

# Hertfordshire Waste Partnership

Final Destinations Report – 2021/22



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# Introduction



**Cllr Eric Buckmaster (Chair)**  
Executive Member for  
Environment, Hertfordshire  
County Council

What happened to the waste generated by Hertfordshire households in 2021/22? The Hertfordshire Waste Partnership (HWP), which includes the county council as Hertfordshire's Waste Disposal Authority and the 10 district and borough councils as Waste Collection Authorities, believes it is important to show Hertfordshire residents and other interested parties where each of the three main waste streams: residual waste, organics and recycling are dealt with from the point of collection through to processing and final disposal.

The importance of providing this information was confirmed by an October 2021 survey of over 2,000 people on attitudes to recycling conducted by the Industry Council for Packaging and the Environment (INCPEN). The survey found that whether items collected for recycling get recycled was the most important factor in shaping consumer confidence in the value of recycling as an undertaking.

In this report we examine the Final Destinations of:

- **Residual waste:** the material Hertfordshire residents put in their refuse bins and the bagged waste they take to Recycling Centres
- **Organic wastes:** the green garden waste collected from households or taken by residents to Recycling Centres, and the waste from preparing and eating food collected from households either in dedicated food waste collections or mixed with green garden waste
- **Recycling:** the paper, cardboard, cans, plastics and glass set out by households for recycling collections, and the wood, electricals, metals, clothing and other recyclables and reusable materials taken by residents to Recycling Centres.

## 2. Residual Waste

Residual Waste is made up of the refuse material which residents put in their household waste bins and in litter bins and which they may also take themselves to the large designated non-recyclable waste containers provided at Recycling Centres.

Table 1 below shows that two thirds of the residual waste from households in Hertfordshire was disposed of at Energy Recovery Facilities (ERF), with only one third going to landfill.

The use of ERFs allows energy to be recovered from the residual waste, which contributes towards the UK's national power needs, whilst minimising the HWP's use of landfill, in compliance with the EU Landfill Directive, the Waste Emissions Trading Act 2003 and importantly HWP aspirations to send zero waste to landfill by 2030.

Table 1 Overview of Residual Waste 2021/22		
Disposal method	Tonnes	% Total
Energy Recovery Facilities	158,030	66.41%
Landfill	78,692	33.07%
Other	1,245	0.52%
<b>Total</b>	<b>237,967</b>	<b>100.00%</b>

In early 2022, following a lengthy and complex procurement process, the county council as Hertfordshire's Waste Disposal Authority awarded six residual waste contracts to four different suppliers which will commence in April 2024.

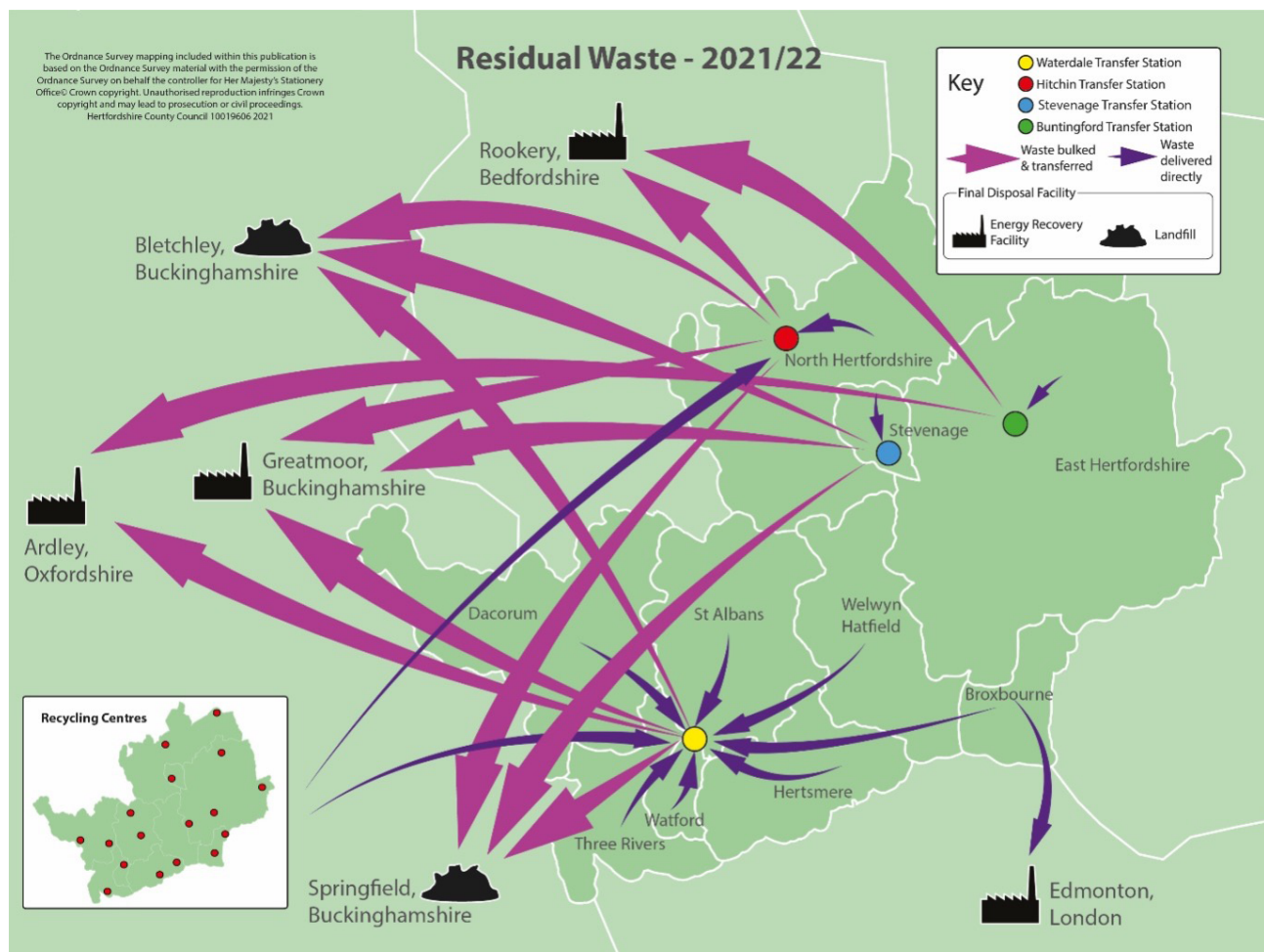
Each contract is for 10 years with an option to extend for 5 years. Non-landfill solutions have been secured with sufficient capacity to manage all local authority collected residual wastes forecast to arise during the contract period. Whilst the contracts will permit emergency landfill use when all other options are unavailable, the award of these contracts will, subject to the delivery of separate waste shredding proposals, significantly advance the HWP's ambition for zero waste to landfill and comfortably exceed the anticipated target of the UK Government's Resources and Waste Strategy of reducing landfill to 10% by 2035.



The map Residual Waste – 2021/22 below shows the journeys of Hertfordshire's residual waste. Most of the material collected from household refuse bins and litter bins by Hertfordshire's ten District and Borough Councils is taken by the familiar Refuse Collection Vehicle (RCV) to one of four Waste Transfer Stations, at Buntingford, Hitchin, Stevenage and Watford (near Garston). Here the compacted waste material is loaded onto much larger vehicles and taken to one of six disposal facilities, also shown on the map. Two of these are landfill sites, while four are Energy Recovery Facilities. The proximity of the Edmonton ERF to Broxbourne allows direct delivery of waste by RCV without transfer.

Non-recyclable material taken by residents themselves to the large waste containers at the network of Hertfordshire Recycling Centres is also further concentrated at Transfer Stations before onward transport to the disposal facilities.

It should be noted that currently the ERFs and landfill sites accepting residual waste from Hertfordshire are located in adjacent counties and regions rather than in Hertfordshire itself.



### 3. Organic Waste

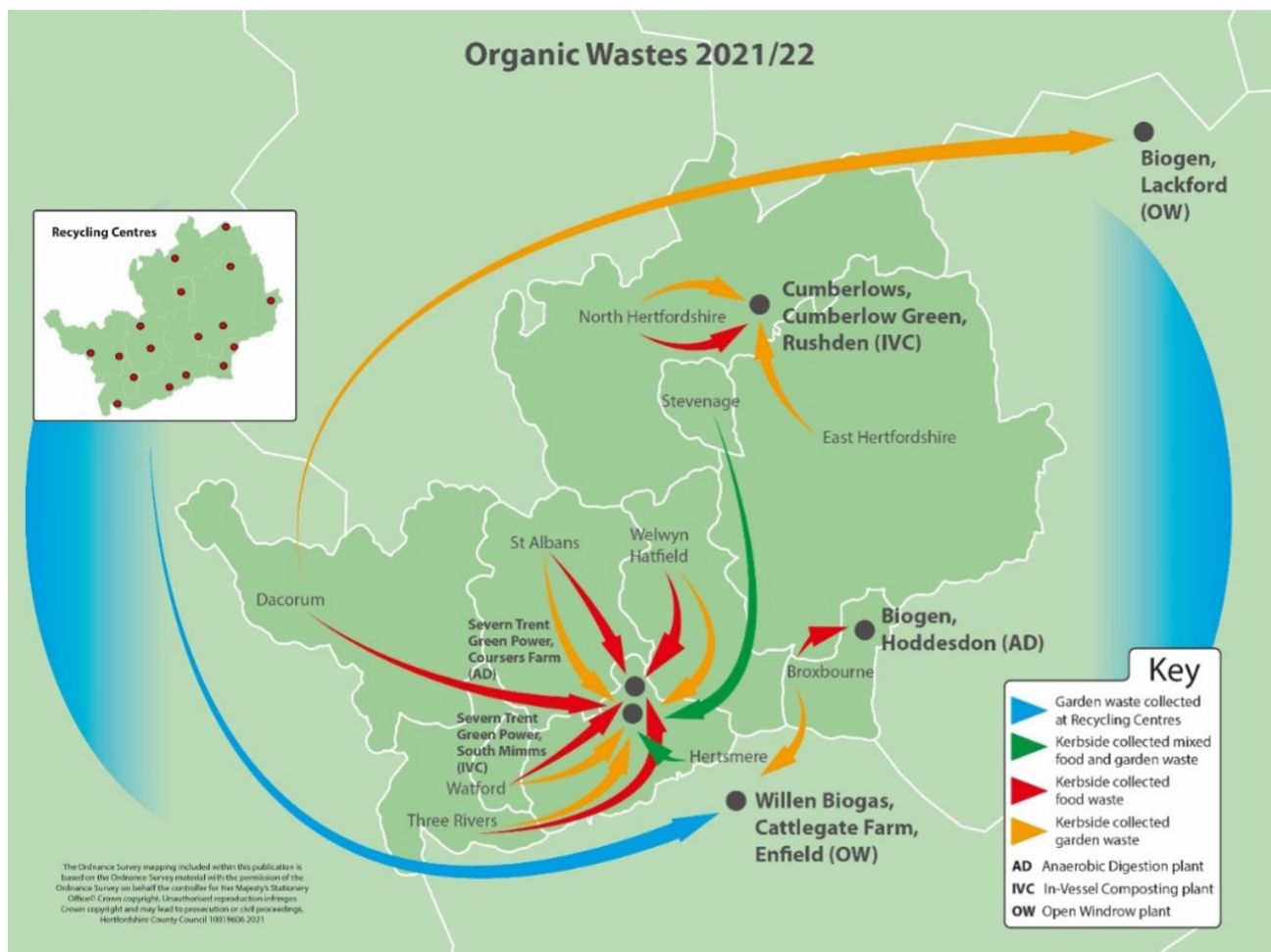
Under the auspices of the HWP the county council operates a number of different contracts which provide outlets for the organic wastes collected by the boroughs and districts as well as garden waste collected annually across the county's Recycling Centres. In total during 2021/22 the HWP collected over 125,400 tonnes of organics including nearly 26,000 tonnes of separately collected food waste.

In view of the different organic 'mixes' collected by the HWP's partner authorities, on behalf of the Partnership the county council has contracts with a number of different reproprocessors including windrow composting for garden waste, in-vessel composting for any combination of food and garden wastes and anaerobic digestion for separate food wastes as shown in Table 2 below.

Table 2 Overview of Organic Wastes 2021/22			
Material	Treatment method	Tonnes	% Total
Garden Waste	Open Windrow	23,389	18.64%
Garden Waste	In-Vessel Composting	49,982	39.84%
Garden Waste and Food Waste	In-Vessel Composting	22,121	17.63%
Food Waste	In-Vessel Composting	4,662	3.72%
Food Waste	Anaerobic Digestion	21,214	16.91%
Compostable Street Sweepings	Other	4,082	3.25%
Total		125,450	100.00%

While Windrow and In-Vessel Compost processes produce composts for agricultural and garden use, the Anaerobic Digestion facilities use methane and other gases produced and captured in treating the food waste to generate electricity for the national grid on site. Compostable materials are also recovered from council street sweeping operations.





The map Organic Wastes 2021/22 above and Table 2 on the previous page, shows that the two In Vessel Composting (IVC) plants and the two Anaerobic Digestion (AD) plants, all located within the county boundary, between them treat nearly four-fifths of Hertfordshire's organic waste arisings. In contrast to the residual waste, only about a fifth of the organic material collected goes out of the county for processing, much of that to the Cattlegate Farm Open Windrow (OW) facility in immediately adjacent Enfield.

Management of the organic waste stream continues to undergo significant change as borough and district councils implement separate food waste collections to improve performance. In 2021/22, seven of the ten HWP boroughs and districts already offer separate weekly food waste collections. In line with the Government's Consistency Agenda laying down minimum standards of recycling services for councils, the remaining three HWP authorities are due to implement separate collections by 2025.

## 4. Recycling

Material collected for recycling is considered by the Environment Agency to have reached a Final Destination when, through sorting, cleaning and other processes, it again becomes a usable resource. The earlier sections of this report have shown that while Hertfordshire's residual waste is processed outside the county, it is nonetheless treated in neighbouring or nearby areas. Meanwhile almost all the garden waste and food waste collected in Hertfordshire is processed in Hertfordshire itself. The fate of the dry recycling, the paper, card and cardboard, glass, plastics, steel and aluminium cans etc. collected across the county, is more complicated. This is largely because the materials are all very different and require sorting, further separation, cleaning and processing at specialist plants before they become a usable resource rather than waste. In the case of recycling, some materials will have to be transported significant distances in the UK, or to locations overseas, to be processed into new products or feedstocks.

Nonetheless as Table 3 below indicates, while only 3% of the material collected for recycling across the Hertfordshire Waste Partnership reached a reprocessing final destination in Hertfordshire itself, more than a third of it was still processed fairly nearby - in the East of England, East Midlands, London or South East England Regions. Table 3 also shows that 35% of material collected for recycling was reprocessed further afield in the UK, and 25% reached a reprocessing final destination abroad.

**Table 3: Summary of Final Destinations for Recycling and Reuse items collected by Herts Waste Partnership (HWP) 2021/22**

Final Destination location	Tonnes processed	% Total Recycling
Hertfordshire	4,073	2.92%
Eastern and Southern English Regions (excluding Herts)	50,326	36.07%
Rest of the UK	49,331	35.36%
Europe	2,199	1.58%
Asia (inc Turkey)	32,415	23.23%
Africa	673	0.48%
Final Destination not recorded	510	0.37%
<b>Total Recycling and Reuse Collected by HWP</b>	<b>139,527</b>	<b>100.00%</b>



**Table 4: Proportion of recyclates and reuse items processed in UK**

Year	Tonnes for recycling and reuse	% Reaching Final Destinations in UK
2020/21	144,106	72.55%
2021/22	139,526	74.34%

As shown in Table 4 above, the proportion of recyclates reprocessed at Final Destinations in the UK increased slightly in 2021/22 compared with 2020/21.

#### 4.1 Recycling Final Destinations by Commodity

Some commodities are 100% reprocessed at Final Destinations in the UK as indicated in Table 5 below. For comparative purposes Table 5 shows the results for 2020-21 and 2021-22. Note that Glass and Steel Cans are mainly collected through home recycling services. On the other hand Wood, Scrap Metal, Waste Electricals and Miscellaneous Recyclables and Reuse Items which include Batteries, Books, Bric-a-brac, CDs/DVDs and videos, Mattresses, Oils, Toner Cartridges etc. are mainly taken by householders themselves to Recycling Centres to be placed in labelled containers and bays. In addition, Aggregates are also recovered from Street Sweepings at specialist plants. For a full breakdown of the Final Destinations of all commodities see Table 9.

**Table 5: Commodities 100% reaching processing Final Destinations in UK**

Commodity	2020/21		2021/22	
	Total Tonnes collected by HWP	% Total Recycling Tonnage	Total Tonnes collected by HWP	% Total Recycling Tonnage
Glass	39,053.58	27.10%	36,404.26	26.09%
Wood	14,028.45	9.73%	16,613.77	11.91%
Scrap Metal	4,566.36	3.17%	5,188.42	3.72%
Waste Electrics/Electronics	3,805.75	2.64%	4,699.43	3.37%
Metals – Steel Cans	3,858.42	2.68%	3,420.17	2.45%
Recyclable Street Sweepings	4,920.49	3.41%	2,460.93	1.76%
Miscellaneous Recyclables and Reuse Items	1,015.78	0.70%	1,093.27	0.78%

Of the other commodities, significant proportions reach processing final destinations overseas as indicated in Table 6 below which also compares the situation in 2020/21 with 2021/22. Almost all card / cardboard is sent overseas, as well as more than 60% of paper collected, and half the card, cardboard & paper when collected mixed. Most textiles and footwear are exported.

Interestingly, however, over 90% of plastics go to processing final destinations in the UK, with less than 10% going overseas. This is a significant increase in the proportion reaching final destinations in the UK compared with the year before. Aluminium Cans also continue mainly to be processed in the UK.

**Table 6: Final Destination summary of other Commodities**

	2020/21			2021/22		
Commodity	Total Tonnes collected by HWP	% to Final Destination in UK	% to Final Destination overseas	Total Tonnes collected by HWP	% to Final Destination in UK	% to Final Destination overseas
Card, Cardboard & Paper Mixed	26,096.87	57.22%	42.78%	24,939.50	50.66%	49.34%
Paper	17,894.13	32.06%	77.94%	17,484.83	38.86%	61.14%
Plastics	14,672.81	70.97%	29.13%	13,378.58	91.51%	8.49%
Card & Cardboard	10,657.08	0.73%	99.27%	10,052.25	1.64%	98.36%
Textiles & Footwear	1,524.49	20.69%	79.31%	1,817.63	14.23%	85.77%
Metals – Aluminium Cans	1,918.59	95.40%	4.60%	1,811.36	93.58%	6.42%
Tyres	79.69	1.34%	98.66%	150.23	33.38%	66.62%
Beverage Cartons	13.88	86.38%	13.62%	12.22	69.39%	30.61%

Table 7 on the next page shows the final destination countries where commodities are exported. India is by some margin the major destination for all types of fibres (paper, card and cardboard) although Malaysia, Thailand, Turkey and Vietnam also receive substantial quantities. Several countries also receive plastics, but only Ireland and Turkey receive sizeable quantities, since as noted above over 90% of plastics reach final processing destinations in the UK. Textiles and footwear largely supply reuse markets in West Africa. A small proportion of aluminium cans are processed in Europe. Where final destination countries are shown as unspecified, materials have been supplied to more than one country with the breakdown between countries not recorded.



**Table 7: Tonnes of principal commodities exported to Final Destinations in countries overseas 2021/22**

Country	Card, Cardboard & Paper Mixed	Paper	Plastics	Card & Cardboard	Textiles & Footwear	Metals – Aluminium Cans
Total collected across HWP	24,939.50	17,484.83	13,378.58	10,052.25	1,817.63	1,811.36
India	6,854.75	10,350.14		3,269.47	48.84	
Indonesia	17.71			36.17		
Malaysia	384.56	315.57		772.94		
Pakistan					439.50	
Taiwan	17.71			124.03		
Thailand	1,058.94			2,442.37		
Turkey	751.08		342.46	1,411.08		
UAE					5.67	
Vietnam	575.22			1,274.79		
Asian countries - unspecified	1,819.40					
Belgium		3.65				
France	194.19		11.33	97.96		
Germany	314.05	20.30	59.13	283.89		47.48
Greece			37.63			68.76
Ireland			421.83			
Italy			2.20			
Lithuania			1.90			
Netherlands		1.24	142.52			
Poland			7.01			
Portugal			18.39			
Romania			15.25			
Slovakia			9.45			
Spain	199.11		64.10	175.37		
EU countries - unspecified			2.16			
Benin					5.67	
Burkina Faso					2.88	
Cameroon					2.88	
Equatorial Guinea					2.88	
Ghana					18.05	
Ivory Coast					42.06	
Kenya					20.43	
Niger					5.66	
African countries – unspecified					572.25	
Overseas – unspecified	117.41				392.19	
Total to Final Destinations Overseas	12,304.13	10,690.90	1,135.36	9,886.94	1,558.96	116.24
Total to Final Destinations UK	12,635.37	6,793.93	12,243.22	165.31	258.67	1,695.12

## 4.2 Recycling Audit Trail

As much address information as possible about the final destinations of materials has been sought. We do this because we believe that having an audit trail to the reprocessing final destination helps build confidence in the value of recycling efforts and can challenge persistent media reports of recyclable materials from UK local authorities ending up at unregulated disposal locations.

However, we recognise that WasteDataFlow, the UK Government's logging system for materials collected by Councils for reuse, recycling and organic treatment does not require the name and address of overseas processing companies to be recorded, only the receiving country, and that particularly

where materials go overseas via international brokerage bodies it may not always be possible to obtain full address information. Indeed, as noted above, sometimes the brokerage body indicates that more than one country has been supplied without offering a breakdown. New waste tracking arrangements are being considered by the UK Government and if and when these are implemented it may allow more comprehensive tracking of material than is currently achieved. As can be seen in Table 8 there is a mixed picture in terms of recording the addresses of reprocessing final destinations.

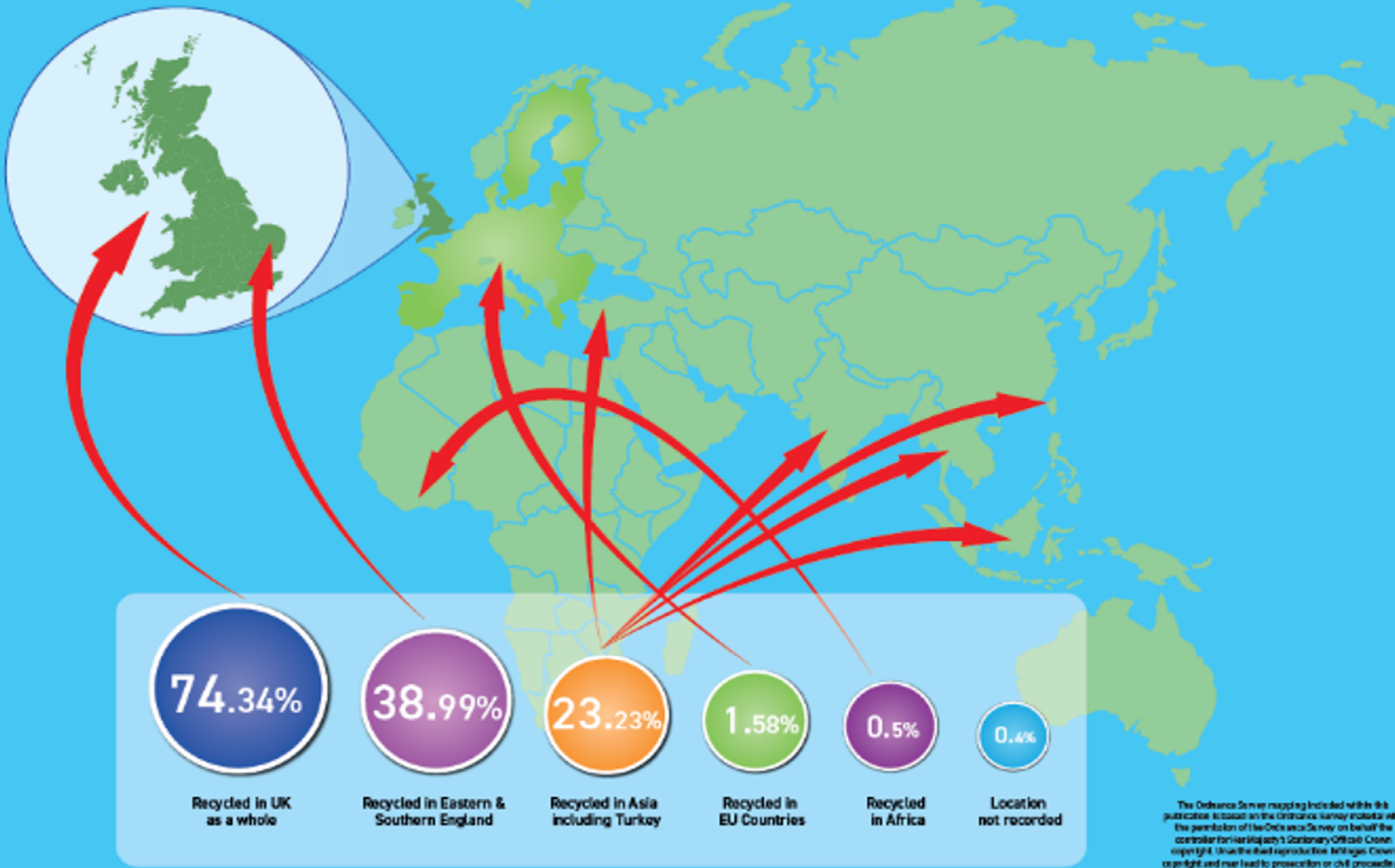
**Table 8: Transactions with Full Address of Final Destination**

Commodity	Transactions Logged	Transactions with Full Address	% with Full Address
Beverage Cartons	13	6	46.15%
Card & Cardboard	247	159	64.37%
Card, Cardboard & Paper Mixed	293	109	37.20%
Glass	140	139	99.29%
Metals – Aluminium Cans	74	64	86.49%
Metals – Steel Cans	138	138	100%
Miscellaneous Recyclables and Reuse items	48	48	100%
Paper	119	91	76.47%
Plastics	395	344	87.09%
Recyclable Street Sweepings	34	34	100%
Scrap Metal	29	29	100%
Textiles & Footwear	182	145	79.67%
Tyres	8	5	62.50%
Waste Electrical & Electronic Equipment	148	148	100%
Wood	4	4	100%



The Final Destinations of Materials map below summarises the global distribution of recyclates collected in Hertfordshire, while Table 9 on page 14 shows the final destinations of different material types.

Final Destinations of Materials collected for Recycling and Reuse (excluding Organics) HWP 2021/22



	Total	Hertfordshire		Eastern and Southern England except Hert- fordshire		Rest of the UK		Europe		Asia		Africa		Final Destination not recorded		% Final Destination in UK	
	Tonnes	Tonnes	% FD here	Tonnes	% FD here	Tonnes	% FD here	Tonnes	% FD here	Tonnes	% FD here	Tonnes	% FD here	Tonnes	% FD here	2021-22	2020-21
Glass	36,404.26			24,622.54	67.64%	11,781.72	32.36%									100.00%	100.00%
Wood	16,613.77					16,613.77	100.00%									100.00%	100.00%
Waste Electrical and Electronic Equipment	4,699.43	353.48	7.52%	818.51	17.42%	3,527.43	75.06%									100.00%	100.00%
Metals - Steel Cans	3,420.17			881.58	25.78%	2,538.59	74.22%									100.00%	100.00%
Recyclable street sweepings	2,460.93			2,460.93	100.00%											100.00%	100.00%
Brick-pave (reuse)	365.25	365.25	100.00%													100.00%	100.00%
Books (reuse)	228.21			228.21	100.00%											100.00%	100.00%
Car batteries	159.76			159.76	100.00%											100.00%	100.00%
Metals - Steel & Alu Cans	115.41			115.41	100.00%											100.00%	100.00%
Mineral Oil	113.82					113.82	100.00%									100.00%	100.00%
Video Tapes, DVDs and CDs	46.32	46.32	100.00%													100.00%	100.00%
Household Batteries	36.11					36.11	100.00%									100.00%	1.18%
Vegetable Oil	12.63			12.63	100.00%											100.00%	100.00%
Mattresses	11.87			11.87	100.00%											100.00%	n/a
Ink & Toner Car- tridges (reuse and recycling)	3.89	0.97	24.94%	2.92	75.06%											100.00%	100.00%
Scrap Metal	5,188.42	3,023.36	58.27%	2,124.24	40.94%	40.82	0.79%									100.00%	100.00%
Metals - Aluminium Cans	1,811.36			19.46	1.07%	1,675.66	92.51%	116.24	6.42%							93.58%	95.40%
Plastics	13,378.58	158.93	1.19%	7,003.10	52.35%	5,081.19	37.98%	792.90	5.93%	342.46	2.56%					91.51%	70.97%
Composite Food and Beverage Cartons	12.22					8.48	69.39%	0.17	1.39%	3.57	29.21%					69.39%	86.38%
Card, Cardboard & Paper Mixed	24,939.50	124.72	0.50%	4,952.49	19.86%	7,558.16	30.31%	707.35	2.84%	11,479.37	46.03%			117.41	0.47%	50.66%	57.22%
Paper	17,484.83			6,778.07	38.77%	15.86	0.09%	25.19	0.14%	10,665.71	61.00%					38.86%	32.06%
Tyres	150.23					50.14	33.38%			100.09	66.62%					33.38%	1.34%
Textiles & footwear	1,817.63			25.29	1.39%	233.39	12.84%			494.01	27.18%	672.76	37.01%	392.19	21.58%	14.23%	20.69%
Card & Cardboard	10,052.25			109.09	1.09%	56.22	0.56%	557.22	5.54%	9,329.72	92.81%					1.64%	0.73%
Recycling and Reuse Collected by HWP	139,526.85	4,073.04	2.92%	50,326.10	36.07%	49,331.36	35.36%	2,199.07	1.58%	32,414.93	23.23%	672.76	0.48%	509.60	0.37%	74.34%	72.55%

Table 9

## 5 How to contact us

If you have any questions about this report or any other matter relating to the Hertfordshire Waste Partnership, please contact us via :-

 [www.wasteaware.org.uk](http://www.wasteaware.org.uk)  
 [wasteaware@hertfordshire.gov.uk](mailto:wasteaware@hertfordshire.gov.uk)  
 0300 1234 051  
     @HertsWasteAware

Sign up to the monthly WasteAware e-bulletin to get advance details of upcoming events straight to your inbox. Select 'Rubbish and Recycling'.  
<https://www.hertfordshire.gov.uk/>

[update me/](#)

You can also view our messages on [our website](#) and social media. We have a [Facebook page](#), [Twitter feed](#) and [Instagram account](#). Follow us to see videos and photos, news stories, campaign updates and ways to make little changes to your life to reduce waste and recycle right.

We can all make a difference: share these details with family, friends and colleagues as well.

## 6 Glossary

### Anaerobic Digestion

is a collection of processes by which microorganisms break down biodegradable material in the absence of oxygen. The process is used for industrial or domestic purposes to manage waste and/or to produce fuels often used for on -site electricity generation.

### Composting

means a biological process in which biodegradable waste, such as garden and food waste, is decomposed in the presence of air to produce compost or soil conditioner.

### Disposal

means any waste management operation serving or carrying out the final treatment and disposal of waste.

### Dry Recycling

refers to recyclables materials normally collected at the kerbside including steel and aluminium cans, all grades of paper and cardboard, plastic bottles, pots, tubs and trays and glass.



EPA	means the Environmental Protection Act 1990.
Final Destination	the location of a processing facility at which waste material collected for recycling is transformed into a new product or a feedstock which has value
Food Waste	biodegradable waste derived from food materials typically consisting of cooked and uncooked fruit and vegetables, meat and fish scraps, excess or spoiled prepared food and other discards from domestic kitchens.
Green Waste	biodegradable waste such as green catering waste (i.e., raw fruit and vegetables), vegetation and plant matter (includes trimmings, leaves, shrubs, plants, grass and trees etc.) from household gardens, local authority parks and gardens and commercial landscaping.
Household Waste	as defined in the Controlled Waste Regulations 1992 and includes waste from household collection rounds, street cleansing, bulky household waste collections, household hazardous waste and clinical waste.
HWP	means the Hertfordshire Waste Partnership which includes Hertfordshire County Council as the waste disposal authority and the 10 district and borough waste collection authorities.
In-vessel composting	Describes a group of methods that confine the composting materials within a vessel typically consisting of metal or plastic tanks or concrete bunkers in which air flow and temperature are controlled to allow maintenance of optimum aerobic decomposition conditions.
Landfill	a landfill (also known as a tip, dump, rubbish dump or dumping ground) is a site for the disposal of waste materials by burial and is the oldest form of waste treatment.

<b>Materials Recycling Facility</b>	a materials recycling facility is a specialized plant that receives, separates and prepares recyclable materials for marketing to end-users.
<b>Open Windrow Composting</b>	is the production of compost by piling organic matter or biodegradable waste, such as animal manure and crop residues, in long rows (windrows). This method is suited to producing large volumes of compost. These rows are generally turned to improve porosity and oxygen content, mix in or remove moisture and redistribute cooler and hotter portions of the pile.
<b>Organic Waste</b>	Food waste and/or green waste collected by the WCAs pursuant to section 45 of the EPA.
<b>Recycling</b>	means the collection and separation of selected materials and subsequent reprocessing to produce marketable products.
<b>Residual Waste</b>	waste other than that collected for reuse, composting or recycling.
<b>Reuse</b>	the use of waste items for their original or another purpose without reprocessing.
<b>WasteDataFlow</b>	means the online “WasteDataFlow” scheme established by the Department for Environment Food and Rural Affairs for the collation of household waste information returns ( <a href="http://www.wastedataflow.org">www.wastedataflow.org</a> ).