

# Warwickshire Waste Partnership

15 June 2022

## Kerbside 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 kerbside waste composition analysis to take place during a three-week period in March 2022 on behalf of the Waste Partnership using the same method as previous waste composition surveys.
- 1.2 The survey focused on the weight and composition of:
  - kerbside residual waste containers
  - kerbside bio-waste recycling containers (green garden waste and food waste)
- 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.

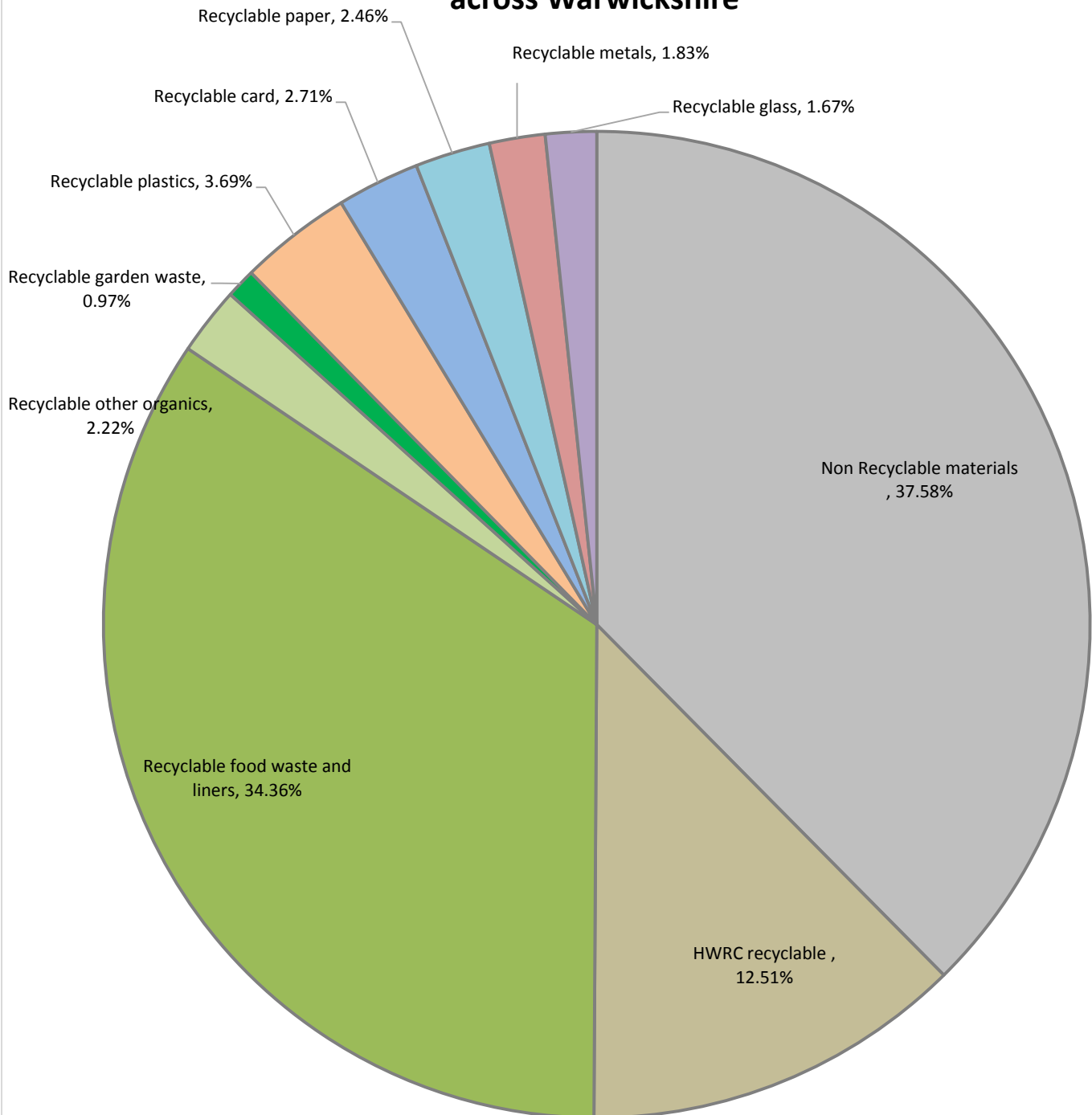
### 2.0 Residual Kerbside Analysis

#### 2.1 Waste composition of the kerbside residual waste bin

Chart 1 shows the composition of Warwickshire's average kerbside residual waste bin showing the percentage of waste that could be recycled using the **current** kerbside systems. The data shows that 49.91% of the residual bin is recyclable at the kerbside using current collection systems, 12.51% is recyclable at the HWRCs, while 37.58% is non-recyclable under current collection systems and HWRC provision. Based on these figures there is approximately 51,800 tonnes of recyclables and compostables going into the residual waste bin each year, which could be recycled at the kerbside or at the HWRCs.

The data assumes that all households have access to the full range of kerbside recycling services including bio-waste. A breakdown of the waste material categories is provided at Appendix 1.

**Chart 1 Percentage of Recyclables in the kerbside residual waste across Warwickshire**



2.2 HWRC recyclable material includes a mix of material including but not limited to:

- plasterboard and rubble (5.88%),
- re-usable or recyclable textiles (2.90%),
- wood and DIY material (2.47%),
- hazardous household waste and WEEE (1.05%) and
- tetrapak<sup>1</sup> (0.22%).

Non-Recyclable materials includes kerbside includes a mix of materials including but not limited to:

- disposable nappies and adult hygiene products (8.40%),
- plastic film (6.71%) – some of which can be recycled at some supermarkets
- Non-organic pet litter and animal waste (5.88%)
- paper tissue (3.95%),
- carpet and underlay (1.01%)
- polystyrene (0.35%).

### 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. Of this food waste 38% was packaged and 54% was home compostable.

Table 1 and Graph 3 show the KG/HH/WK of food waste in the kerbside residual bin for each year of the waste composition.

**Table 1 Recyclable food waste in the kerbside residual bin**

	2013	2014	2015	2016	2017	2018	2022
Food Waste KG/HH/WK	2.98	2.97	2.42	2.66	1.50	1.30	2.06

Based on this figure there is approximately 28,400 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 5,000 tonnes. So about 15.5% of all food waste set out for collection is currently correctly set out for recycling.

Less than 1% of residual waste was found to be garden waste.

### 2.4 Dry Recyclables

There are still dry recyclables in the kerbside residual waste for which there is comprehensive kerbside recycling collections across the County, this shows

<sup>1</sup> Tetrapak is not currently recycled in 2 of the 5 WCAs and so this has been counted as HWRC recyclable overall. The material will be recyclable in areas from 2023.

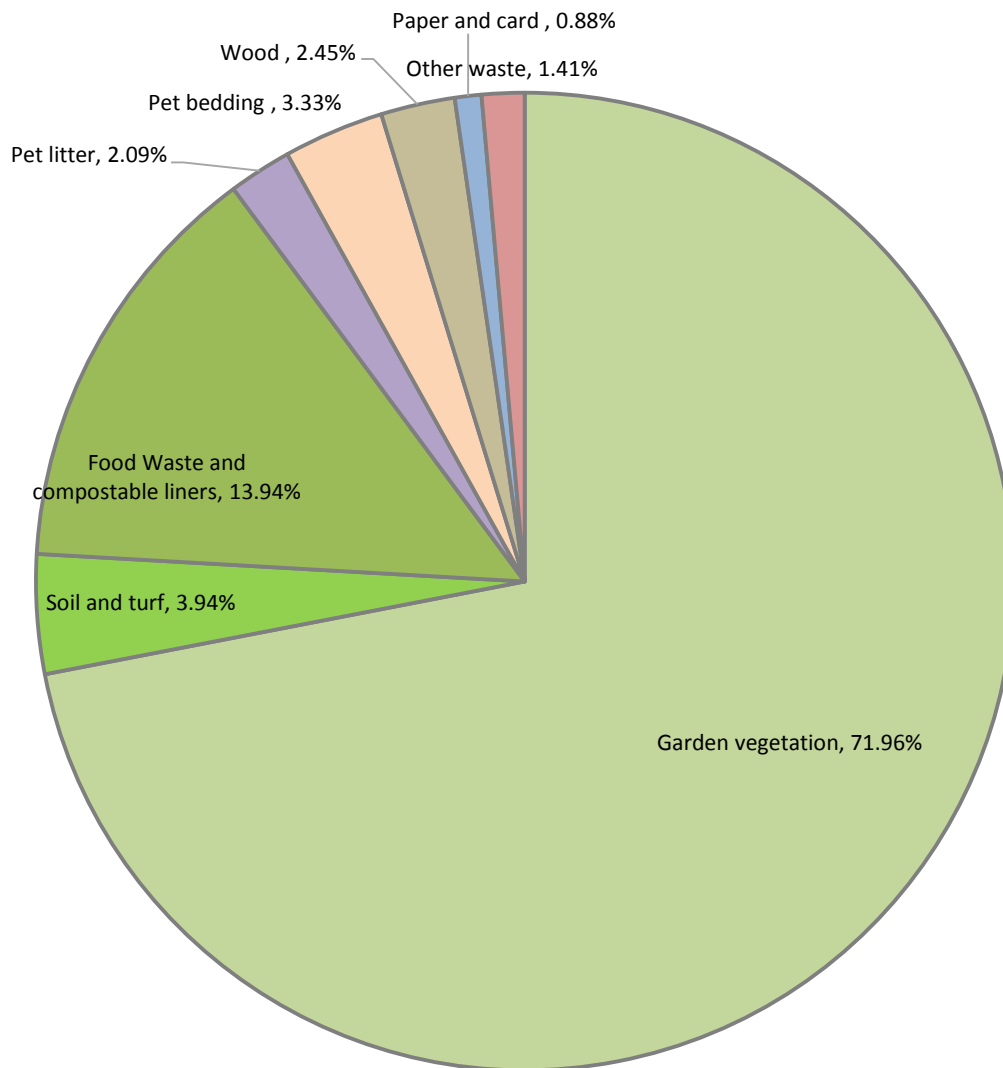
there is still more work to do to maximise the capture of this material. Details of the recyclables in the residual bin are provided in Appendix 2.

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.

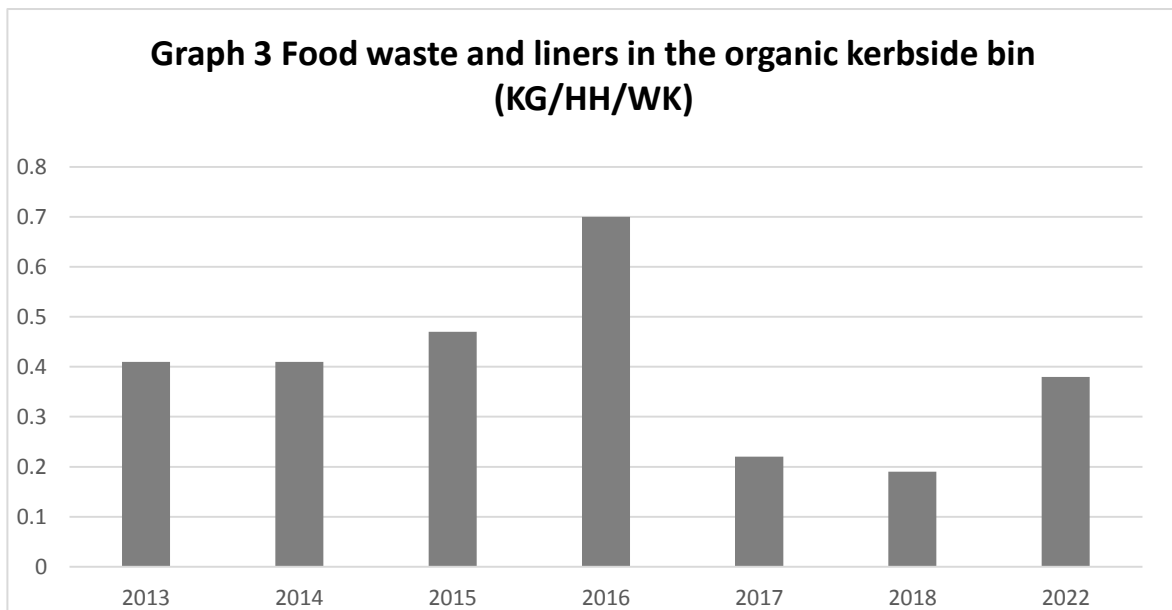
### 3.0 Organic Kerbside Analysis

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

**Chart 2 Composition of the kerbside organic waste bin across Warwickshire %**



3.2 The amount of food waste in the organic bin is 13.45% or 0.38 KG/HH/WK.



**Table 2 Recyclable food waste in the kerbside organic bin**

	2013	2014	2015	2016	2017	2018	2022
Home compostable KG/HH/WK	0.26	0.25	0.27	0.44	0.14	0.14	0.28
Non home compostable KG/HH/WK	0.15	0.16	0.21	0.26	0.08	0.05	0.10
All Food KG/HH/WK	0.41	0.41	0.47	0.70	0.22	0.19	0.38

- 3.3 15.5% of food waste was correctly captured (recycled) by households, which is better than 2018 (12.8%).
- 3.4 97.2% of garden waste was correctly captured (recycled) by households, which is slightly less than 2018 (99%) but still very high.
- 3.5 Warwickshire households diverted an average of 28.4% of their total waste through the organic collections.

#### **4.0 Next steps**

- 4.1 This report provides good up to date 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 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). Campaign work promoting the financial and environmental benefits of reducing avoidable food waste will also continue.

Stratford and Warwick Districts' new collection service which includes a separate weekly food waste collection will also help to divert food waste out of the residual waste bin. The separately collected food waste will be treated at an Anaerobic Digestion facility near Chipping Camden.

4.3 The composition shows that paper, card, plastic, glass, metal, hazardous household waste (batteries/engine oil) and small 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 The data for the HWRCs is provided in a separate report.

## 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 PET
	Plastic Bottles HDPE
	Other Bottles
	EPS
	Food Packaging Containers
	Other Packaging Containers
	Other dense plastic
TEXTILES	Reusable clothing
	Pairs of shoes
	Accessories
	Carpet & underlay
	Clean bed linen, curtains, blankets & towels
	All other textiles & odd shoes
MISC COMBUSTIBLES	Composite & laminates INC TREATED WOOD
	DIY based materials
	Untreated Wood
	Disposable nappies
	All incontinence & absorbent hygiene products
	All other
MISC NON-COMBUSTIBLES	Plasterboard
	DIY rubble & ceramics
	All other inc Pet Litter non-organic
GLASS	Green packaging
	Brown packaging
	Clear bottles
	Clear jars
	Other glass
FERROUS METAL	Drinks cans
	Food cans & tins
	Aerosols
	Other ferrous packaging inc jar lids
	Other ferrous
NON-FERROUS METAL	Drinks cans
	Food cans & tins
	Aerosols
	Aluminium foil and trays
	Other non-ferrous
GARDEN WASTE	Flora organics
	Soil & turf
PUTRESCIBLES	All fully packaged & unopened Home compostable food waste
	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 and Oils
	Compostable Liners
FINES	Particles passing a 10mm screen
HHW	Household Batteries
	Engine Oil
	Other Separately listed
WEEE	Small WEEE
	All other – separately listed

## Appendix 2 – Material streams in the kerbside residual bin

### Paper

30.5% or 0.15 KG/HH/WK of all the paper in the kerbside residual bin was recyclable at the kerbside in 2022. This equates to 2.4% of the total residual waste.

Recyclable paper KG/HH/WK	2013	2014	2015	2016	2017	2018	2022
	0.39	0.33	0.23	0.31	0.23	0.12	0.15

### Card / cardboard

46% or 0.32 KG/HH/WK of the card/cardboard in the kerbside residual bin was recyclable at the kerbside. This equates to 5.3% of the total residual waste.

Recyclable card/ cardboard KG/HH/WK	2013	2014	2015	2016	2017	2018	2022
	0.22	0.22	0.19	0.20	0.36	0.08	0.32

### Plastic

28.85% of plastics in the kerbside residual bin consisted of plastic bottles, trays, tubs and pots, this shows that 3.4% of residual waste or 0.13 KG/HH/WK is currently recyclable within existing kerbside collection schemes.

Recyclable plastic KG/HH/WK	2013	2014	2015	2016	2017	2018	2022
	0.33	0.25	0.26	0.34	0.20	0.13	0.13

### Plastic Film

5.36% of plastic film in the kerbside residual bin consisted of packaging film and carrier bags which can be recycled at some supermarkets.

Recyclable plastic film KG/HH/WK	2013	2014	2015	2016	2017	2018	2022
	0.45	0.35	0.33	0.38	0.23	0.20	0.32

### Tetrapak

The kerbside residual bin consisted of 0.22% of tetrapak.

Recyclable paper KG/HH/WK	2013	2014	2015	2016	2017	2018	2022
	0.02	0.02	0.02	0.02	0.01	0.01	0.01



## Metal

71.2% or 0.11 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.

Recyclable metal KG/HH/WK	2013	2014	2015	2016	2017	2018	2022
	0.14	0.11	0.11	0.16	0.09	0.07	0.11

## Glass

81.6% or 0.10 KG/HH/WK of glass in the kerbside was recyclable. This equates to 1.7% 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 77% 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.

Recyclable glass KG/HH/WK	2013	2014	2015	2016	2017	2018	2022
	0.15	0.13	0.13	0.12	0.10	0.06	0.10

## Textiles

If we include textiles (e.g., clothing and shoes) that are able to be reused at charity shops and bring banks and assume that textiles are able to be recycled in all five areas, it shows that 69% of the textiles within the residual bin could have been reused or recycled. This equates to 2.9% or 0.17 KG/HH/WK of the total residual waste.

Re-usable & recyclable textiles KG/HH/WK	2013	2014	2015	2016	2017	2018	2022
	0.25	0.34	0.10	0.28	0.23	0.17	

## Hazardous Waste and Waste Electrical and Electronic Equipment (WEEE)

1.3% or 0.08 KG/HH/WK of the residual waste was deemed to be either Hazardous or small WEEE.

HHW and WEEE KG/HH/WK	2013	2014	2015	2016	2017	2018	2022
	N/A	0.01	0.01	0.03	0.12	0.07	0.05

## Disposable nappies and Absorbent Hygiene Products (AHP)

8.4% of the kerbside residual waste bin consisted of disposable nappies (7.16%) and AHP waste (1.24%) – equivalent to 0.50 kg/hh/wk.

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2022</b>
Nappies KG/HH/WK	0.56	0.40	0.30	0.51	0.36	0.48	0.43
AHP KG/HH/WK	N/A	0.06	0.09	0.12	0.07	0.04	0.07