

Warwickshire Waste Partnership

19th December 2018

Waste Composition Analysis

Recommendations

- (1) The Waste Partnership is asked to note the overview of the recent kerbside waste composition analysis and to consider how this information can be used to improve waste management across Warwickshire.

1.0 Background

- 1.1 Warwickshire County Council commissioned a waste composition analysis to take place during a three week period in Sept 2018 on behalf of the Partnership using the same method as the 2017 waste composition survey.
- 1.2 The survey focused on the weight and composition of
- kerbside residual waste containers
 - kerbside organic/green recycling containers
- 1.3 Three samples of 50 households were taken in each Waste Collection Authority. Households were selected from a range of demographic profiles across the County; so that results from each survey could be weighted to provide an annual picture of the residual waste being collected within individual Waste Collection Authorities (WCAs), as well as across the County. This was repeated for bio-waste.
- 1.4 The key aim of the waste composition analysis is to understand the waste composition in Warwickshire and to provide information which could be used by the Partnership when planning future services and campaigns etc.

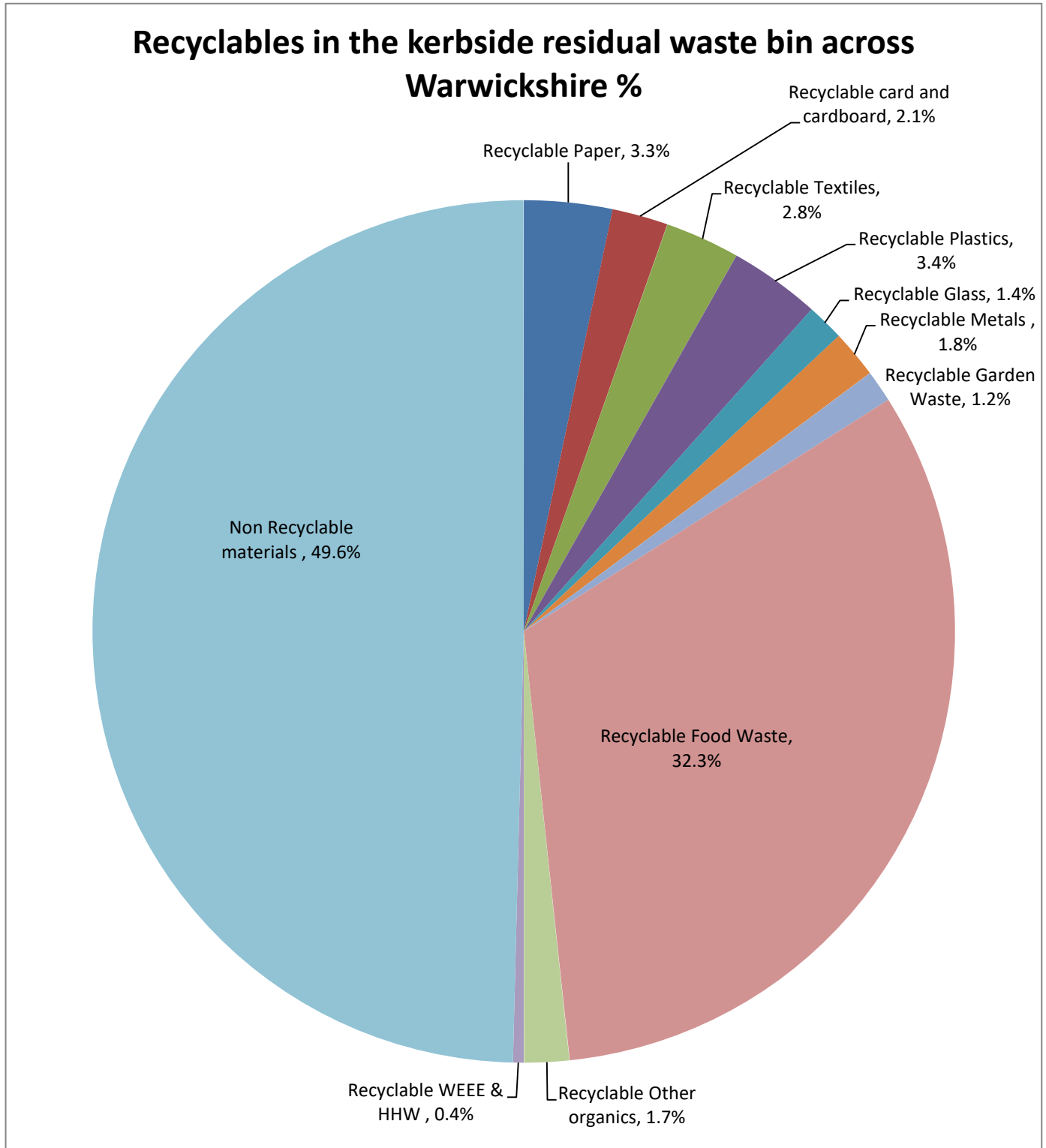
2.0 Residual Kerbside Analysis

2.1 Waste composition of the kerbside residual waste bin

Chart 1 below shows the composition of Warwickshire's kerbside residual waste bin showing the percentage of waste that could be recycled using the current kerbside systems. This shows that 50.4% of the residual bin is recyclable while 49.6% is non-recyclable.

This assumes that all households have access to the full range of kerbside recycling services including bio-waste. A proportion of householders in Rugby no longer have access to the bio-waste service.

Chart 1 Percentages of recyclables in the kerbside residual waste bin across Warwickshire



2.2 A breakdown of the waste material categories is provided at Appendix 1. Non-recyclable material at the kerbside includes paper tissue, books, plastic film, polystyrene, carpet and underlay, odd shoes, DIY materials, untreated wood, disposable nappies and adult hygiene products, pet litter, pyrex, soil and turf etc. A small proportion of these items could be recycled at the HWRCs.

2.3 Organics and Food within Residual Waste

The waste composition data shows that food waste continues to be the major recyclable component of the kerbside residual waste in Warwickshire making up about 1/3 of all residual kerbside waste.

Table 2 and Graph 3 show the KG/HH/WK of food waste in the kerbside residual bin for each year of the waste composition.

Table 2 Recyclable food waste in the kerbside residual bin

	2013	2014	2015	2016	2017	2018
Food waste KG/HH/WK	2.98	2.97	2.42	2.66	1.50	1.30

Based on this figure there is approximately 17,000 tonnes of food waste going into the residual waste bin that could be captured by a kerbside food waste collection. The best chance of capturing the majority of this material would be to offer weekly separate food waste collections.

Based on the data provided in section 3.2 annual County wide collection levels of food waste within the bio-waste currently collected is approximately 4000 tonnes.

Only 1.2% of residual waste was found to be garden waste.

2.4 Dry Recyclables

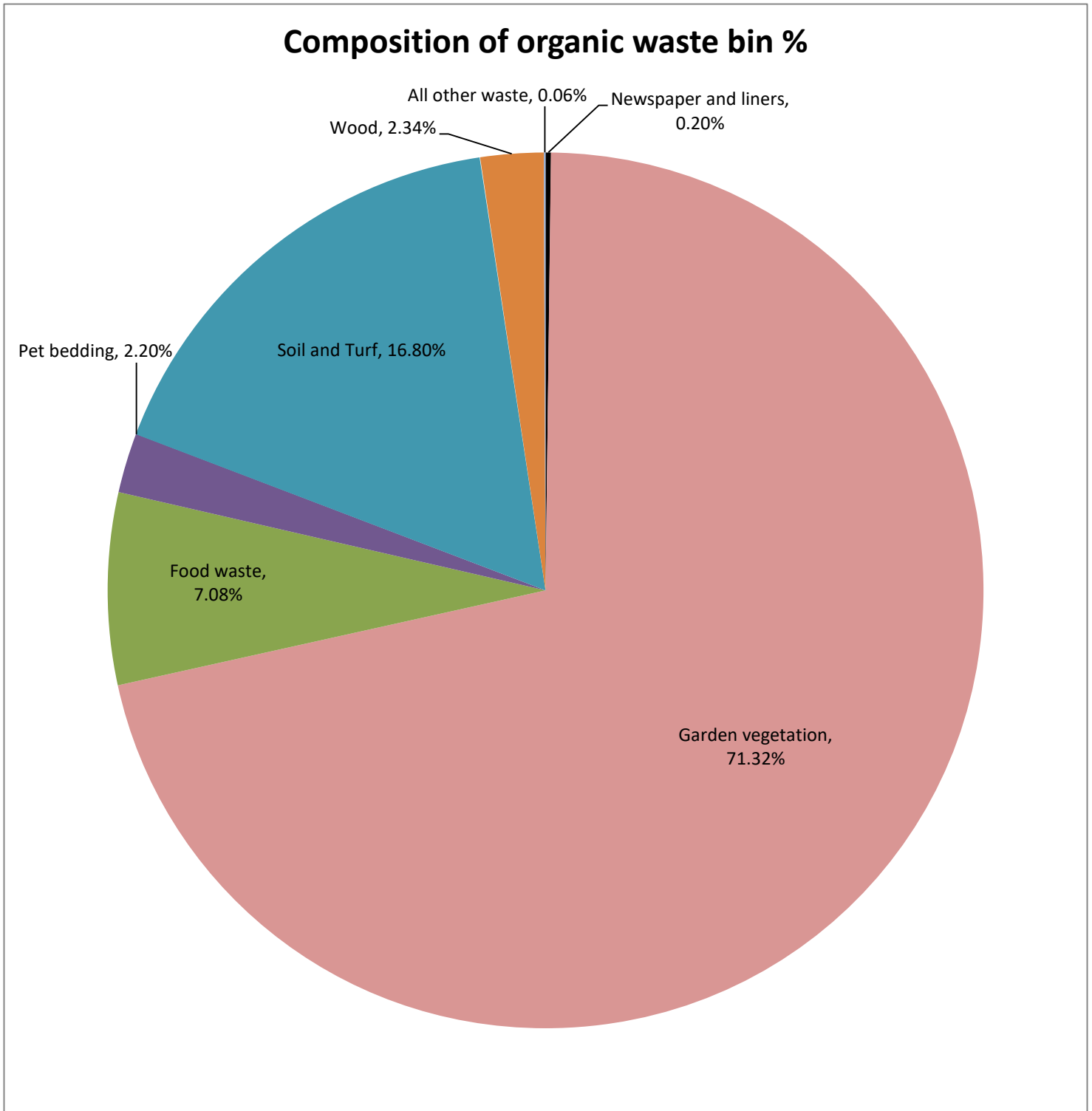
However, there are still dry recyclables in the kerbside residual waste for which there is comprehensive kerbside recycling collections across the County, this shows there is still more work to do to maximise the capture of this material. Details of the recyclables in the residual bin are provided in Appendix 2.

The amount of dry recycling in residual waste has decreased over the years. There are a number of technical reasons for this, but one reason is householders are doing more to put their recycling in the right container.

3.0 Organic Kerbside Analysis

3.1 Chart 2 below shows the composition of Warwickshire's kerbside organic waste bin.

Chart 2 Composition of the kerbside organic waste bin across Warwickshire



3.2 The amount of food waste in the organic bin is 7.08% or 0.19 KG/HH/WK.

Graph 2 Food in the organic kerbside bin

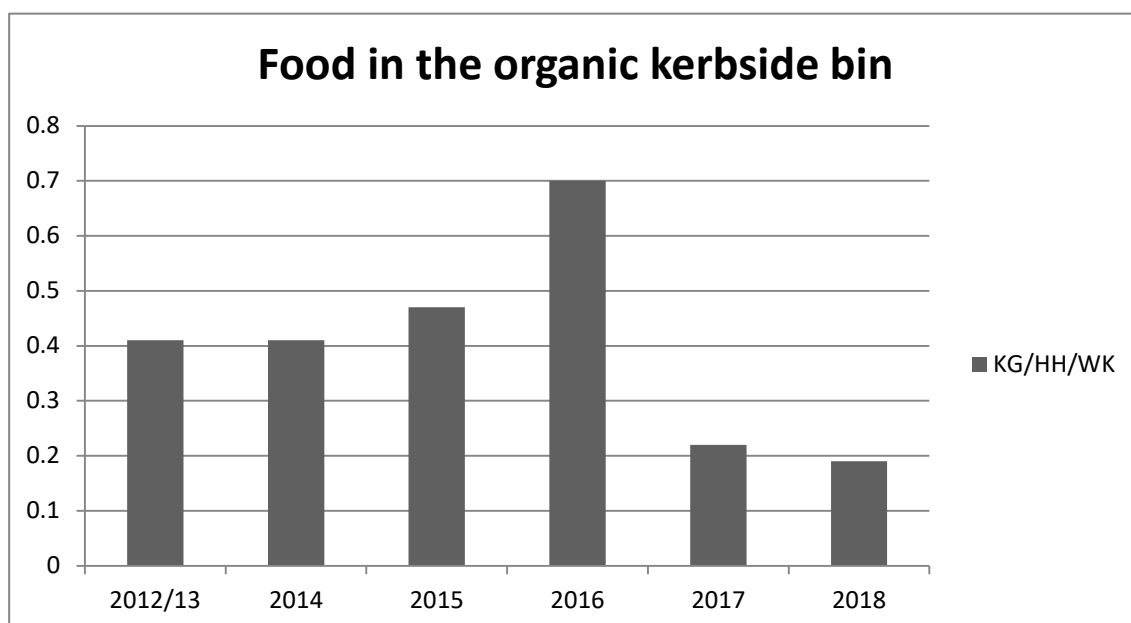


Table 3 Recyclable food waste in the kerbside organic bin

	2013	2014	2015	2016	2017	2018
Home compostable KG/HH/WK	0.26	0.25	0.27	0.44	0.14	0.14
Non home compostable KG/HH/WK	0.15	0.16	0.21	0.26	0.08	0.05
All food KG/HH/WK	0.41	0.41	0.47	0.70	0.22	0.19

3.3 12.8% of food waste was correctly captured (recycled) by households, which is similar to last year. A proportion of householders in Rugby no longer access the biowaste service.

3.4 99% of garden waste was correctly captured (recycled) by households, which is similar to last year.

3.5 Warwickshire households diverted an average of 32.3% of their waste through the organic collections.

4.0 Next steps

4.1 This report provides vital information for all partners to drive future service planning, communication campaigns and projects. It is important that all partners use this information to target resources to ensure the amount of

recyclable materials that are currently being disposed of in the residual waste at the kerbside and at the HWRCs is reduced.

- 4.2 A third of kerbside residual waste is food waste. Campaign work for the coming year can continue to focus on food waste capture and continue to emphasise that all food waste can be recycled at the kerbside (meat, fish and plate scrapings). The results from the Stratford trial can be combined with current national best practice to inform a programme of behaviour change interventions across the county that will drive down the amount of food waste in the residual bin.
- 4.3 The composition shows that paper, card, plastic, metal, glass, textiles, WEEE are still being incorrectly placed in the residual kerbside bin, so the partnership needs to continue to promote recycling services to engage householders.
- 4.4 A report on the composition of the residual waste at the HWRCs will be provided at the March 2019 meeting. The HWRC data has not yet been received by the Council, as there was a delay in sorting the material from one of the sites.

Background Papers

1. None.

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Appendix 1 Waste Material Categories

Primary categories	Sub-categories
PAPER	Newspaper & magazines
	Catalogues & Directories
	Other recyclable paper
	Paper tissue
	Shredded paper
	Other non-recyclable paper
CARD	Tetrapak cartons
	Corrugated Cardboard
	Thin high-grade packaging card
	Thin high-grade non-packaging card
	Thin low-grade brown card
	Non-recyclable card & books
PLASTIC FILM	Packaging film
	Carrier Bags
	Refuse Sacks
	All other film
DENSE PLASTIC	Plastic Bottles Types 1,2,3,5,
	Plastic Bottles Types 4,6,7
	Other Bottles
	EPS
	Packaging Containers Types 1,2,3,5,
	Packaging Containers Types 4,6,7
	Other dense plastic
TEXTILES	Reusable clothing
	Pairs of shoes
	Accessories
	Carpet & underlay
	Clean bed linen, curtains, blankets & towels
	All other textiles & odd shoes
	Composite & laminates INC TREATED WOOD
	DIY based materials
MISC COMBUSTIBLES	Untreated Wood
	Disposable nappies
	All incontinence & absorbent hygiene products
	All other
	Plasterboard
MISC NON-COMBUSTIBLES	DIY rubble & ceramics
	All other inc Pet Litter non-organic
	Green packaging
GLASS	Brown packaging
	Clear bottles
	Clear jars
	Other glass
	Drinks cans
	Food cans & tins
FERROUS METAL	Aerosols
	Other ferrous packaging inc jar lids
	Other ferrous
	Drinks cans
NON-FERROUS METAL	Food cans & tins
	Aerosols
	Aluminium foil and trays
	Other non-ferrous
	Flora organics
GARDEN WASTE	Soil & turf
	All fully packaged & unopened Home compostable food waste
PUTRESCIBLES	All fully packaged & unopened Non-Home Compostable food waste
	All loose Home Compostable food waste
	All loose Non-Home compostable food waste
	All mixed un-sortable Food waste
	Herbivorous Pet Straw & Sawdust Bedding
	Consumable Liquids
	Fats & Oils
	Compostable Liners
	Particles passing a 10mm screen
	Household Batteries
	Engine Oil
FINES	Other Separately listed
	Small WEEE
HHW	All other – separately listed
WEEE	

Appendix 2 - Recyclables in the kerbside residual bin

Paper

35.6% or 0.123 KG/HH/WK of all the paper in the kerbside residual bin was recyclable at the kerbside in 2018. This equates to 3.3% of the total residual waste.

	2013	2014	2015	2016	2017	2018
Recyclable paper KG/HH/WK	0.39	0.33	0.23	0.31	0.23	0.12

Card / cardboard

54.9% or 0.08 KG/HH/WK of the card/cardboard in the kerbside residual bin was recyclable at the kerbside. This equates to 2.1% of the total residual waste.

	2013	2014	2015	2016	2017	2018
Recyclable card KG/HH/WK	0.22	0.22	0.19	0.20	0.36	0.08

Plastic

57% of plastics in the kerbside residual bin consisted of plastic bottles, trays, tubs and containers, this shows that 3.4% of residual waste or 0.13 KG/HH/WK is currently recyclable within existing kerbside collection schemes.

	2013	2014	2015	2016	2017	2018
Recyclable plastics KG/HH/WK	0.33	0.25	0.26	0.34	0.20	0.13

Metal

65% or 0.07 KG/HH/WK of metallic waste in the kerbside residual bin was recyclable. This equates to 1.8% of the total residual waste.

There were more recyclable food tins compared to drinks cans in the residual waste, this may be because they tend to require a degree of washing/rinsing before being placed into recycling containers and as such are often less well diverted than cleaner drinks cans.

	2013	2014	2015	2016	2017	2018
Recyclable metal KG/HH/WK	0.14	0.11	0.11	0.16	0.09	0.07

Glass

75.4% or 0.06 KG/HH/WK of glass in the kerbside was recyclable. This equates to 1.4% of all collected residual waste.

In all areas of the County the majority of the recyclable glass found within the residual waste was higher grade clear glass. Around 53% of the clear glass was due to jars as opposed to bottles. In the same way that food tins are often recycled less effectively than drink cans; jars often contain food or sauce and householders may choose not to rinse them for recycling.

	2013	2014	2015	2016	2017	2018
Recyclable metal KG/HH/WK	0.15	0.13	0.13	0.12	0.10	0.06

Textiles

Textiles are able to be recycled at the kerbside within the following waste collection authority areas: NBBC, SDC and WDC.

If we include textiles (e.g. clothing and shoes) that are able to be reused at charity shops and bring banks, as well as those able to be recycled at the kerbside (and assume that textiles are able to be recycled in all five areas), it shows that 71% of the textiles within the residual bin could have been reused or recycled. This equates to 4.3% or 0.17 KG/HH/WK of the total residual waste.

	2013	2014	2015	2016	2017	2018
Re-usable and recyclable textiles KG/HH/WK	0.25	0.34	0.10	0.28	0.23	0.17

Hazardous Waste and Waste Electrical and Electronic Equipment (WEEE)

1.8% or 0.07 KG/HH/WK of the residual waste was deemed to be either Hazardous or WEEE.

The hazardous waste included items such as batteries, ink cartridges, lightbulbs, paint and chemicals. The WEEE waste included items such as small appliances (kettle, shredder etc.), phones, toys, smoke alarm, cameras, cables and leads, clocks, solar lights, controllers).

	2013	2014	2015	2016	2017	2018
HHW and WEEE KG/HH/WK	Not available	0.01	0.01	0.03	0.12	0.07

Disposable nappies and Absorbent Hygiene Products (AHP)

13.2% of the kerbside residual waste bin consisted of disposable nappies (12.15%) and AHP waste (1.09%) – equivalent to 0.52 kg/hh/wk.

	2013	2014	2015	2016	2017	2018
Nappies KG/HH/WK	0.56	0.40	0.30	0.51	0.36	0.48
AHP KG/HH/WK	NA	0.06	0.09	0.12	0.07	0.04