside and Halton flats also have dry mixed recycling collections; again, this is generally using communal / shared bins.

Most flats do not have garden space and therefore collections of green waste do not normally take place. St. Helens kerbside residents have food waste collections. Some flats may have this service, but many will not.

Table 1 – Selected Flat types for Merseyside and Halton District council authorities

AUTHORITY	FLAT ACORN TYPE	FLAT ACORN DESCRIPTION
HALTON	C13	UPMARKET DOWNSIZERS
	O49	YOUNG FAMILIES IN LOW COST PRIVATE FLATS
KNOWSLEY	J32 / O50	EDUCATED FAMILIES IN TERRACES, YOUNG CHILDREN / STRUGGLING YOUNGER PEOPLE IN MIXED TENURE
	E19	FIRST TIME BUYERS IN SMALL, MODERN HOMES
LIVERPOOL	Q59	DEPRIVED AREAS AND HIGHRISE FLATS
	E19	FIRST TIME BUYERS IN SMALL, MODERN HOMES
SEFTON	I31	ELDERLY SINGLES IN PURPOSE BUILT ACCOMMODATION
	C13	UPMARKET DOWNSIZERS
ST. HELENS	P56	LOW INCOME LARGE FAMILIES IN SOCIAL RENTED ACCOMMODATION
	E19	FIRST TIME BUYERS IN SMALL, MODERN HOMES
WIRRAL	C13	UPMARKET DOWNSIZERS
	N48	PENSIONERS AND SINGLES IN SOCIAL RENTED FLATS

The following materials are deemed recyclable relative to Merseyside and Halton authorities. Some materials may only be available for recycling for kerbside as opposed to flats residents. However, for completeness these materials will be termed as recyclable for flats to allow Merseyside and Halton to directly compare with figures from the kerbside report.

Paper = Newspapers, Magazines, Junk mail, leaflets & flyers, Envelopes, Directories.

Card & Cardboard = Cardboard boxes, Corrugated cardboard, Cardboard egg boxes, Cardboard sleeves, Cardboard tubes, Plain greetings cards.

Plastic bottles = Cleaner and detergent bottles, Trigger sprays, Toiletries and other bathroom bottles, Drinks bottles, Skin care product bottles, Ready to use plant food and pesticide bottles

Plastic pots and trays = Pots, Tubs, Trays/punnets, Chocolate and biscuit tubs and trays*

Metals = Drinks cans, Food tins, Metal lids and tops, Biscuit/chocolate tins, Aerosol cans*, Aluminium foil*, Foil trays*, Aluminium tubes*.

Glass bottles and jars = Bottles, Jars, Other glass bottles (for example perfume, aftershave, face/body cream).

Textiles = Clean fabrics, clothing, accessories & shoes*

Food waste = all scrap food and food by-products*

Garden waste = all vegetation including pet bedding**

** St. Helens only.*

***Pet bedding Knowsley only*

Results – Household residual waste from flats

Compositional analysis

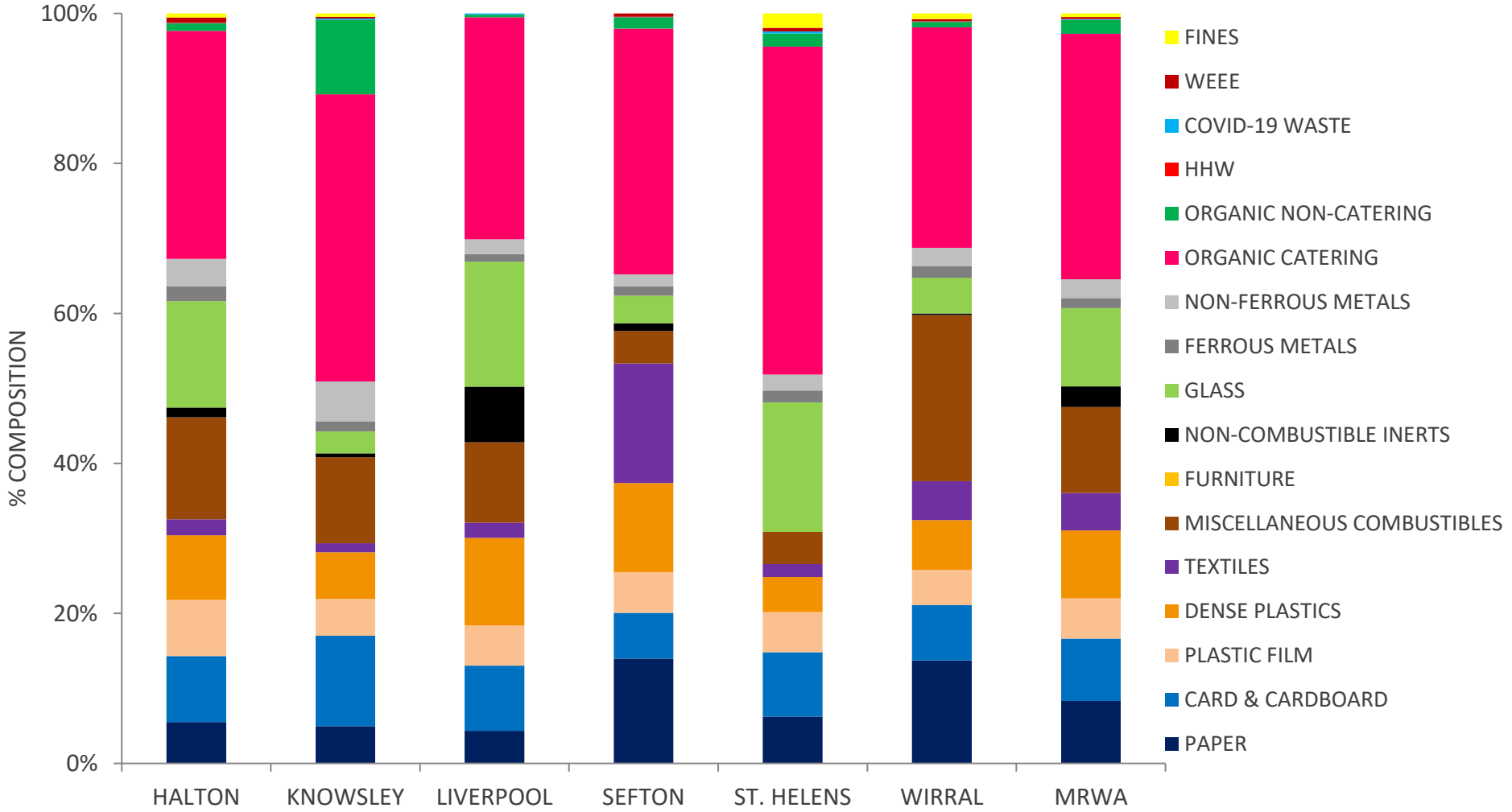
This section looks at the average composition of the household residual waste generated by the selected Merseyside and Halton flats. Hand sorting of the household residual waste gave concentration by weight figures for the main categories of waste as well as the more detailed subcategories. Looking at the concentration percentages gives an indication as to the proportions of each waste category. Detailed composition tables can be found in a separate Excel document. Figure 1 breaks down the main waste types present within the residual waste. All residual waste will contain a proportion that is classified as potentially recyclable. That is to say that it should have been placed into the dry mixed recycling.

Table 2: Average flats residual waste composition (%)

RESIDUAL WASTE MATERIAL (%)	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
PAPER	5.51%	4.98%	4.35%	13.96%	6.22%	13.73%	8.34%
CARD & CARDBOARD	8.81%	12.03%	8.69%	6.13%	8.59%	7.37%	8.31%
PLASTIC FILM	7.46%	4.92%	5.35%	5.43%	5.38%	4.71%	5.35%
DENSE PLASTICS	8.64%	6.23%	11.69%	11.87%	4.64%	6.62%	9.06%
TEXTILES	2.13%	1.19%	2.01%	15.93%	1.73%	5.18%	5.01%
MISCELLANEOUS COMBUSTIBLES	13.58%	11.48%	10.72%	4.35%	4.30%	22.16%	11.45%
FURNITURE	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NON-COMBUSTIBLE INERTS	1.32%	0.51%	7.41%	1.01%	0.00%	0.22%	2.78%
GLASS	14.20%	2.94%	16.67%	3.67%	17.27%	4.77%	10.43%
FERROUS METALS	1.99%	1.29%	1.02%	1.29%	1.59%	1.51%	1.33%
NONFERROUS METALS	3.63%	5.37%	1.98%	1.57%	2.12%	2.48%	2.49%
ORGANIC CATERING	30.38%	38.29%	29.59%	32.78%	43.74%	29.38%	32.76%
ORGANIC NON CATERING	1.00%	9.93%	0.33%	1.51%	1.72%	0.73%	1.82%
HHW***	0.09%	0.01%	0.00%	0.02%	0.00%	0.04%	0.02%
COVID19 WASTE	0.01%	0.15%	0.18%	0.03%	0.30%	0.04%	0.13%
WEEE****	0.70%	0.24%	0.00%	0.45%	0.45%	0.29%	0.27%
FINES	0.54%	0.45%	0.00%	0.00%	1.93%	0.76%	0.47%
TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

**Miscellaneous items deemed combustible. Includes nappies & sanitary, wood, carpet and other general bric-a-brac etc.*
***Mixed materials deemed non-combustible. Includes rubble, DIY cement, ceramics, cat litter etc.*
****Hazardous household waste*
*****waste electrical and electronic equipment*

Figure 1: Average flats household residual waste composition (%)



Organic Waste

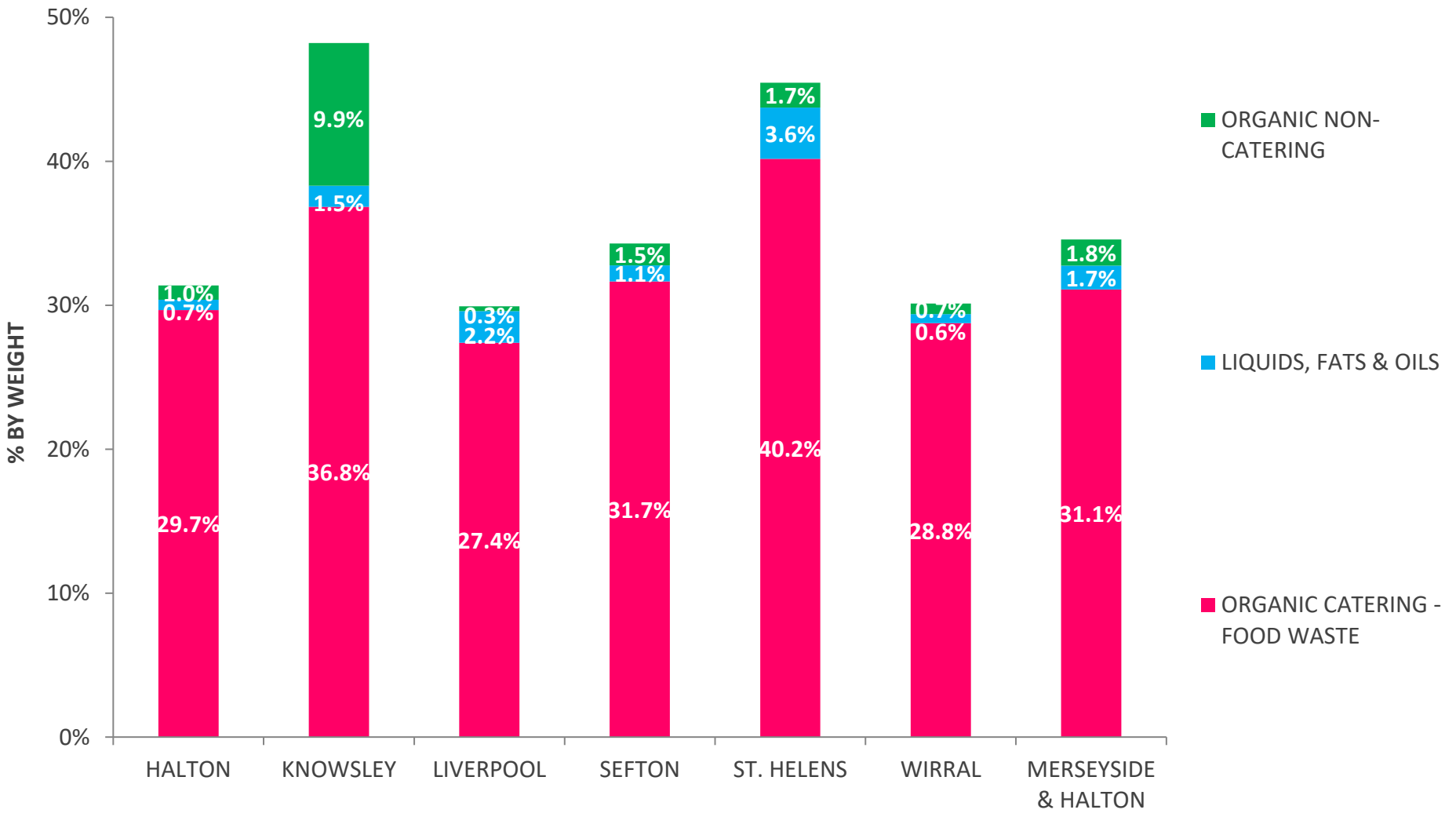
Organic waste (which includes food waste and non catering organics such as garden waste and pet bedding) formed the greatest weight concentration of the primary waste categories for all flats. Ranges seen were 29.9% from Liverpool to 48.2% for Knowsley flats. Averaged for Merseyside and Halton, around 34.6% of all flats household residual waste is classified as organic.

Food waste alone accounted for between 27.4% (Liverpool) and 40.2% (St. Helens) of flats household residual waste. On average, 31.1% of all residual flats waste is classified as food waste. Currently, St. Helens is the only authority to offer food waste recycling to its residents.

Table 3: Organics within the household residual waste (%)

RESIDUAL ORGANICS (%)	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
FOOD WASTE	29.67%	36.83%	27.39%	31.66%	40.17%	28.75%	31.09%
LIQUIDS, FATS & OILS	0.71%	1.46%	2.20%	1.12%	3.57%	0.63%	1.67%
ORGANIC NON CATERING	1.00%	9.93%	0.33%	1.51%	1.72%	0.73%	1.82%
% ORGANICS	31.37%	48.22%	29.92%	34.28%	45.46%	30.11%	34.57%

Figure 2: Organics within the household residual waste (%)



Further food waste separation identified whether the food was avoidable (uneaten, unused, or spoilt) or unavoidable (inedible by products such as shells, stones, skin etc). Finally, all avoidable food waste was assessed to determine whether it was disposed of packaged or loose.

Table 4: Breakdown of food within the household residual waste from flats

RESIDUAL FOOD WASTE	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
UNAVOIDABLE FOOD	2.92%	3.33%	8.97%	6.30%	2.33%	5.39%	5.96%
POTENTIALLY AVOIDABLE FOOD	1.76%	6.01%	0.90%	1.69%	0.36%	0.67%	1.51%
AVOIDABLE FOOD LOOSE	7.77%	1.79%	4.76%	10.64%	10.50%	7.95%	7.05%
AVOIDABLE FOOD PACKAGED	17.21%	25.70%	12.76%	13.03%	26.98%	14.74%	16.56%
% OF FOOD AVOIDABLE	84.21%	74.64%	63.94%	74.75%	93.31%	78.92%	75.96%
% OF AVOIDABLE FOOD PACKAGED	68.89%	93.48%	72.83%	55.06%	71.99%	64.96%	70.13%
% OF ALL FOOD PACKAGED	58.01%	69.77%	46.57%	41.16%	67.17%	51.27%	53.28%

Food formed 31.1% of all household residual flats waste across Merseyside and Halton, of this 76.0% was deemed to be avoidable; this equates to 23.6% of all waste. In the Liverpool sample, 64% of all discarded food was avoidable rising to over 93% for St. Helens where 37.5% of all household residual waste was due to avoidable food waste.

On average, 70% of all the avoidable food waste is due to packaged food which is therefore responsible for 16.6% of all the food in the household residual waste from flats. Overall, 53.3% of all food in the residual waste from flats was disposed of packaged. Levels ranged between 41% for Sefton flats up to 70% for Knowsley flats.

Flats residents will not have the requirement for garden waste recycling collections. Levels of this waste were very low for all samples ranging between <0.1% for Liverpool up to 1.5% for Sefton, an average figure of 0.7%.

Paper

Averaged annually, Sefton flats residents had the highest concentrations of this type of waste (14.0%). In comparison 4.3% of household residual waste from Liverpool flats was due to paper based materials. Across Merseyside and Halton flats it was seen that around 8.3% of household residual waste consisted of discarded paper.

Mixed dry recycling bins can be used for collecting paper such as newspapers, junk mail, envelopes, and directories. It was found that between 7.5% (Knowsley) and 63.4% (Sefton) of paper could have been placed into mixed dry recycling bins as opposed to the residual bins.

When accounting for all the various types of paper within the Merseyside and Halton household residual waste from flats, it is seen that 49.8% was recyclable which accounted for 4.2% of all the household residual waste.

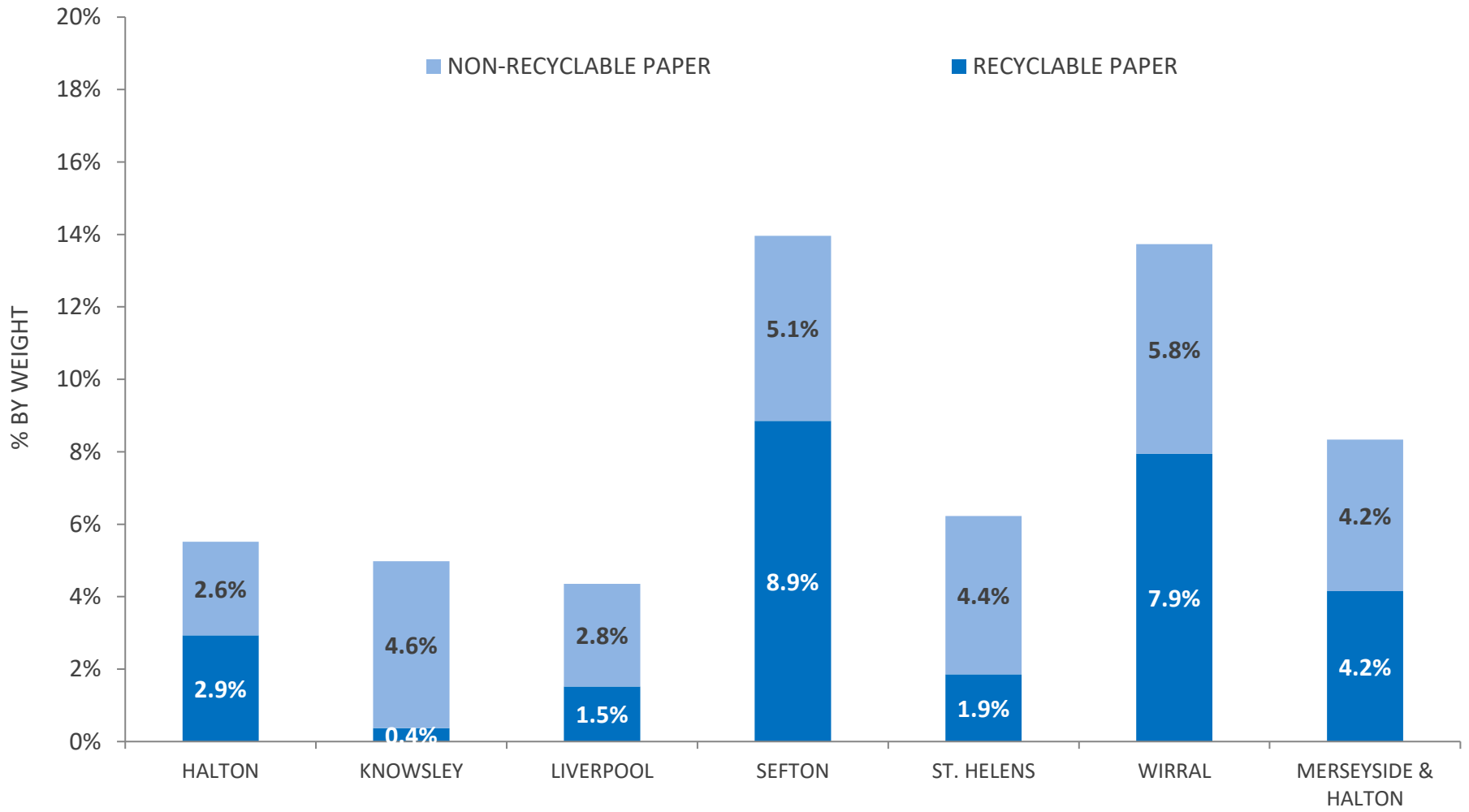
Table 5 and Figure 3 show the proportions of the different forms of paper waste for each council's flats and averaged for the Merseyside and Halton.

Table 5: Paper within the household residual waste from flats (%)

RESIDUAL PAPER	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
RECYCLABLE PAPER	2.93%	0.37%	1.52%	8.85%	1.85%	7.95%	4.15%
NONRECYCLABLE PAPER	2.58%	4.61%	2.83%	5.11%	4.37%	5.79%	4.18%
% TOTAL PAPER	5.51%	4.98%	4.35%	13.96%	6.22%	13.73%	8.34%
% OF PAPER RECYCLABLE	53.17%	7.46%	34.97%	63.41%	29.78%	57.86%	49.81%
% OF PAPER DEEMED PACKAGING	4.89%	0.10%	21.96%	9.74%	5.16%	8.27%	10.09%

There is an interest in the overall packaging content of the Merseyside and Halton's household residual waste from flats. This is discussed in more detail in subsequent sections (p.30 Packaging content of the residual waste). Of the paper in the household residual waste from flats, just 10.1% was classified as packaging which equates to just 0.8% of the total. Commonly this will be due to items such as grocery bags, sugar and flour bags, envelopes etc. Across the six councils the proportion of paper due to packaging ranged between 0.1% (Knowsley) and 22.0% (Liverpool).

Figure 3: Paper within the household residual waste from flats (%)



Card & Cardboard

Averaged annually, Knowsley flats residents had the highest concentrations of this type of waste in their residual bins (12.0%). In comparison, 6.1% of household residual waste from Sefton flats was due to card and cardboard based materials. Across all the Merseyside and Halton flats it was seen that around 8.3% of household residual waste consisted of discarded card and cardboard.

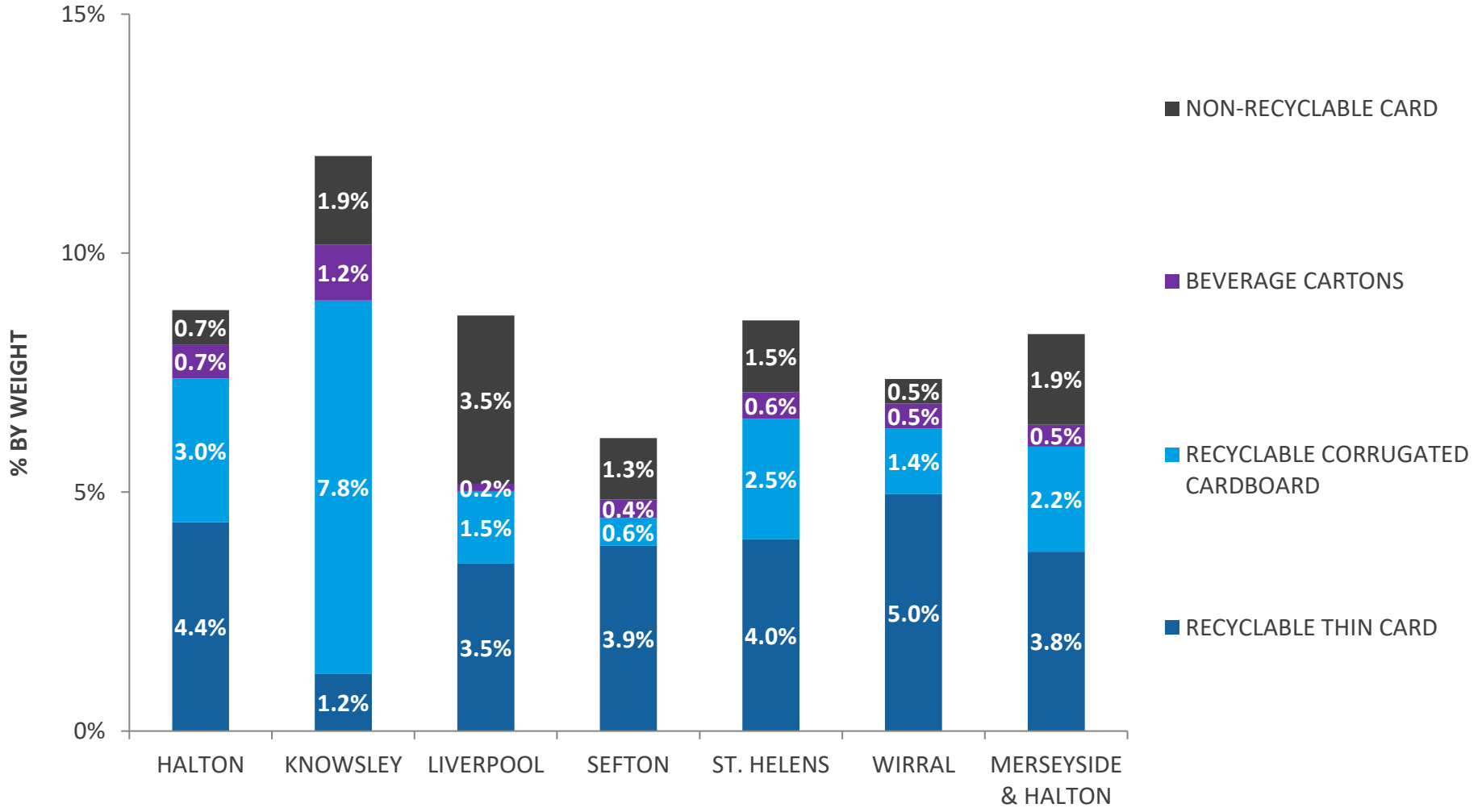
A proportion of this card & cardboard is compatible with dry mixed recycling bins. It was found that between 57.8% (Liverpool) and 85.9% (Wirral) of card and cardboard could have been recycled rather than disposed of in household residual waste bins. Across Merseyside and Halton flats, 71.6% of residual card and cardboard was compatible with dry mixed recycling bins which accounted for 6.0% of all the residual waste. When combining paper and card together it is estimated that 61% of that present in Merseyside and Halton household residual waste could have been recycled via mixed dry recycling bins. This amounts to 10.1% of all the residual waste being collected.

Table 6: Card and cardboard within the household residual waste from flats (%)

RESIDUAL CARD	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
RECYCLABLE THIN CARD	4.37%	1.20%	3.50%	3.88%	4.01%	4.96%	3.75%
RECYCLABLE CORRUGATED CARDBOARD	3.01%	7.81%	1.52%	0.59%	2.52%	1.38%	2.20%
BEVERAGE CARTONS	0.71%	1.17%	0.15%	0.38%	0.56%	0.52%	0.46%
NONRECYCLABLE CARD	0.72%	1.85%	3.52%	1.29%	1.50%	0.52%	1.90%
% TOTAL CARD	8.81%	12.03%	8.69%	6.13%	8.59%	7.37%	8.31%
% RECYCLABLE CARD	7.38%	9.01%	5.02%	4.46%	6.54%	6.33%	5.95%
% CARD RECYCLABLE	83.74%	74.88%	57.75%	72.78%	76.10%	85.93%	71.62%
% OF CARD DEEMED PACKAGING	93.68%	96.73%	72.70%	80.40%	95.08%	91.94%	85.13%

Of the card in the household residual waste from flats, 85.1% was classified as packaging which equates to 7.1% of the total. Commonly this will be due to food packaging card and thicker corrugated box packaging. Across the samples the proportion of card due to packaging ranged between 73% (Liverpool) and 86% Wirral.

Figure 4: Card and cardboard within the household residual waste from flats (%)



Plastics

The annual average range for plastics within the household residual waste from flats was 10.0% from St. Helens flats to 17.3% in the waste from Sefton flats. Merseyside and Halton flats residents currently recycle plastic bottles as part of their dry mixed recycling. St. Helens Council households can additionally recycle plastic food containers. Across the six councils , 14.4% of household residual waste from flats was classified as plastic. On the whole plastic material, although not heavy in itself, can produce large volumes of waste.

Figure 5 clearly shows the levels of recyclable plastics within the household residual waste from flats. On average, around 23.6% of the plastic waste present in the household residual waste from flats was recyclable, this equates to 3.4% of the total waste. Around 16.7% of the plastic in Sefton flats residual waste was recyclable compared with 42.0% of that in St. Helens bins.

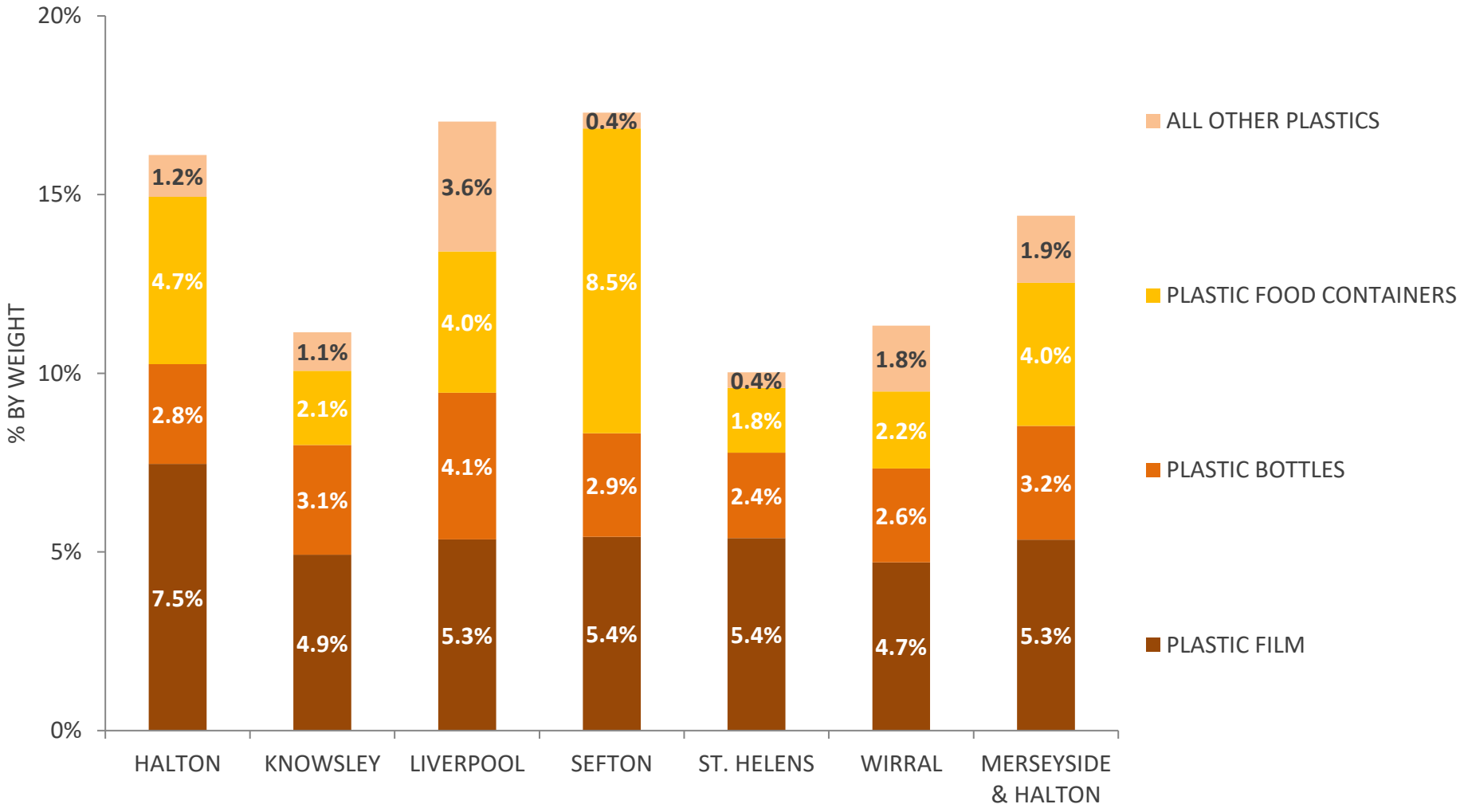
Table 7: Plastics within the household residual waste from flats (%)

RESIDUAL PLASTICS	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
PLASTIC FILM	7.46%	4.92%	5.35%	5.43%	5.38%	4.71%	5.35%
PLASTIC BOTTLES	2.79%	3.07%	4.11%	2.89%	2.40%	2.62%	3.18%
PLASTIC FOOD CONTAINERS	4.69%	2.08%	3.95%	8.53%	1.81%	2.16%	4.00%
ALL OTHER PLASTICS	1.16%	1.08%	3.63%	0.45%	0.44%	1.84%	1.88%
% TOTAL PLASTIC	16.11%	11.15%	17.04%	17.29%	10.03%	11.33%	14.41%
% RECYCLABLE PLASTIC	2.79%	3.07%	4.11%	2.89%	4.21%	2.62%	3.40%
% PLASTIC RECYCLABLE	17.34%	27.56%	24.11%	16.73%	41.97%	23.16%	23.61%
% OF PLASTIC DEEMED PACKAGING	96.77%	88.19%	76.09%	100.00%	96.26%	81.58%	86.35%

Of the plastics in the household residual waste from flats, 86% were classified as packaging which equates to 12.4% of total waste. Around 39% of the plastic packaging was due to bags and film with 26% plastic bottles and 35% food and other packaging containers. Across the samples the proportion of plastic due to packaging ranged between 76% (Liverpool) and 97% (Halton).

Of all the plastic bottles present in the household residual waste from flats around 75% were of as type potentially suitable for deposit return schemes. That is to say they were from consumable liquids and of <3litres in capacity.

Figure 5: Plastic within the household residual waste from flats (%)



Metals

Annual average concentrations of metals in the household residual waste from flats were seen to be 2.9% by weight from Sefton flats, to 6.7% in the household residual waste from Knowsley flats, averaging 3.8% overall. Merseyside and Halton flats residents have access to dry mixed recycling collections that include food and drink cans with St. Helens additionally able to recycle aerosols and clean foil via their recycling collection.

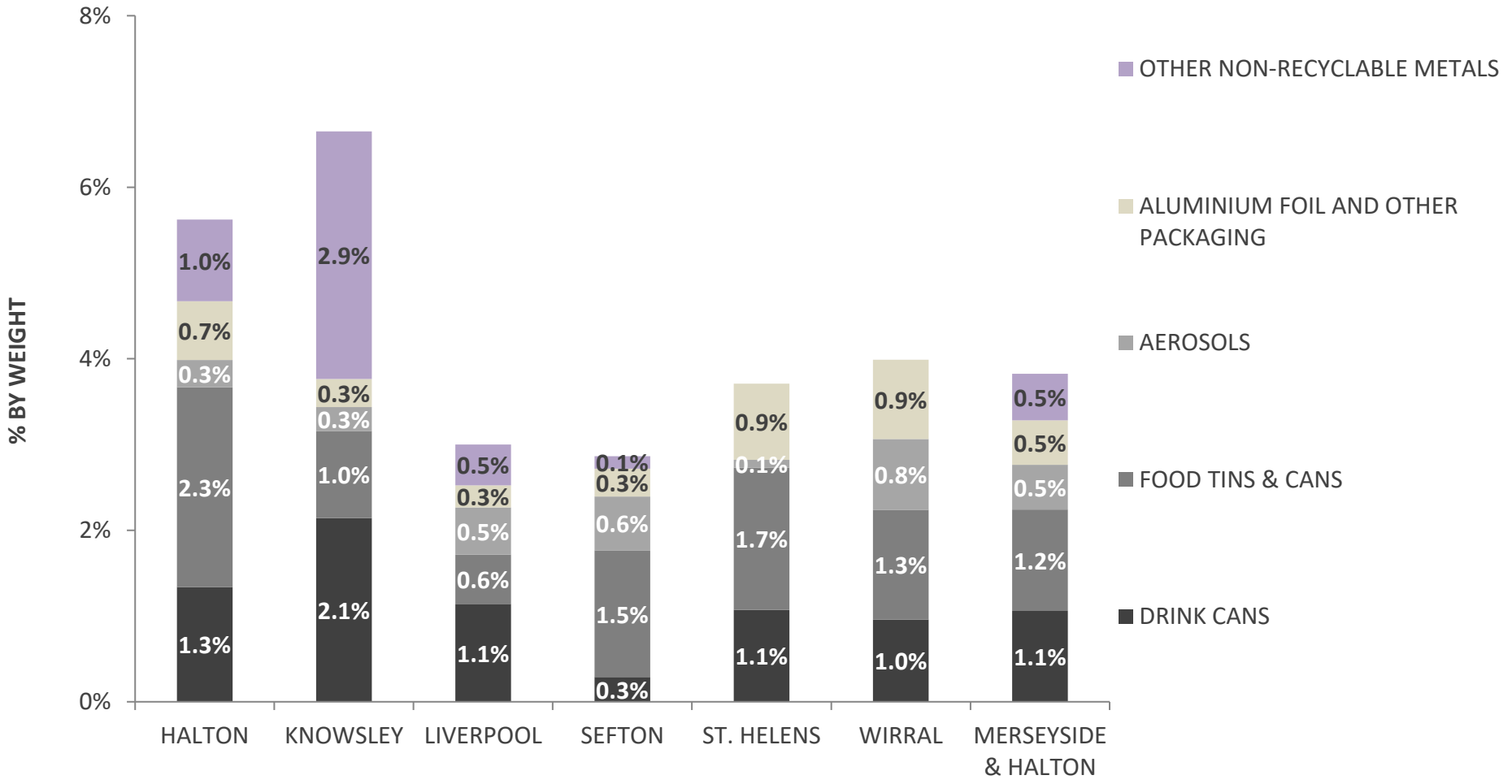
A proportion of this metal waste is therefore compatible with dry mixed recycling collections. It was found that 47.5% of metal in the household residual waste from Knowsley flats was recyclable rising to 100% for the metals in St. Helens residual waste. Across Merseyside and Halton, an average of 61.8% of metal in the household residual waste from flats is classified as recyclable, this equates to 2.4% of all collected residual waste.

35% of all metal in the household residual waste from flats was ferrous. Around 86% of all metals were deemed to be packaging. Around 36% of the packaging metals were food tins with 32% drink cans, 16% foil and other packaging and 16% aerosols.

Table 8: Metals within residual waste (%)

RESIDUAL METALS	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
DRINK CANS	1.34%	2.14%	1.14%	0.29%	1.07%	0.96%	1.06%
FOOD TINS & CANS	2.33%	1.02%	0.58%	1.48%	1.66%	1.28%	1.18%
AEROSOLS	0.32%	0.28%	0.55%	0.63%	0.09%	0.83%	0.52%
FOIL AND OTHER PACKAGING	0.68%	0.33%	0.26%	0.32%	0.89%	0.92%	0.52%
OTHER NONRECYCLABLE METALS	0.95%	2.89%	0.48%	0.15%	0.00%	0.00%	0.54%
RECYCLABLE METALS	3.73%	3.16%	1.72%	1.76%	3.71%	2.24%	2.36%
TOTAL METALS	5.62%	6.65%	3.00%	2.86%	3.71%	3.99%	3.83%
% FERROUS	35.37%	19.32%	33.94%	45.02%	42.96%	37.81%	34.84%
% OF METALS RECYCLABLE	66.28%	47.46%	57.31%	61.62%	100.00%	56.09%	61.80%
% OF METAL DEEMED PACKAGING	83.05%	56.58%	84.14%	94.88%	100.00%	100.00%	85.78%

Figure 6: Metals within the household residual waste from flats (%)



Glass

The average annual concentration of glass in the household residual waste from flats was seen to be 2.9% by weight from Knowsley flats, rising to 17.3% in the waste from St. Helens flats. Merseyside and Halton flats residents can recycle glass bottles and jars as part of their dry mixed recycling collections. On average, Merseyside and Halton flats residual waste was 10.4% glass.

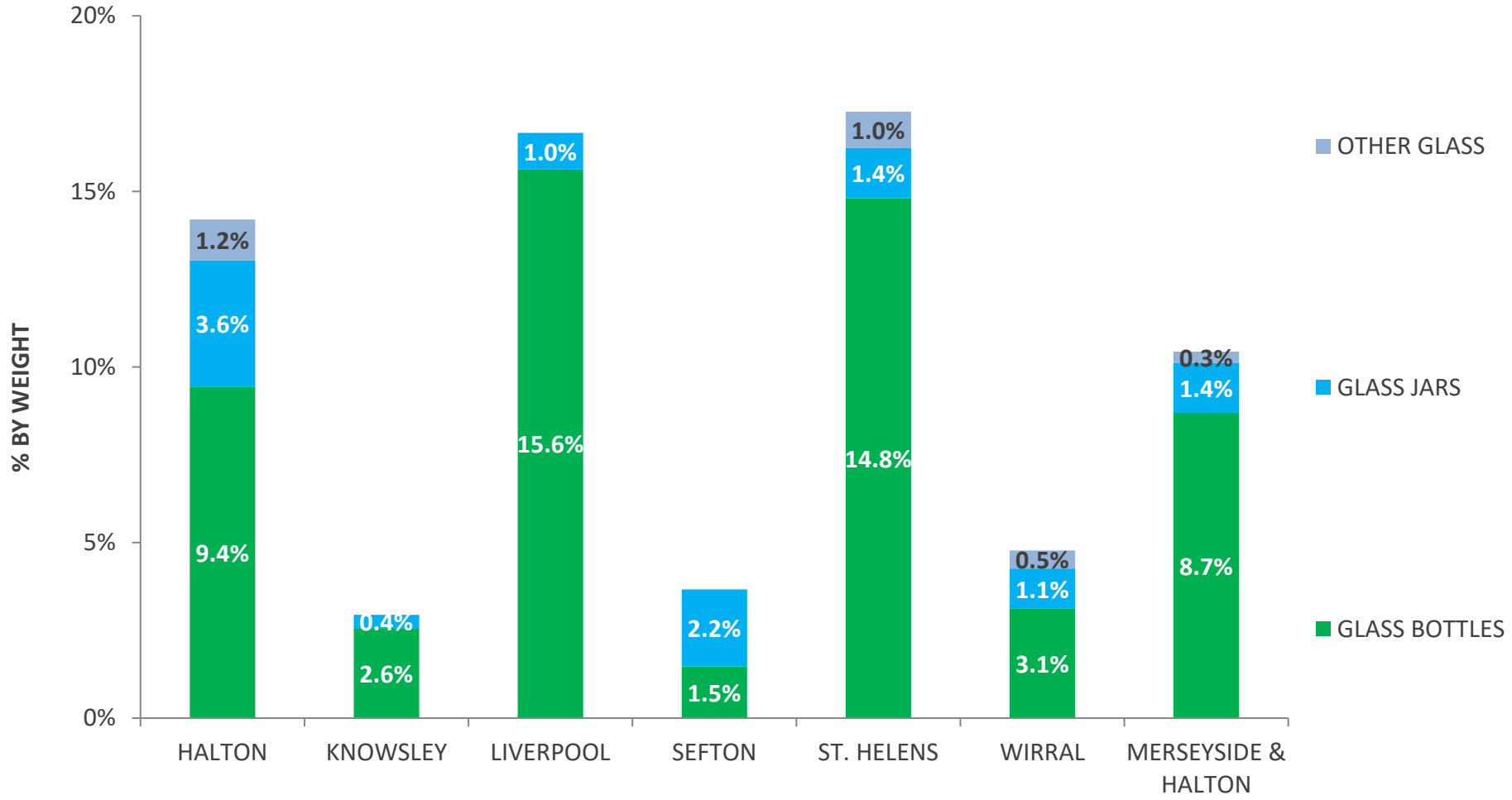
A proportion of this glass consists of bottles and jars could have been recycled rather than placed into residual bins. It was found that across Merseyside and Halton flats, an average of 97.0% of glass in the household residual waste from flats is classified as recyclable, this equates to 10.1% of all collected residual waste.

Overall, 86% of recyclable glass was due to bottles as opposed to jars. Jars often need more cleaning than bottles and are generally less effectively recycled.

Table 9: Glass within the household residual waste from flats (%)

RESIDUAL GLASS	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
GLASS BOTTLES	9.44%	2.56%	15.63%	1.47%	14.80%	3.12%	8.69%
GLASS JARS	3.59%	0.37%	1.04%	2.20%	1.44%	1.14%	1.43%
OTHER GLASS	1.16%	0.00%	0.00%	0.00%	1.04%	0.51%	0.31%
% TOTAL GLASS	14.20%	2.94%	16.67%	3.67%	17.27%	4.77%	10.43%
% RECYCLABLE GLASS	13.04%	2.94%	16.67%	3.67%	16.23%	4.26%	10.12%
% RECYCLABLE	91.81%	100.00%	100.00%	100.00%	94.00%	89.24%	97.00%

Figure 7: Level of glass within the household residual waste from flats (%)



Other notable materials within the household residual waste from flats

Textiles – Averaged annually, between 1.2% of the household residual waste from Knowsley flats and 15.9% of that from Sefton flats was seen to consist of textiles. Only St. Helens Council offers separate collections of textiles which may not be available to all flat's residents.

Overall, an average of 5.0% of household residual waste across all flats consisted of textile waste. Of the textiles present, around 73% were potentially recyclable (via either separate collections or by diverting to local bring banks or donation to charities or community groups) and these accounted for 3.7% of the total residual waste.

Disposable Nappies & AHP (Absorbent Hygiene Products) Disposable nappy levels within the residual waste of households with babies can be extremely high. These households will be more prevalent in demographic samples typical for young families. This form of waste also encompasses adult incontinence products which will be more typically prevalent in demographic samples with a higher density of senior residents. Averaged annually, the concentrations of disposable nappies and AHP averaged 4.1%. In Liverpool the samples average was 6.7% with Wirral averaging just 1.2%.

Inert rubble – This type of waste is generally one of the densest materials placed into residual bins. Although more suited for disposal at HWRC's small amounts of this material are common in residual bins, but less common for flats where DIY construction is less likely. On average just 2.8% of Merseyside and Halton residual flats waste consisted of mixed non-combustible waste. Over 7.4% of the residual waste collected from Liverpool flats consisted of this waste

Hazardous waste (HHW) and waste electrical & electronic equipment (WEEE) – On average just 0.4% of Merseyside and Halton residual flats waste consisted of hazardous waste (0.1%) and WEEE (0.3%). Levels of WEEE were highest at 0.7% for the Halton sample.

Potential recyclability of the residual waste

The overall recyclability of the household residual waste from flats relates to all items present that could have been accepted into the dry mixed recycling that are available for Merseyside and Halton flats residents. Results averaged annually showed that the overall recyclability of the household residual waste from flats was highest in St. Helens at over 74%. Food is shown as a recyclable element for St. Helens as it is the only authority to collect this. For the other councils, ranges in the recyclability of the household residual waste from flats were 19.9% for Knowsley up to 30.9% for Halton. Across Merseyside and Halton, it is expected that 31.7% of flats household residual waste is recyclable via the dry mixed recycling bins that are available to flats residents. Overall, around 26.2% of household residual waste from flats was compatible with dry mixed recycling, 4.8% via the potential food collections in St. Helens and 0.7% via any garden waste collections (this includes biodegradable pet bedding where accepted).

Table 10: Proportion of household residual waste from flats currently recyclable via dry mixed recycling collections (%)

% RECYCLABLES IN RESIDUAL WASTE	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
DRY RECYCLABLES	29.87%	18.55%	29.04%	21.64%	33.91%	23.40%	26.15%
RECYCLABLE FOOD	0.00%	0.00%	0.00%	0.00%	40.17%	0.00%	4.82%
GARDEN RECYCLABLE	1.00%	1.37%	0.04%	1.51%	0.34%	0.73%	0.68%
TOTAL RECYCLABLE	30.86%	19.91%	29.07%	23.15%	74.42%	24.13%	31.66%

Table 11: Proportion of household residual waste from flats recyclable (%)

% RECYCLABLE MATERIALS WITHIN RESIDUAL WASTE	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON	MERSEYSIDE & HALTON SPLIT*
RECYCLABLE PAPER	2.93%	0.37%	1.52%	8.85%	1.85%	7.95%	4.15%	13.12%
RECYCLABLE CARD & CARDBOARD	7.38%	9.01%	5.02%	4.46%	6.54%	6.33%	5.95%	18.79%
RECYCLABLE PLASTICS	2.79%	3.07%	4.11%	2.89%	4.21%	2.62%	3.40%	10.75%
RECYCLABLE TEXTILES	0.00%	0.00%	0.00%	0.00%	1.37%	0.00%	0.16%	0.52%
RECYCLABLE GLASS	13.04%	2.94%	16.67%	3.67%	16.23%	4.26%	10.12%	31.97%
RECYCLABLE METALS	3.73%	3.16%	1.72%	1.76%	3.71%	2.24%	2.36%	7.47%
TOTAL DRY RECYCLABLES	29.87%	18.55%	29.04%	21.64%	33.91%	23.40%	26.15%	82.61%
RECYCLABLE FOOD WASTE	0.00%	0.00%	0.00%	0.00%	40.17%	0.00%	4.82%	15.24%
RECYCLABLE GARDEN WASTE	1.00%	1.37%	0.04%	1.51%	0.34%	0.73%	0.68%	2.15%
RECYCLABLE PET BEDDING	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
TOTAL ORGANIC RECYCLABLES	1.00%	1.37%	0.04%	1.51%	40.51%	0.73%	5.51%	17.39%
TOTAL RECYCLABLE CONTENT	30.86%	19.91%	29.07%	23.15%	74.42%	24.13%	31.66%	100.00%

**Split is the proportional breakdown of the recyclable content. E.g., Recyclable paper forms 4.2% of the residual waste equating to 13.1% of the recyclable content*

Figure 8: Proportion of household residual waste from flats recyclable (%)

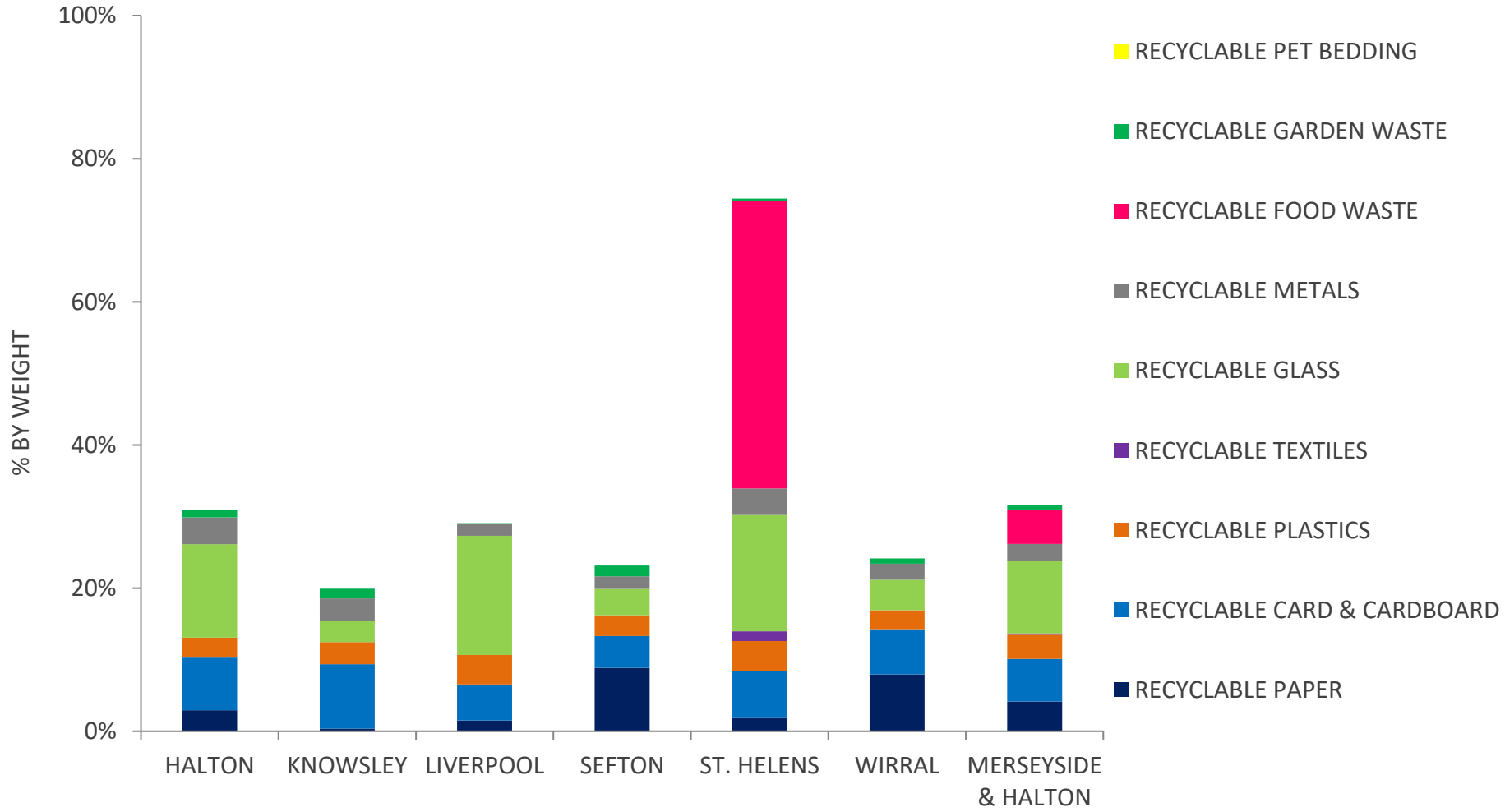


Figure 8 clearly shows the proportion of household residual waste from flats that is currently collectable in the dry mixed recycling. Flats from each individual council were seen to be disposing of differing levels of recyclable materials, both in terms of proportion and composition (Tables 10 & 11). On average, 31.7% of household residual waste from flats is classified as recyclable. Figure 9 gives a breakdown of the recyclables present in all of Merseyside and Halton household residual waste.

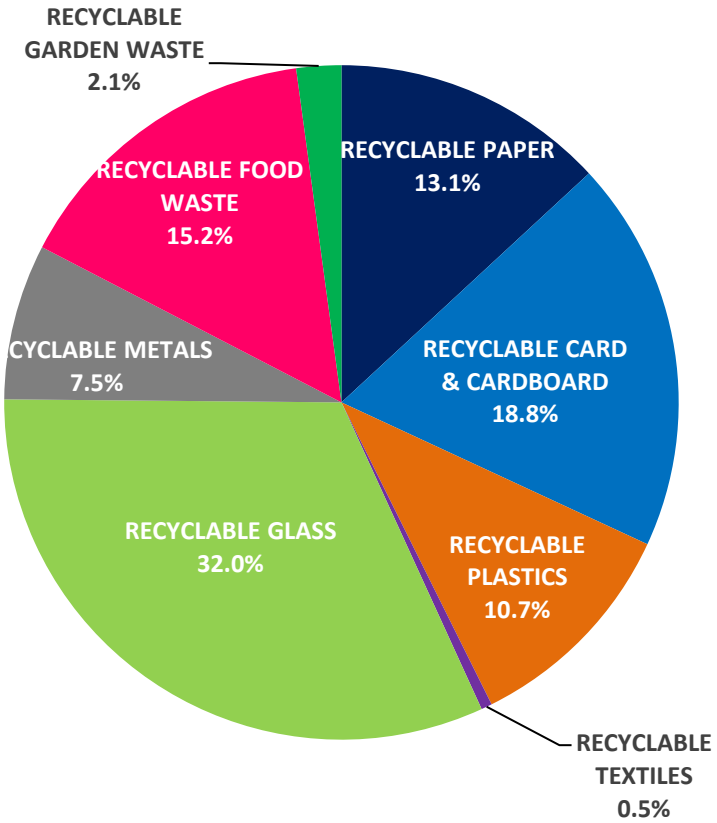
Figures show that glass bottles and jars accounted for 32% of the recyclables present within the household residual waste from flats – 10.1% of the total waste.

Recyclable paper and card made up 31.9% of the recyclable content forming 10.1% of the household residual waste from flats.

Despite only being potentially recyclable in St. Helens, food formed 15.2% of the recyclable element of household residual waste from flats for the Merseyside and Halton area . Overall, it contributed 4.8% to the total.

Recyclable plastics were responsible for 10.8% of the recyclable material present in household residual waste from Merseyside and Halton flats with recyclable metals accounting for 7.5%

Figure 9: Recyclables within the household residual waste from flats for the Merseyside and Halton area



Packaging content of the residual waste

Merseyside Recycling and Waste Authority has an interest in the levels of packaging material in the various waste streams. A large proportion of the materials that are available for dry mixed recycling consist of packaging items so ideally would not be present in the residual waste. On average, 35% of Merseyside and Halton residual waste consists of packaging items. Wirral waste was 26.5% packaging items this compares with 43.2% for Halton.

Table 12: Proportion of packaging material in the household residual flats waste (%)

PACKAGING CONTENT (%)	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON	MERSEYSIDE & HALTON SPLIT*
PAPER PACKAGING	0.27%	0.01%	0.96%	1.36%	0.32%	1.14%	0.84%	2.40%
CARD PACKAGING	8.25%	11.64%	6.32%	4.93%	8.17%	6.77%	7.07%	20.21%
PLASTIC FILM PACKAGING	7.22%	4.23%	4.54%	5.43%	5.17%	4.20%	4.87%	13.91%
DENSE PLASTIC PACKAGING	8.36%	5.60%	8.43%	11.87%	4.48%	5.05%	7.58%	21.66%
METAL PACKAGING	4.67%	3.76%	2.52%	2.72%	3.71%	3.99%	3.28%	9.38%
GLASS PACKAGING	13.04%	2.94%	16.67%	3.67%	16.23%	4.26%	10.12%	28.93%
OTHER PACKAGING	0.44%	0.37%	0.23%	0.17%	0.74%	0.27%	0.32%	0.91%
FOOD ASSOCIATED PACKAGING*	0.90%	1.36%	0.75%	0.71%	1.53%	0.77%	0.91%	2.61%
TOTAL PACKAGING	43.15%	29.90%	40.41%	30.84%	40.36%	26.45%	34.99%	100.00%

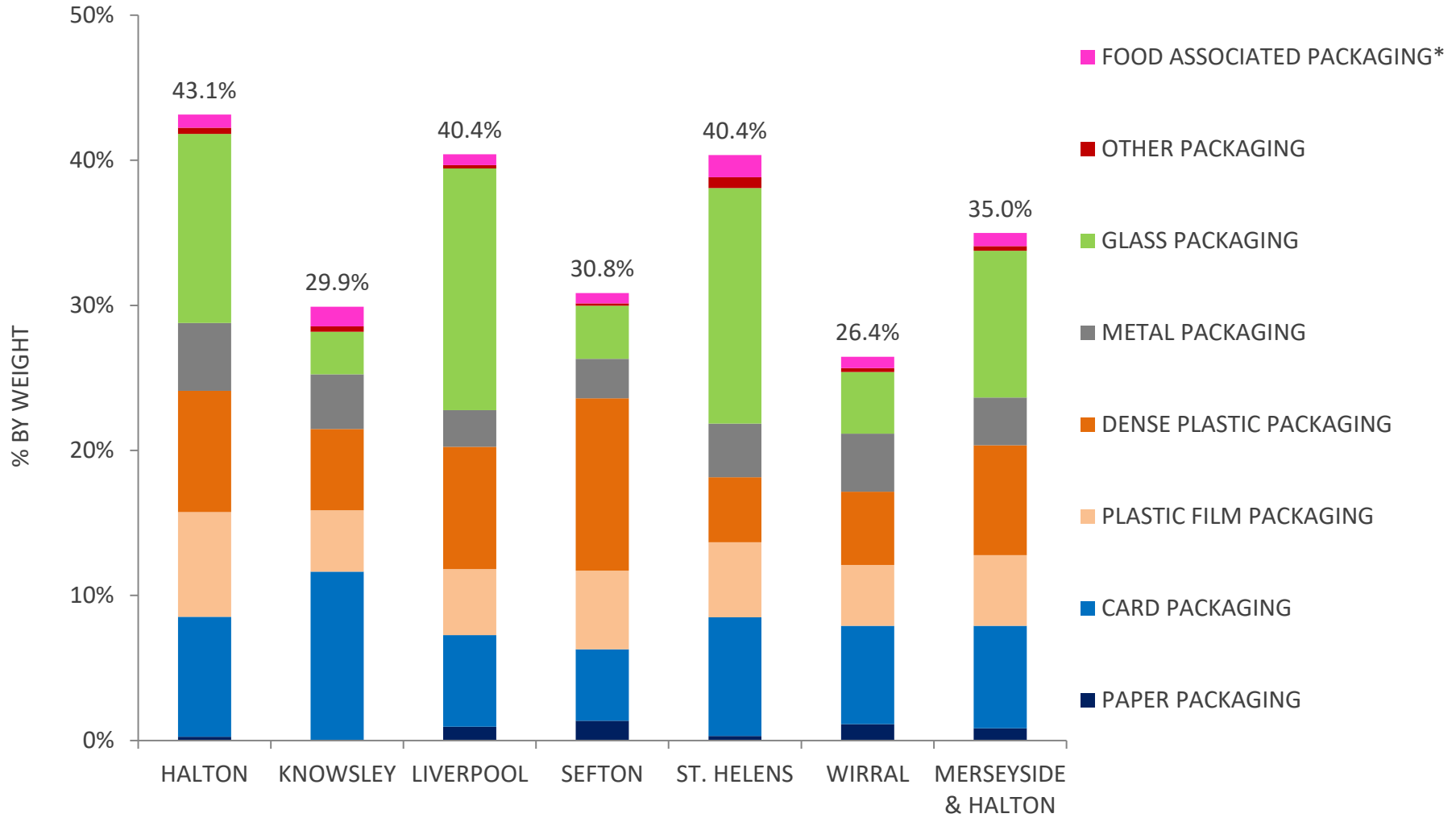
**Split is the proportional breakdown of the packaging content. E.g., Card packing forms 7.1% of the residual waste equating to 20.2% of the packaging content*

*** Estimated for food waste disposed of in original packaging (5% of discarded weight)*

Just over a third of all Merseyside and Halton's household residual flats waste was due to packaging. Almost 36% of all packaging was plastic accounting for 12.4% of total waste.

An average of 22.6% of packaging was formed from paper and card with 28.9% glass packaging, 9.4% metal packaging, 0.9% other packaging and 2.6% food associated packaging.

Figure 10: Breakdown of packaging material household residual flats waste (%)



Packaging recyclability

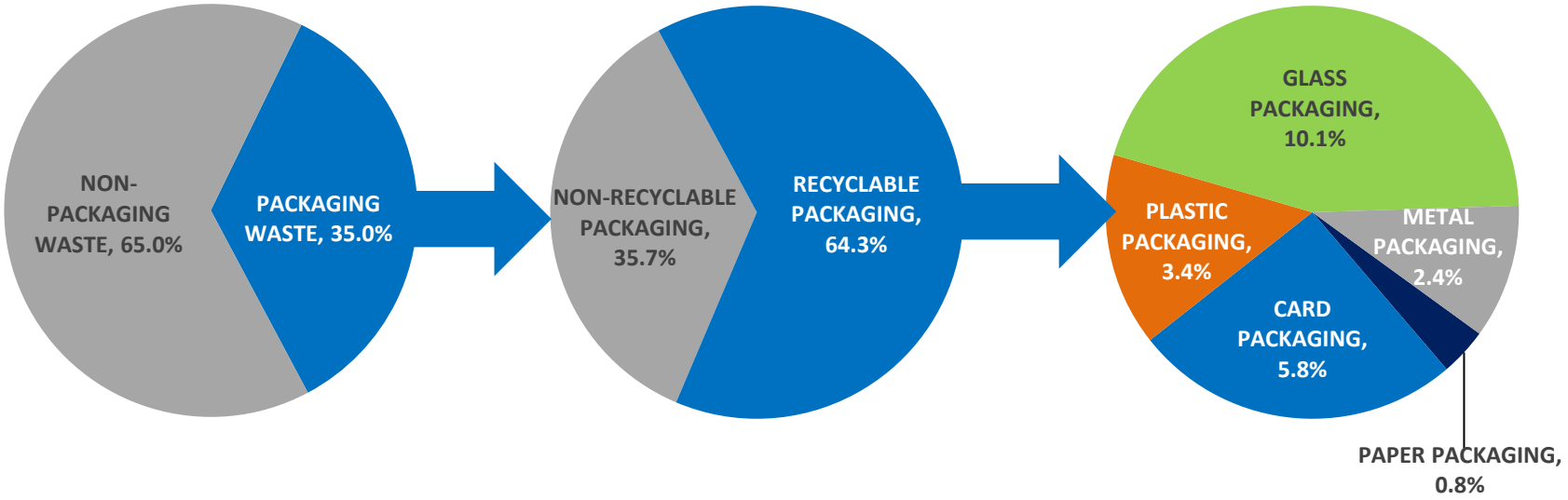
Of the packaging material present in the household residual waste from Merseyside & Halton flats, an average of 64.3% was of a type that could have been placed into dry mixed recycling bins. Therefore, an estimated 22.5% of household residual waste from flats is due to recyclable packaging items.

Just 14.2% of Sefton household residual waste from flats was due to recyclable packaging compared with 30.9% of that from St. Helens. In St. Helens, 77% of the packaging in residual bins was deemed recyclable.

Table 13: Recyclable content of packaging in household residual waste from flats

PACKAGING CONTENT (%)	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
TOTAL PACKAGING	43.15%	29.90%	40.41%	30.84%	40.36%	26.45%	34.99%
RECYCLABLE PACKAGING	27.21%	18.18%	28.18%	14.15%	30.93%	16.19%	22.49%
% OF PACKAGING RECYCLABLE	63.05%	60.80%	69.74%	45.87%	76.63%	61.23%	64.29%

Figure 11: Proportion of Merseyside & Halton household residual waste from flats due to packaging and recyclable content (%)



Drinks containers within the residual waste

A proportion of the packaging material within the household residual waste from flats will be due to single use drinks containers. These are defined as either plastic bottles, metal drinks cans and glass bottles. Smaller amounts of liquids cartons (0.5%) were present. The majority of these are either for non-drink waste (sauces, custard etc) or for drinks not consumed on a single use basis (larger cartons of milk, fruit juice etc). Less than 0.2% of waste was due to single use coffee cups with film pouches present at trace levels as part of the plastic film that was disposed of.

Results indicated that the levels of single use drinks containers ranged between 4.1% for Sefton and 20.5% for Liverpool. This represented an average for Merseyside & Halton of 10.8%.

In most cases, the majority of all drink's containers were seen to be glass. These were responsible for between 35% of Knowsley and 76% of Liverpool drink containers. On average, 7.3% of Merseyside & Halton residual waste was due to glass drinks bottles – 68% of the drink containers present.

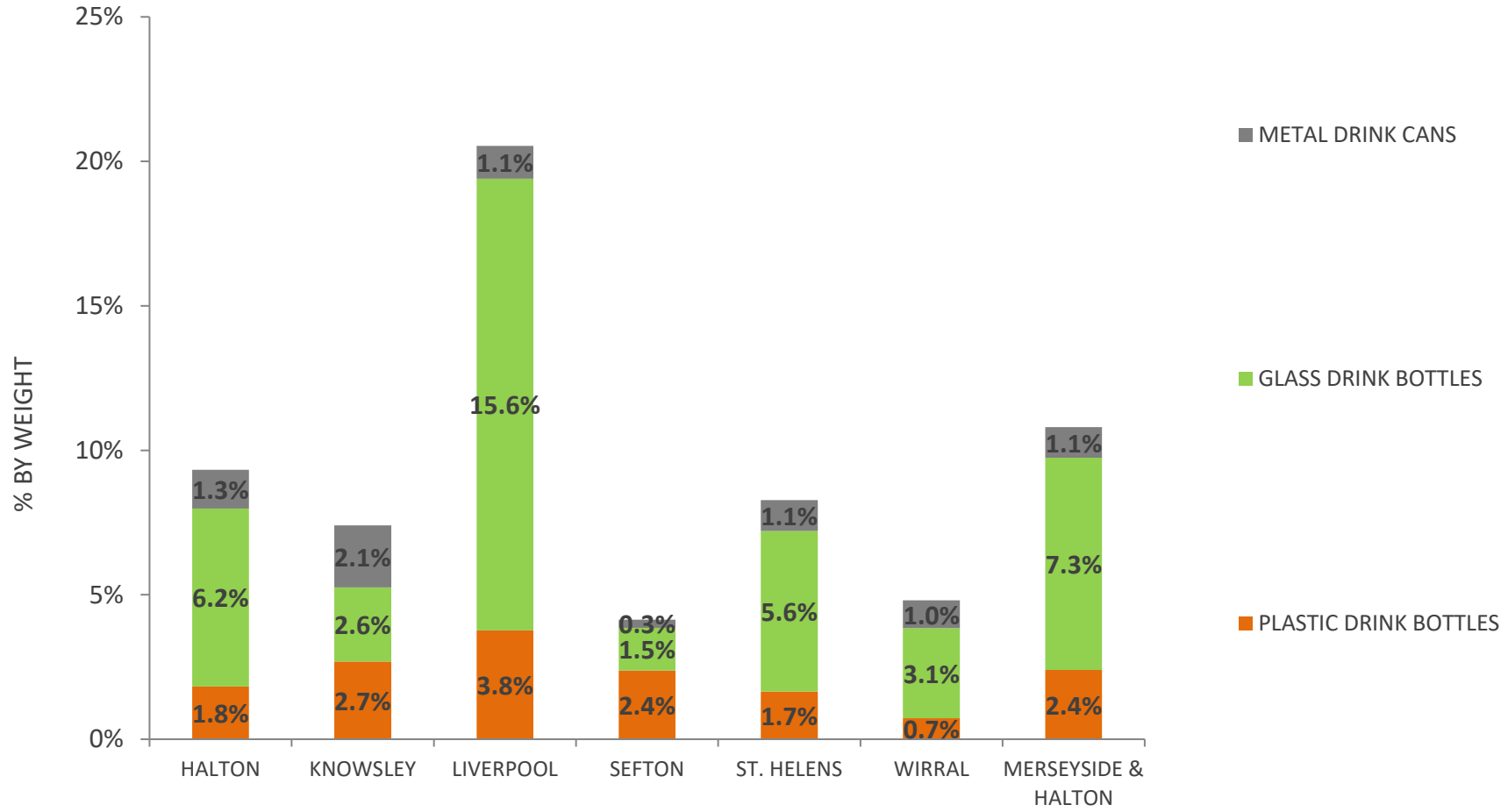
Between 15% of Wirral and 58% of Sefton drink containers were due to plastic bottles. On average, 2.4% of Merseyside & Halton residual waste was due to plastic drinks bottles – 22% of the drink containers present. Of the plastic drink bottles present, 98% were under 3 litres in capacity. Of all plastic bottles under 3 litres, 57% were polyethylene terephthalate (PET) with 43% high density polyethylene (HDPE).

Between 6% of Liverpool and 29% of Knowsley drink containers were due to metal cans. On average, 1.1% of Merseyside & Halton residual waste was due to metal drink cans – 10% of the drink containers present.

Table 14: Drink containers in the household residual waste from flats

SINGLE USE DRINK CONTAINERS %	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
PLASTIC DRINK BOTTLES	1.8%	2.7%	3.8%	2.4%	1.7%	0.7%	2.4%
GLASS DRINK BOTTLES	6.2%	2.6%	15.6%	1.5%	5.6%	3.1%	7.3%
METAL DRINK CANS	1.3%	2.1%	1.1%	0.3%	1.1%	1.0%	1.1%
TOTAL	9.3%	7.4%	20.5%	4.1%	8.3%	4.8%	10.8%

Figure 12: Drink containers in the household residual waste from flats (%)



Potentially reusable items

In the same way that certain materials were categorised as packaging items, others were selected as having possible reuse potential. It is a fairly judgemental process to label a waste item as having reuse potential. Many people will have absolutely no interest in any item that has been placed into a rubbish bin. Others will judge an item on its merits. For this survey items such as books, clothes, fabrics, carpet, rugs, paint and electrical goods[3] were deemed had having some potential for reuse.

Table 15: Reuse items within the kerbside residual waste from flats

POTENTIAL REUSE ITEMS	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
%	2.8%	1.9%	2.0%	16.4%	2.2%	15.3%	7.3%

On average around 7.3% household residual waste from the flats across Merseyside & Halton had some reuse potential. This amount peaked in the Sefton waste at 16.4%. Half of this (50%) was due to clothing and shoes in the residual waste with 18% other textiles and 28% carpet.

[3] No electrical testing was undertaken therefore it should be considered that a good proportion of electrical items will be non-functional and irreparable.

Mixed dry recycling waste

Composition of flats mixed dry recycling

This section looks at the composition of the mixed recycling collected from the flats sampled. Hand sorting of the recycling waste gave concentration by weight figures for the fifteen main categories of waste as well as the more detailed subcategories. Results can again be expressed in terms of percentage concentration by weight for each council and Merseyside and Halton as a whole. Table 16 and Figure 13 show recycling data in terms of percentage composition for major materials across all of Merseyside and Halton flats.

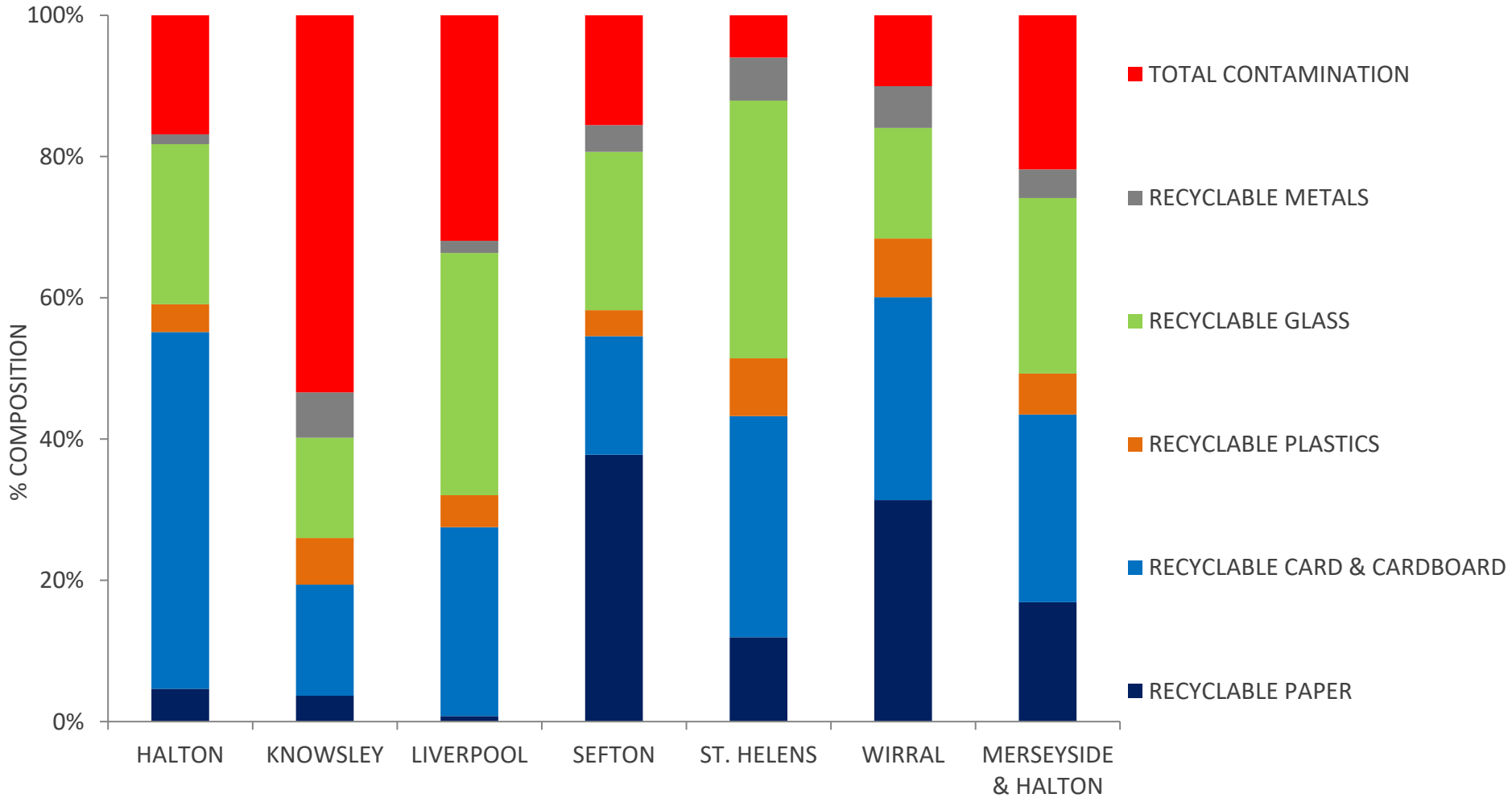
As residual waste will contain a proportion that is classified as recyclable; then recycling waste will contain a faction that is deemed to contamination. That is to say that it is not compatible with the materials currently acceptable to the recycling bin it is placed into.

Table 16: Composition of mixed dry recycling (% concentration)

FLATS MIXED DRY RECYCLING (%)	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS*	WIRRAL	MERSEYSIDE & HALTON
RECYCLABLE PAPER	4.64%	3.68%	0.79%	37.77%	11.96%	31.38%	16.91%
RECYCLABLE CARD & CARDBOARD	50.51%	15.72%	26.74%	16.79%	31.29%	28.70%	26.56%
RECYCLABLE PLASTICS	3.94%	6.58%	4.51%	3.69%	8.19%	8.33%	5.80%
RECYCLABLE GLASS	22.66%	14.22%	34.31%	22.42%	36.49%	15.66%	24.86%
RECYCLABLE METALS	1.38%	6.43%	1.70%	3.80%	6.09%	5.90%	4.04%
TOTAL DRY RECYCLABLES	83.14%	46.63%	68.06%	84.48%	94.00%	89.97%	78.17%
TOTAL CONTAMINATION	16.86%	53.37%	31.94%	15.52%	6.00%	10.03%	21.83%

**Composition of all separate bins combined*

Figure 13: Composition of flats mixed dry recycling (%)



Flats Recycling Contamination

Table 16 shows that on average 21.8% of the items present in Merseyside and Halton mixed dry recycling bins are made up of contamination. This section looks to breakdown the amounts and concentrations of various contaminants being placed into the flats mixed dry recycling across Merseyside and Halton.

Some forms of contamination may be due to residents' lack of knowledge in relation to the materials acceptable for mixed dry recycling bins. For example, a householder may believe anything metallic is acceptable with tins and cans. Other contamination will be formed from waste that is totally unrelated to the materials collected (i.e., disposable nappies, wood, or food waste). Table 17 and Figure 14 show the amounts of contamination materials recovered from the recycling bins.

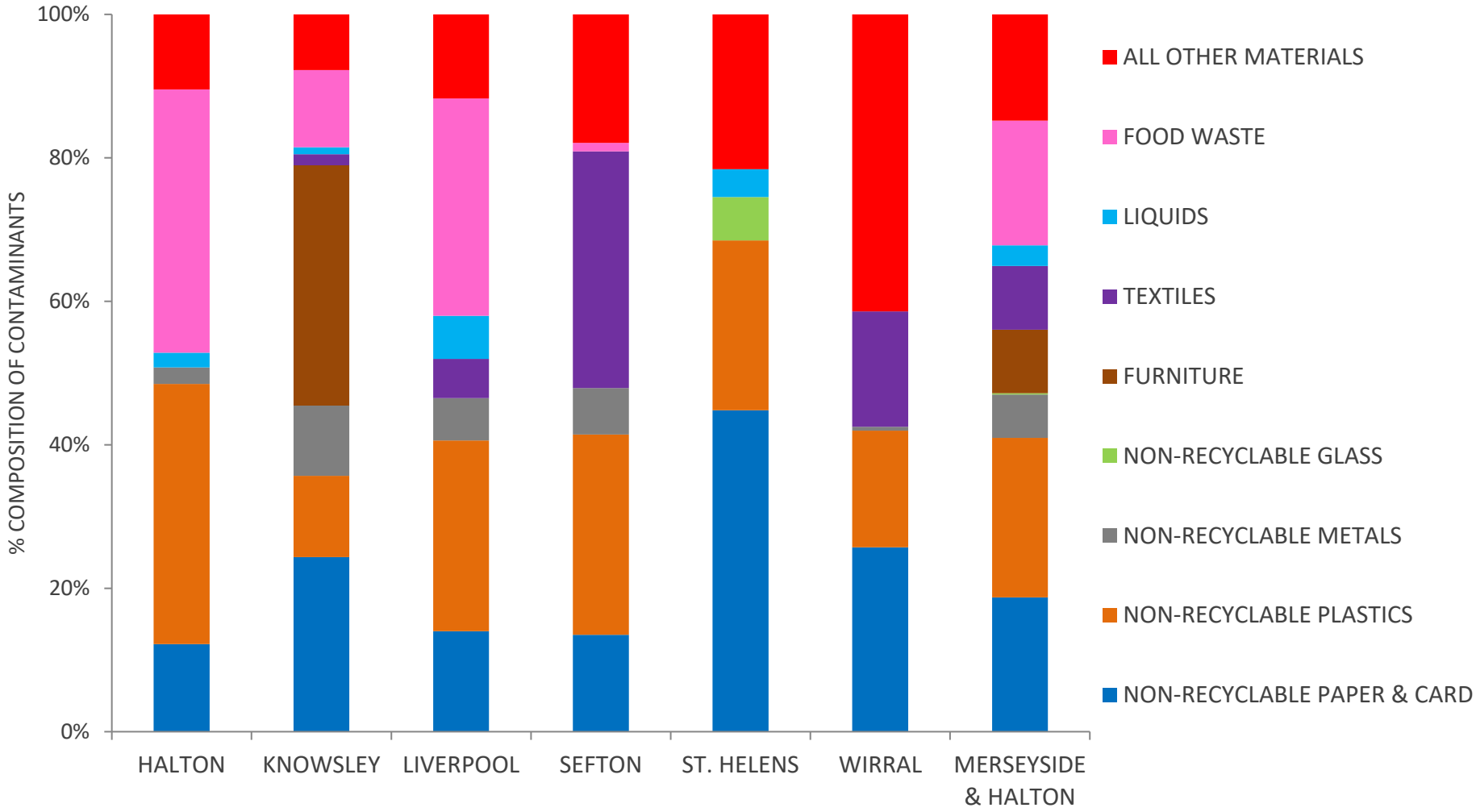
On average 21.8% of the material collected in recycling bins was deemed to be contamination. The recycling collected from St. Helens households was just 6% contamination, St. Helens have separate rather than combined DMR collections. In contrast the recycling collected from Knowsley households was 53.4% contamination.

Table 17: Breakdown of flats mixed dry recycling bin contaminants (%)

CONTAMINATION (%)	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
NONRECYCLABLE PAPER & CARD	2.1%	13.0%	4.5%	2.1%	2.7%	2.6%	4.1%
NONRECYCLABLE PLASTICS	6.1%	6.0%	8.5%	4.3%	1.4%	1.6%	4.9%
NONRECYCLABLE METALS	0.4%	5.2%	1.9%	1.0%	0.0%	0.1%	1.3%
NONRECYCLABLE GLASS	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%
FURNITURE	0.0%	17.9%	0.0%	0.0%	0.0%	0.0%	1.9%
TEXTILES	0.0%	0.8%	1.7%	5.1%	0.0%	1.6%	1.9%
LIQUIDS	0.4%	0.5%	1.9%	0.0%	0.2%	0.0%	0.6%
FOOD WASTE	6.2%	5.8%	9.7%	0.2%	0.0%	0.0%	3.8%
ALL OTHER MATERIALS*	1.8%	4.1%	3.7%	2.8%	1.3%	4.2%	3.2%
TOTAL CONTAMINATION	16.9%	53.4%	31.9%	15.5%	6.0%	10.0%	21.8%

**WEEE contributes 0.3%*

Figure 14: Breakdown of contaminants present within flats mixed dry recycling (%).



- Overall, it was seen that the most prevalent single contaminant in the mixed recycling bins was nonrecyclable plastics which formed 4.9% of mixed dry recycling or 22.2% of the contamination in Merseyside and Halton mixed dry recycling. Around 43% of this was due to plastic film. Around 11% of the contamination in Knowsley mixed dry recycling was due to nonrecyclable plastics with this proportion being 36% for Halton.
- Nonrecyclable paper and card formed 18.7% of the contamination in Merseyside and Halton mixed dry recycling bins; accounting for 4.1% of recycling. Around 12% of the contamination in Halton mixed dry recycling was due to nonrecyclable paper and card with this proportion being 28% for Sefton.
- Food waste formed 3.8% of mixed dry recycling or 17.4% of Merseyside and Halton flats mixed dry recycling contamination. None of the contamination in Wirral or St. Helens mixed dry recycling was due to food. However, food waste was responsible for around 37% of all mixed dry recycling contamination in Halton. Contained liquids (mainly drinks inside plastic bottles) contributed an additional 2.9% of contamination or 0.6% of collected Merseyside and Halton mixed dry recycling.
- General residual waste formed 14.8% of the mixed dry recycling contamination; accounting for 3.2% of Merseyside and Halton mixed dry recycling. This included items such as rubble, pet bedding, WEEE (0.3%) etc.
- Textiles made up 1.9% of Merseyside and Halton mixed dry recycling or 8.9% of the contamination that was present. Textiles were responsible for 33% of the contamination present within Sefton mixed dry recycling.
- Over a third of Knowsley recycling contamination was due to furniture. This was absent from other samples. Larger communal bins can often attract items that residents with smaller kerbside bins could not feasibly dispose of.
- Nonrecyclable metals made up 1.3% of Merseyside and Halton mixed dry recycling or 6.0% of the contamination that was present. Nonrecyclable metal was responsible for 9.8% of the contamination present within the Knowsley mixed dry recycling.
- Unacceptable glass made up <0.1% of Merseyside and Halton mixed dry recycling or just 0.2% of the contamination that was present. This type of glass was responsible for 6.0% of the contamination present within the St. Helens mixed dry recycling.

Packaging content of flats mixed dry recycling

Merseyside Recycling and Waste Authority has an interest in the levels of packaging material in its various waste streams. A large proportion of the materials that are available for flats mixed dry recycling consist of packaging items.

Table 18: Levels of packaging material in the flats mixed dry recycling (%)

PACKAGING CONTENT (%)	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
PAPER PACKAGING	0.5%	0.0%	0.2%	1.8%	0.9%	2.0%	1.0%
CARD PACKAGING	50.9%	23.9%	26.8%	14.7%	33.9%	30.4%	27.8%
PLASTIC FILM PACKAGING	3.3%	2.6%	2.5%	1.4%	0.5%	0.7%	1.7%
DENSE PLASTIC PACKAGING	6.7%	9.1%	7.5%	6.6%	9.1%	9.3%	8.0%
METAL PACKAGING	1.8%	7.5%	2.3%	4.3%	6.1%	6.0%	4.5%
GLASS PACKAGING	22.7%	14.2%	34.3%	22.4%	36.5%	15.7%	24.9%
OTHER PACKAGING	0.0%	0.0%	0.6%	0.0%	0.0%	1.2%	0.4%
FOOD ASSOCIATED PACKAGING*	0.2%	0.1%	0.3%	0.0%	0.0%	0.0%	0.1%
TOTAL PACKAGING	86.1%	57.4%	74.7%	51.2%	87.0%	65.1%	68.4%

** Estimated for food waste disposed of in original packaging (5% of discarded weight)*

Around 68% of all Merseyside and Halton flats mixed dry recycling was due to packaging. This ranged between 51.2% for Sefton up to 87.0% for St. Helens. Around 41% of all packaging was card and cardboard accounting for 27.8% of total mixed dry recycling. An average of 36% of packaging was formed from glass bottles and jars with 14.3% plastics, 6.5% metal packaging and 1.5% paper packaging.

Figure 15: Concentrations of packaging material in the flats mixed dry recycling (%)

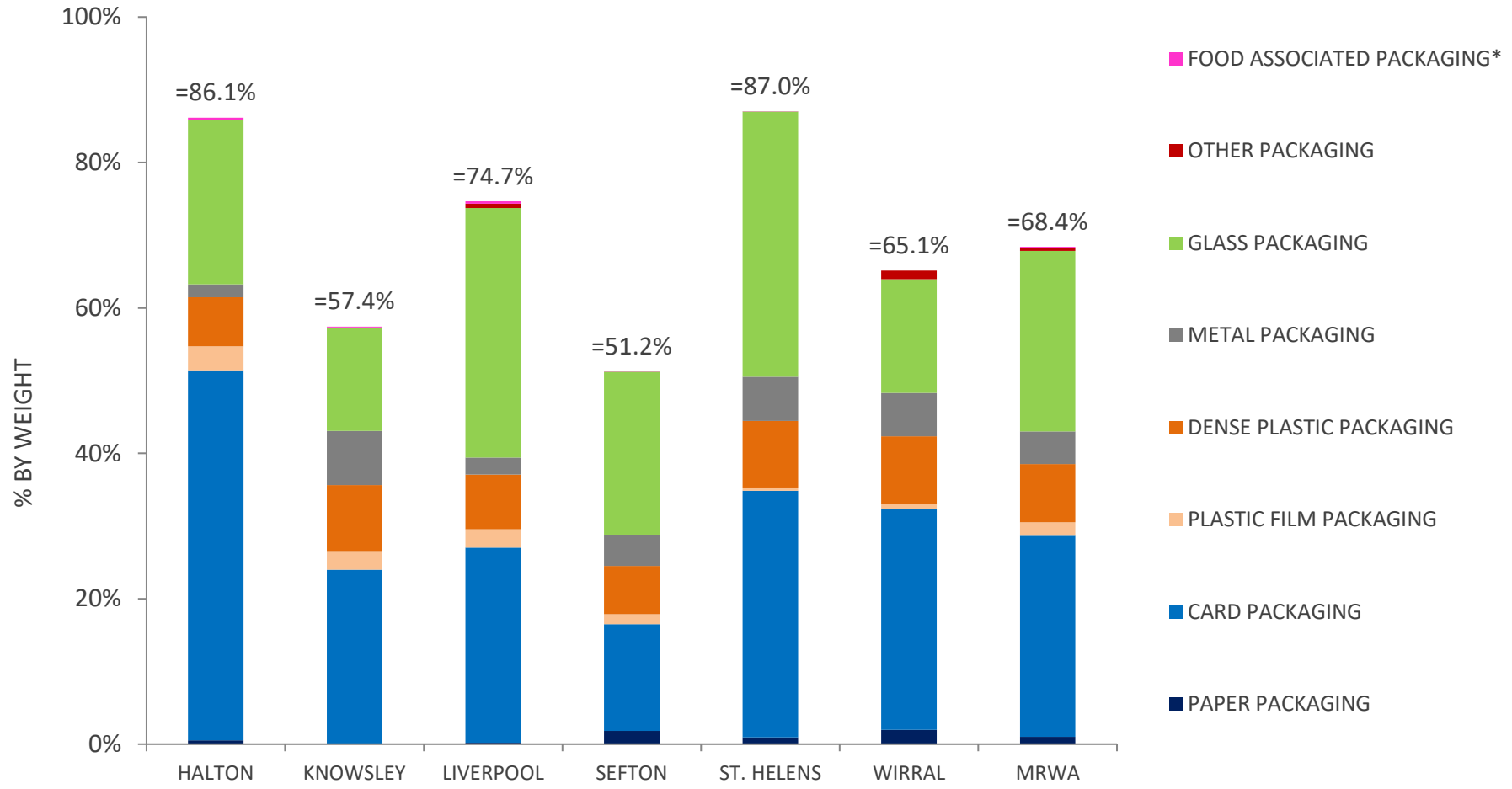
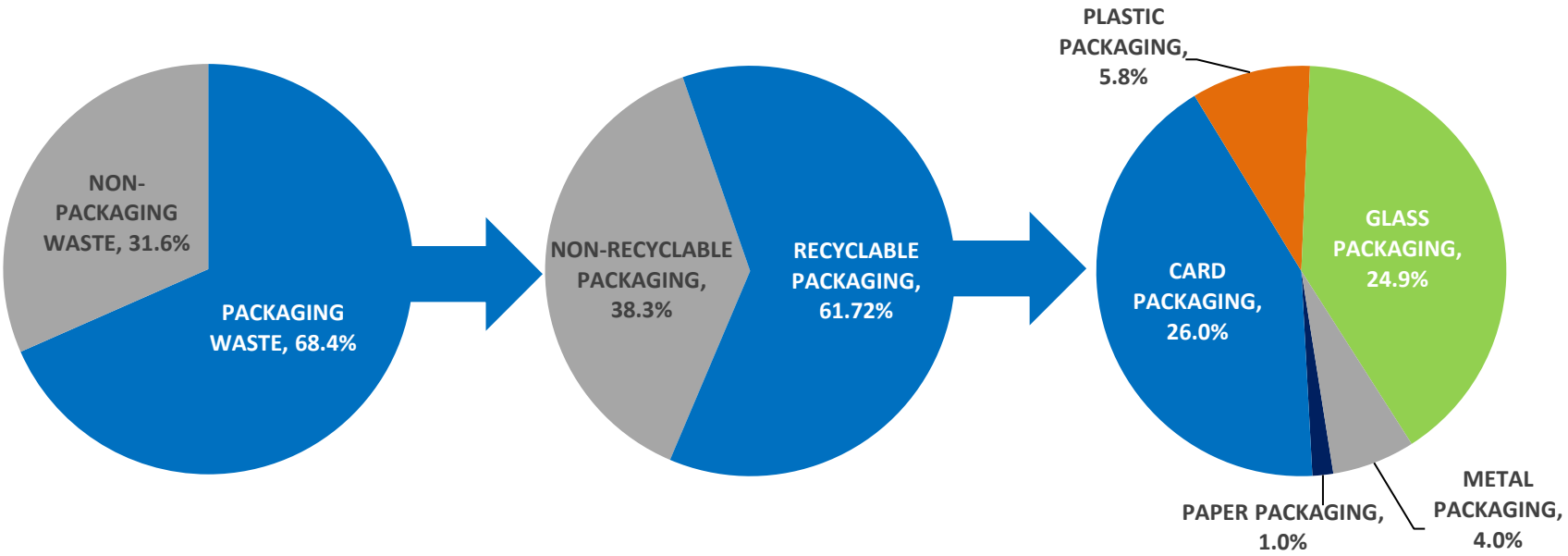


Figure 16: Proportion of Merseyside & Halton flats mixed dry recycling due to packaging and recyclable content (%)



Drinks containers within the mixed dry recycling

Results indicated that the levels of single use drinks containers in the mixed dry recycling ranged between 19.6% for Wirral up to 40.4% for St. Helens. This represented an average for Merseyside & Halton of 28.4%.

For all authorities, the majority of drink's containers were seen to be glass. These were responsible for 52% of Knowsley and 87% of Sefton drink containers. On average, 22% of Merseyside & Halton mixed dry recycling was due to glass drinks bottles – 78% of the drink containers present. Smaller amounts of liquids cartons (1.7%) were present. The majority of these are either for non-drink waste (sauces, custard etc) or for drinks not consumed on a single use basis (larger cartons of milk, fruit juice etc). Less than 0.1% of waste was due to single use coffee cups with film pouches present at trace levels as part of the plastic film that was disposed of. Cartons, cups and pouches are not acceptable for mixed recycling so should not really be present.

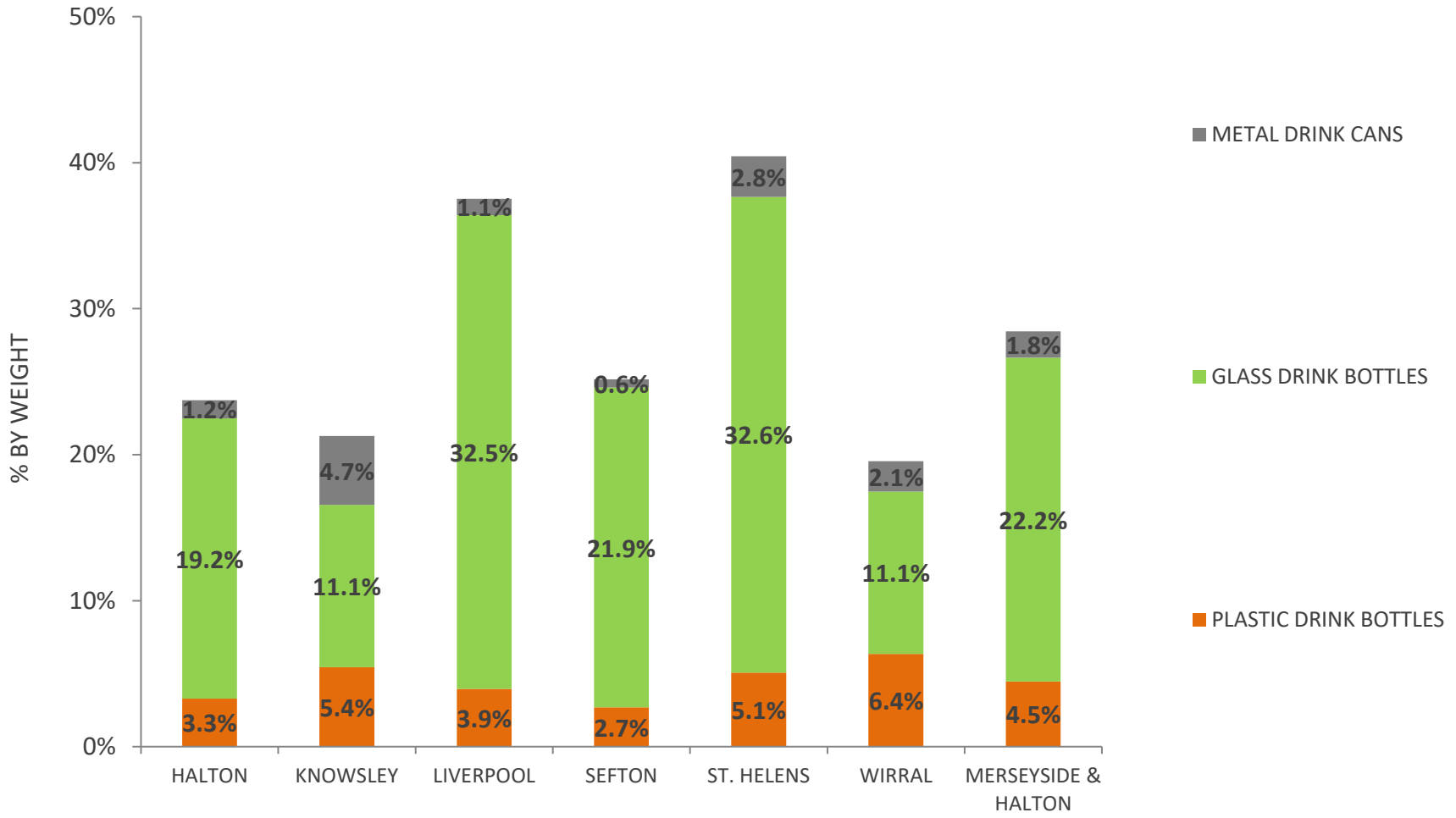
Between 10.5% (Liverpool) and 32.5% (Wirral) of drink containers were due to plastic bottles. On average, 4.5% Merseyside & Halton mixed dry recycling was due to plastic drinks bottles – 16% of the drink containers present. Of the plastic drink bottles present, 96% were under 3 litres in capacity. Of all plastic bottles under 3 litres, 68% were polyethylene terephthalate (PET) with 32% high density polyethylene (HDPE)

Between 2% (Sefton) and 22% of Knowsley drink containers were due to metal cans. On average, 1.8% of Merseyside & Halton mixed dry recycling was due to metal drink cans – 6% of the drink containers present.

Table 19: Drink containers in the mixed dry recycling

SINGLE USE DRINK CONTAINERS %	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
PLASTIC DRINK BOTTLES	3.3%	5.4%	3.9%	2.7%	5.1%	6.4%	4.5%
GLASS DRINK BOTTLES	19.2%	11.1%	32.5%	21.9%	32.6%	11.1%	22.2%
METAL DRINK CANS	1.2%	4.7%	1.1%	0.6%	2.8%	2.1%	1.8%
TOTAL	23.7%	21.3%	37.5%	25.2%	40.4%	19.6%	28.4%

Table 19: Drink containers in the mixed dry recycling



Potentially reusable items

The collected recycling had around half the level of reuse potential when compared with the residual waste. On average only 4.3% of the recycling across Merseyside & Halton had some reuse potential. This amount peaked in the Knowsley recycling at 18.9%. Around 44% was due to scrap furniture with 44% clothes and 10% electrical goods.

Table 20: Potentially reusable materials in recycling bins

POTENTIAL REUSE ITEMS	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
%	0.0%	18.9%	1.7%	6.9%	0.0%	1.9%	4.3%

Considerations for reducing residual waste

Residual waste will form the majority of flats waste generated across Merseyside and Halton, and significant increases or decreases in constituent materials are likely to have a noticeable effect on waste performance figures as whole.

Food Waste

The single biggest component of the residual waste is seen to be food waste. Overall, this makes up an average of 31.1% of all the residual waste collected. St. Helens is the only authority where food waste is collectable from the kerbside. Not all flats will benefit from this service. Expanding this service to more flats with communal bins would help to reduce total residual tonnages. If food waste collections were universally available, then obviously a proportion of food in residual bins would be diverted into recycling collections. There may also be an associated effect on general food waste reduction when food waste recycling is introduced.

Table 21: Food within the flats residual waste

RESIDUAL WASTE	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
% FOOD WASTE	29.7%	36.8%	27.4%	31.7%	40.2%	28.8%	31.1%

There will always be a degree of food waste in residual bins. A lot of food waste comes from inedible by-products such as cores, skin, shells, stones, fat and bone etc. Some of these items could potentially be home composted.

Reducing avoidable food waste

Annually it is estimated that 76.0% of all the food in the residual bins from flats is classified as avoidable. That is to say it is disposed of packaged or in a prepared but uneaten condition. Clearly it is unrealistic to aim to fully eliminate avoidable food in the residual waste. Consequently, it may be worth targeting a certain proportion of this waste food. For example, 70% of the avoidable food being disposed of is still packaged. Therefore, over half (53.3%) of all food in residual bins is due to packaged food. This represents almost 17% of total bin contents. A communications campaign focussing on better food management may help reduce unnecessary food waste. This includes things such as over buying of perishable foods, portion control, food storage and recipes etc.

Table 22: Avoidable food within the residual waste

RESIDUAL FOOD WASTE	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
PROPORTION OF FOOD WASTE AVOIDABLE	84.2%	74.6%	63.9%	74.8%	93.3%	78.9%	76.0%
PROPORTION OF AVOIDABLE FOOD WASTE PACKAGED	68.9%	93.5%	72.8%	55.1%	72.0%	65.0%	70.1%
PROPORTION OF ALL FOOD WASTE PACKAGED	58.0%	69.8%	46.6%	41.2%	67.2%	51.3%	53.3%

Dry Mixed Recycling (DMR) in residual bins

Residual waste contains items that should have been placed into the separate recycling bins that are available to all Merseyside & Halton flats residents . Overall, these materials make up an average of 26.2% of all the residual waste collected. All councils have the ability to recycle paper, card, plastic bottles, glass bottles & jars, and food tins & drinks cans separately. St. Helens residents have a slightly expanded service which includes plastic tubs, pots and trays as well as aerosols and foil.

Table 23: DMR within the residual waste

RESIDUAL WASTE	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
% DMR RECYCLABLE	29.87%	18.55%	29.04%	21.64%	33.91%	23.40%	26.15%

For most councils the amount of food in the residual bin can only be reduced by less being thrown away. This is because there is no option to divert it into a recycling collection. With DMR items there is an avenue to reduce the amount in the residual bin by diverting it into existing collections. This has the benefit of both reducing the amount of residual waste and increasing the amount of recyclable material collected.

Residents generally find certain materials easier to separate for recycling than others. Paper & card as well as most drinks cans, glass bottles and plastic bottles are easily identifiable and clean at the point of disposal. Jars and food tins tend to contain food waste that deters residents from cleaning them out for recycling.

Reducing existing DMR content of flats residual waste

It is estimated that 26.2% of waste material generated across Merseyside & Halton consists of recyclable paper, card, glass, metal and plastics within the residual waste. Around 32% of the residual DMR was glass with 19% card & cardboard, 13% paper, 11% plastics and 8% metals.

Table 24: Breakdown of DMR in residual waste

% RECYCLABLE MATERIALS	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON	MERSEYSIDE & HALTON SPLIT*
PAPER	2.9%	0.4%	1.5%	8.9%	1.9%	7.9%	4.2%	13.1%
CARD & CARDBOARD	7.4%	9.0%	5.0%	4.5%	6.5%	6.3%	5.9%	18.8%
PLASTICS	2.8%	3.1%	4.1%	2.9%	4.2%	2.6%	3.4%	10.8%
TEXTILES	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.2%	0.5%
GLASS	13.0%	2.9%	16.7%	3.7%	16.2%	4.3%	10.1%	32.0%
METALS	3.7%	3.2%	1.7%	1.8%	3.7%	2.2%	2.4%	7.5%
TOTAL DRY RECYCLABLES	29.9%	18.5%	29.0%	21.6%	33.9%	23.4%	26.2%	82.6%

Recyclable glass and card account for over half of the DMR present in the residual waste across Merseyside & Halton flats. These materials therefore offer the greatest opportunity for increasing diversion.

Expanding the range of recyclable materials

When looking at food waste we looked at the proportion of residual waste that could potentially be removed from the residual waste stream if food recycling were to become a standard collection for all authorities. St. Helens residents are able to recycle foil, aerosols and plastic tubs, pots and trays as part of their expanded DMR collections. It is therefore of interest to see the levels of these materials in the residual waste from other councils.

It is seen that an average of 5.0% of all the residual waste collected across Merseyside and Halton consists of potentially recyclable foil, aerosols and plastic containers. Only St. Helens residents currently recycle these materials. The residual waste from flats in this area had the lowest levels at 2.6% compared with as much as 9.5% for Sefton flats.

Table 25: Additional DMR materials % of residual

ADDITIONAL DMR MATERIALS	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
PLASTIC TUBS, POTS & TRAYS	4.69%	2.08%	3.95%	8.53%	1.81%	2.16%	4.00%
ALUMINIUM FOIL	0.62%	0.27%	0.26%	0.32%	0.65%	0.92%	0.48%
EMPTY AEROSOLS	0.32%	0.28%	0.55%	0.63%	0.09%	0.83%	0.52%
TOTAL	5.63%	2.62%	4.75%	9.48%	2.55%	3.91%	5.00%

Considerations for better waste separation

It is an aspirational target that all nonrecyclable material is placed into residual bins with all recyclable material separated out and placed into the appropriate recycling bin. This would mean that there would be no recyclable material in residual bins and no contamination in the recycling. All materials would therefore have a 100% capture rate and the maximum possible diversion would be achieved.

Table 26: Separation of flats waste t.p.a

WASTE SEPARATION	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
RECYCLABLE CONTENT OF RESIDUAL	30.86%	19.91%	29.07%	23.15%	74.42%	24.13%	31.66%
CONTAMINATION CONTENT OF RECYCLING	16.86%	53.37%	31.94%	15.52%	6.00%	10.03%	21.83%

Contamination materials in the recycling and recyclable materials in the residual waste both cause capture rates to be reduced and decrease overall diversion. Around 32% of material in residual bins is classified as recyclable (this includes garden waste and food/textiles where applicable). In the separated recycling 22% is deemed contamination. Levels of collected residual waste will be higher than the amount of recycling generated. The placement of communal bins can aid waste separation. Residents may be tempted to put rubbish in recycling bins if, for example, they are closer or more easily accessible. The reverse may be true if residual bins are more convenient and therefore attract recyclables. It is also important to ensure flats residents have sufficient waste capacity. If residual or recycling bins are full it is likely the nearest empty bin will be used (even if it is the wrong one for the waste being disposed of). Communal bin areas should have sufficient bins that are emptied regularly enough to serve the number of flats residents. Unlike kerbside

households, residents living in flats may have reduced space (indoor or outdoor) to store waste and recycling before taking it to communal collection points.

Main DMR contaminants

Currently an estimated 21.8% of recycling collected across Merseyside & Halton consists of contamination. It will always be the case that some degree of contamination will be present even if a very low percentage. Residents need to determine whether something is deemed as acceptable for recycling or is a residual bin item. Some forms of contamination may be due to a misunderstanding of what is acceptable. For example, a resident may believe anything made of glass or metal is acceptable alongside bottles, jars, tins and cans. Other forms of contamination will be more deliberate as the items bear no reasonable connection to the materials being recycled. This may include waste such as disposable nappies, wood, food waste or bagged household waste.

Reducing contamination in the recycling would not necessarily decrease the amount of overall waste being collected across Merseyside & Halton as it would most likely be diverted back into residual bins, whose weights would increase. The benefit would obviously be in increasing the purity of the collected recycling.

Table 27: Material contaminants within the DMR (% of contaminants)

DMR CONTAMINANTS T.P.A	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON
NONRECYCLABLE PAPER & CARD	12.2%	24.3%	14.0%	13.5%	44.8%	25.7%	18.7%
NONRECYCLABLE PLASTICS	36.3%	11.3%	26.6%	27.9%	23.7%	16.3%	22.2%
NONRECYCLABLE METALS	2.3%	9.8%	5.9%	6.5%	0.0%	0.5%	6.0%
NONRECYCLABLE GLASS	0.0%	0.0%	0.0%	0.0%	6.0%	0.0%	0.2%
FURNITURE	0.0%	33.5%	0.0%	0.0%	0.0%	0.0%	8.8%
TEXTILES	0.0%	1.5%	5.4%	33.0%	0.0%	16.1%	8.9%
LIQUIDS	2.1%	1.0%	6.0%	0.0%	3.9%	0.0%	2.9%
FOOD WASTE	36.7%	10.8%	30.3%	1.2%	0.0%	0.0%	17.4%
ALL OTHER MATERIALS*	10.4%	7.7%	11.7%	17.9%	21.6%	41.4%	14.8%
TOTAL CONTAMINATION	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**2.0% due to WEEE*

Looking at table 27 it is seen that 58% of contamination is due to nonrecyclable plastics, food waste and nonrecyclable paper & card. It may be worth targeting these contaminants via communications to residents

clarifying what is and is not acceptable. For example, many people believe TetraPaks to simply be cardboard and therefore collectable. In districts other than St. Helens, residents are placing tubs, pots and trays in their recycling along with plastic bottles. Discouraging the use of plastic bags to hold contain recycling is a way of reducing plastic films.

Food should not be in the dry recycling so encouraging residents to clean or empty containers would be of benefit. Additionally, much of the organic content is due to contained liquids. Containers should be emptied before being recycled.

Due to their increased size when compared to kerbside bins, communal bins can attract larger waste items. Larger items can be avoided at communal recycling bins by limiting the size of items which can be dropped through apertures in the lid (and locking he lid). Where bins become full it may be the case that waste is left alongside bins. It can be seen that over a third of contamination in Knowsley recycling was due to furniture. Disposal at communal bin stores is more anonymous than putting out your own bin. As well as attracting larger items, often waste can be piled up against communal bins. Additionally, there is a possibility that contractors working on individual flats or communal areas may use flats bins for their waste.

Expanded recycling collections

Current government policy recommends certain ongoing guidelines councils in relation to the way they collect domestic waste and the materials that are available for households to recycle separately.

- The introduction of weekly food recycling (available only in St. Helens).
- Consistent recycling for all households & flats. As well as the materials already recycled across Merseyside and Halton, there would be a need to introduce plastic tubs, pots and trays, foil and aerosols to all authorities other than St. Helens which already recycles them. Additionally, plastic film and flexible packaging, and drink cartons (TetraPaks) would be added.
- DRS for drinks containers potentially PET plastic bottles, drink cans and glass bottles used for consumable liquids and below 3L capacity will become available for deposit return. Therefore, they may be removed from the domestic waste stream.
- Packaging EPR; (Extended producer responsibility) producers will become responsible for packaging material which includes items not covered by DRS.

Table 28 shows the proportion of material in the dry mixed recycling bins from flats that could potentially become acceptable to expanded and new schemes. Table 29 shows the same information but accounts for the same materials that are present in the residual bins.

Looking at the materials in the recycling bins it is seen that 35.7% of items are potentially compatible with EPR and an additional 27.0% compatible with future DRS schemes. This means that almost two thirds of mixed recycling could be diverted away from mixed recycling collections and into these alternative future collection schemes. Only around 6% of mixed recycling is due to cartons, aerosols, foil, plastic films and plastic containers that could become acceptable recyclables were the current collection scheme to be extended to include them. Additionally, the introduction to all authorities of food waste collections could help to remove the 3.8% of mixed recycling that is currently due to food waste.

For residual bins from flats, it is seen that just 14% of items are potentially compatible with EPR and an under 10% compatible with future DRS schemes. This means that less than a quarter of residual waste could be diverted away from residual collections and into these alternative future collection schemes. Almost 11% of the residual waste from flats is due to cartons, aerosols, foil, plastic films and plastic containers that could become acceptable for expanded mixed recycling schemes. The introduction to all authorities of food waste collections could have a large impact and help to remove the 31.1% of residual waste that is currently due to food waste.

Table 28: Expanded & new recycling collections

MATERIALS POTENTIALLY DIVERTIBLE FROM SEPARATE RECYCLING VIA EXPANDED / NEW COLLECTIONS (%)	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON	
FOOD*	6.2%	5.8%	9.7%	0.2%	0.0%	0.0%	3.8%	5.2%
TUBS, POTS, TRAYS*	2.7%	1.8%	1.2%	2.9%	0.9%	0.9%	1.6%	2.3%
PLASTIC FILMS**	3.3%	2.9%	3.6%	1.4%	0.5%	0.7%	2.1%	2.9%
FOIL*	0.4%	0.4%	0.1%	0.1%	0.2%	0.1%	0.2%	0.2%
AEROSOLS*	0.0%	0.6%	0.5%	0.4%	0.8%	0.0%	0.4%	0.5%
CARTONS**	0.4%	7.7%	0.1%	0.7%	2.5%	1.7%	1.7%	2.3%
DRS***	23.0%	20.1%	36.7%	24.4%	38.9%	16.4%	27.0%	37.3%
EPR****	56.1%	24.1%	33.2%	21.3%	43.3%	45.3%	35.7%	49.3%
TOTAL	92.1%	63.4%	85.1%	51.4%	87.0%	65.1%	72.4%	100.0%

* Potentially removed from existing bins and into new recycling collections (other than St. Helens where collections are already in place)
** Potentially removed from existing bins into expanded DMR collection
*** Potentially removed from residual and recycling bins for DRS
**** Potentially funded by EPR. This amount excludes the contribution from DRS packaging which would also be covered.

Table 29: Expanded & new schemes – residual bins

MATERIALS POTENTIALLY DIVERTIBLE / REDISTRIBUTED FROM RESIDUAL BINS VIA EXPANDED / NEW COLLECTIONS (%)	HALTON	KNOWSLEY	LIVERPOOL	SEFTON	ST. HELENS	WIRRAL	MERSEYSIDE & HALTON	
FOOD*	29.7%	36.8%	27.4%	31.7%	40.2%	28.8%	31.1%	47.4%
TUBS, POTS, TRAYS*	4.7%	2.1%	4.0%	8.5%	1.8%	2.2%	4.0%	6.1%
PLASTIC FILMS**	7.5%	4.9%	5.3%	5.4%	5.4%	4.7%	5.3%	8.1%
FOIL*	0.6%	0.3%	0.3%	0.3%	0.6%	0.9%	0.5%	0.7%
AEROSOLS*	0.3%	0.3%	0.5%	0.6%	0.1%	0.8%	0.5%	0.8%
CARTONS**	0.7%	1.2%	0.2%	0.4%	0.6%	0.5%	0.5%	0.7%
DRS***	8.9%	6.7%	19.0%	2.5%	7.7%	4.5%	9.8%	14.9%
EPR****	19.8%	13.8%	11.2%	12.4%	22.9%	12.5%	14.0%	21.3%
TOTAL	72.2%	66.1%	67.9%	61.8%	79.2%	54.9%	65.6%	100.0%

* Potentially removed from existing bins and into new recycling collections (other than St. Helens where collections are already in place)
** Potentially removed from existing bins into expanded DMR collection
*** Potentially removed from residual and recycling bins for DRS
**** Potentially funded by EPR. This amount excludes the contribution from DRS packaging which would also be covered.

Recommendations / options for a more frequent waste analysis programme

MRWA carries out this comprehensive waste analysis project every 56 years. For this project 2 sets of flats were sampled twice, once per seasonal phase from each authority. Combining the data from these samples provided annual estimates of waste composition for flats. There are several options to consider which would increase the number of times flats are sampled annually. These projects would:

- Provide more annual data points
- Show composition changes annually or biennially
- Show effects of any resident communication campaigns
- Reduce budget requirements for these projects
- Reduce sort site requirement frequency per phase
- Show effects of any additional material inclusions into diversion streams

There are several options for including more frequent, but less comprehensive composition projects. These are shown below.

Waste steams

Currently residual and recycling streams are included in the project for flats. It may be worth considering including only the residual material collected from flats. Although this option will not include contamination in the dry recycling, it will provide important data on the composition of this waste stream, specifically the types and quantities of materials that could have been diverted into existing recycling bins located in bin stores, or at bring sites. Collecting all waste streams from flats, as per the current programme, or just including the residual only, can both be used in the following options.

Single phase options

The simplest way of including a reduced composition project is to include single phases either annually or biennially for all authorities. Phase 1 will be in either Winter or Spring, with phase 2 being in either Summer or Autumn. Each phase should be 6 months apart for the annual option if phase 2 in year 1 and phase 1 in year 2 are selected. This option will provide rolling data points which can be combined to provide a set of estimated annual results based. Please see the table below for examples of this option:

Table 30: Single phase option – annual

Annual						
Year 1				Year 2		
	Phase 1	Phase 2			Phase 1	Phase 2
Halton	✓	x		Halton	x	✓
Knowsley	✓	x		Knowsley	x	✓
Liverpool	✓	x		Liverpool	x	✓
Sefton	✓	x		Sefton	x	✓
St. Helens	✓	x		St. Helens	x	✓
Wirral	✓	x		Wirral	x	✓

Based on table 30, annual estimates will be available after the Summer/Autumn phase of year 2

Table 31: Single phase option – biennial

Biennial						
Year 1				Year 3		
	Phase 1	Phase 2			Phase 1	Phase 2
Halton	✓	x		Halton	x	✓
Knowsley	✓	x		Knowsley	x	✓
Liverpool	✓	x		Liverpool	x	✓
Sefton	✓	x		Sefton	x	✓
St. Helens	✓	x		St. Helens	x	✓
Wirral	✓	x		Wirral	x	✓

Based on table 31, annual estimates will be available after phase 2 of year 3

Appendix 1 – Sort Categories

PAPER	NEWSPAPERS, BROCHURES, CATALOGUES, DIRECTORIES & MAGAZINES
	RECYCLABLE PACKAGING PAPER INC BAGS & ENVELOPES
	RECYCLABLE NONPACKAGING PAPER, OFFICE PAPER & JUNK MAIL ETC
	SHREDDED PAPER
	NONRECYCLABLE PAPER
CARD & CARDBOARD	RECYCLABLE CORRUGATED CARDBOARD
	RECYCLABLE THIN PACKAGING CARD
	RECYCLABLE THIN NONPACKAGING CARD
	BOOKS
	LIQUID CARTONS
	DISPOSABLE COFFEE CUPS
	HEAVILY FOOD CONTAMINATED FOOD PACKAGING CARD
	NONRECYCLABLE CARD
PLASTIC FILM	CARRIER BAGS & PLASTIC BAGS
	PACKAGING FILM
	ALL OTHER FILM PACKAGING
	ALL OTHER FILM NON PACKAGING
DENSE PLASTICS	CLEAR PET DRINKS BOTTLES < 3L
	COLOURED PET DRINKS BOTTLES < 3L
	NATURAL HDPE DRINKS BOTTLES < 3L
	COLOURED HDPE DRINKS BOTTLES < 3L
	ALL PLASTIC DRINKS BOTTLES >3 LITRES CAPACITY
	ALL NON DRINKS PLASTIC BOTTLES
	FOOD TUBS, POTS, TRAYS, PUNNETS NON BLACK
	FOOD TUBS, POTS, TRAYS, PUNNETS BLACK
	ALL POLYSTYRENE
	ALL OTHER PLASTIC PACKAGING
	ALL OTHER PLASTIC NONPACKAGING
TEXTILES	CLOTHING
	SHOES
	ACCESSORIES BAGS, BELTS, HATS ETC
	FLAT LINEN & FABRICS (TOWELS, CURTAINS, SHEETS ETC)
	ALL OTHER TEXTILES INC ALL STUFFED TEXTILES
MISCELLANEOUS COMBUSTIBLES	DISPOSABLE NAPPIES
	ALL OTHER SANITARY
	CARPET, UNDERLAY & FLOORING
	ANIMAL WASTE
	ALL OTHER PACKAGING
	ALL OTHER NON PACKAGING
FURNITURE	ALL SMALL FURNITURE ITEMS

NON-COMBUSTIBLE INERTS	DIY RUBBLE & CERAMICS
	CEMENT & PLASTERBOARD
	UNCLASSIFIED INC CAT LITTER
GLASS	ALL GLASS DRINKS BOTTLES < 3L
	ALL NON DRINKS BOTTLES AND BOTTLES > 3L
	ALL JARS
	OTHER NONPACKAGING GLASS
FERROUS METALS	FOOD TINS & CANS
	DRINK CANS < 3L
	ALL NON DRINKS CANS AND DRINK CANS > 3L
	AEROSOLS
	OTHER FERROUS PACKAGING
	OTHER FERROUS
NONFERROUS METALS	FOOD TINS & CANS
	DRINK CANS < 3L
	ALL NON DRINKS CANS AND DRINK CANS > 3L
	AEROSOLS
	ALUMINIUM FOIL AND FOOD TRAYS
	OTHER NONFERROUS
ORGANIC CATERING	UNAVOIDABLE FOOD WASTE
	POTENTIALLY AVOIDABLE FOOD WASTE
	AVOIDABLE FOOD WASTE LOOSE
	AVOIDABLE FOOD WASTE PACKAGED
	CONSUMABLE LIQUIDS, FATS AND OILS.
ORGANIC NON CATERING	GARDEN WASTE (VEGETATION)
	SOIL & TURF
	PET BEDDING (HERBIVOROUS)
	ACCEPTABLE CADDY LINERS
	OTHER ORGANIC
HHW	HOUSEHOLD BATTERIES
	PRINTER CARTRIDGES
	LIST ALL (INC PAINT CANS)
COVID19 WASTE	(MASKS, VISORS, SANITISER BOTTLES, LATEX GLOVES, DISPOSABLE APRONS ETC…)
WEEE	MOBILE PHONES
	LIST ALL OTHER
FINES	<10MM

Notes –Clarifications / Additions to report required to meet specification:

- See Spec 5.4 – recommendations / options for a more frequent waste analysis programme to be added to report.

- See spec 7.5 – MRWA / MEL to agree number of report hard copies required (12 would provide 2 per District but none for MRWA?).

- Expanded Schemes section re. DRS items – Restate what proportion of packaging from flats waste is composed of potential DRS items

- Provide commentary on the flats findings compared with the main kerbside findings. Recap on any data / statistics issues that need to be taken account of in making these comparisons or in drawing inferences from the flats data (there was some discussion about limitations in project meetings with MEL when the flats survey was discussed).