

# Scottish Household Waste Generated and Managed – 2022

Official Statistics



## Scottish Household Waste Generated and Managed – 2022

This release shows the 2022 calendar year summary of household waste generated in Scotland and managed by or on behalf of Scottish local authorities. Information on the methodology used to prepare this release and a definition of terms is in the methodology and glossary at the end of this document.

### Key points

#### Scottish Household Waste – 2022 calendar year

- The total amount of household waste generated in Scotland was 2.33 million tonnes (Table 1) in 2022, a decrease of 148,000 tonnes (6.0%) from 2021. This is the lowest amount of Scottish household waste generated that has been recorded since 2011.
- For 2022, the Scottish household waste recycling rate<sup>1</sup> was 43.3%, an increase of 0.3 percentage points from the 43.0% (Table 1) rate achieved in 2021<sup>2</sup>. However, the overall amount of household waste recycled between 2021 and 2022 decreased by 56,000 tonnes (5.2%) to 1.01 million tonnes, broadly in line with the reduction in household waste generated.
- The reduction in waste generated and waste recycled follows a previous spike from 2020 to 2021, which was attributed to the impact of the COVID-19 lockdown and other restrictions.
- The amount of Scottish household waste landfilled in 2022 was 585,000 tonnes, a decrease of 78,000 tonnes (11.7%) from 2021. This continues a long-term trend, with a reduction of 868,000 tonnes (59.7%) of household waste landfilled since 2011. The rate

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<sup>1</sup> Recycling rates refer to Scotland's national measure which differs from the Waste from households measure published in [Defra's UK Statistics on Waste](#). For further information refer to the Methodology section on page 24.

<sup>2</sup> A minor revision to the methodology to calculate recycling was made in 2022 to include metals from incinerator bottom ash recycled, and applied to all historic data. Both the 2022 and 2021 datasets refer to the new method. For further information and detailed recycling rates using the old and new method, refer to the Methodology section on page 24.

of landfill between 2021 and 2022 decreased by 1.6 percentage points from 26.7% to 25.1%.

- For 2022, the total amount of Scottish household waste managed by other diversion from landfill was 736,000 tonnes, a decrease of 15,000 tonnes (1.9%) from 2021. Most of the diverted waste in 2022 was managed by incineration (604,000 tonnes, 82.0%).
- The carbon impact of Scottish household waste generated and managed in 2022 was 5.5 million tonnes of carbon dioxide equivalent (TCO<sub>2</sub>e, Table 1), which is the equivalent to 1.02 TCO<sub>2</sub>e per person (Table 2). This was a decrease of 357,000 TCO<sub>2</sub>e (6.1%) from 2021, and a reduction of 1.22 million TCO<sub>2</sub>e from 2011.

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Summary data tables are available to download in Excel format on [SEPA's web site](#).

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<https://code.statisticsauthority.gov.uk/the-code/>

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Table 1. Scottish Household waste generated and managed in 2022 - summary data<sup>3</sup>

LOCAL AUTHORITY	GENERATED (TONNES)	RECYCLED (TONNES)*	RECYCLED (%)*	OTHER DIVERSION FROM LANDFILL (TONNES)*	OTHER DIVERSION FROM LANDFILL (%)*	LANDFILLED (TONNES)	LANDFILLED (%)	CARBON IMPACT (TCO2e)	2021 RECYCLED (%)*
Aberdeen City	88,802	37,091	41.8	22,007	24.8	29,706	33.5	227,309	46.8
Aberdeenshire	109,675	44,130	40.2	5,517	5.0	60,029	54.7	296,479	41.1
Angus	50,730	26,208	51.7	23,549	46.4	973	1.9	104,113	54.7
Argyll and Bute	48,969	19,963	40.8	7,029	14.4	21,978	44.9	116,646	39.3
City of Edinburgh	187,628	69,656	37.1	112,758	60.1	5,215	2.8	463,742	39.9
Clackmannanshire	24,328	12,453	51.2	0	0.0	11,875	48.8	54,898	50.0
Dumfries and Galloway	66,020	29,747	45.1	30,246	45.8	6,028	9.1	160,045	39.8
Dundee City	60,499	20,469	33.8	38,812	64.2	1,220	2.0	143,230	32.6
East Ayrshire	49,578	24,060	48.5	17,325	34.9	8,194	16.5	112,286	48.5
East Dunbartonshire	54,589	28,272	51.8	24,160	44.3	2,157	4.0	124,550	45.3
East Lothian	49,448	26,245	53.1	18,603	37.6	4,600	9.3	106,489	53.9
East Renfrewshire	41,421	23,193	56.0	14,968	36.1	3,261	7.9	86,646	58.1
Falkirk	64,308	33,060	51.4	33	0.1	31,215	48.5	149,701	48.2
Fife	172,084	78,572	45.7	16,185	9.4	77,328	44.9	390,253	43.6
Glasgow City	244,483	67,435	27.6	115,829	47.4	61,219	25.0	714,985	27.3
Highland	111,118	41,295	37.2	3,749	3.4	66,074	59.5	284,558	37.4
Inverclyde	24,982	11,685	46.8	1,534	6.1	11,763	47.1	58,208	48.5
Midlothian	41,096	19,401	47.2	16,644	40.5	5,051	12.3	97,375	47.4
Moray	48,714	28,154	57.8	1	0.0	20,559	42.2	93,245	52.2
Na h-Eileanan Siar	13,469	4,289	31.8	92	0.7	9,089	67.5	36,342	33.5
North Ayrshire	59,166	32,726	55.3	25,986	43.9	455	0.8	117,506	56.9
North Lanarkshire	146,546	63,055	43.0	60,128	41.0	23,363	15.9	334,123	43.4
Orkney Islands	9,951	2,314	23.3	4,506	45.3	2,482	24.9	26,267	24.2
Perth and Kinross	70,604	34,793	49.3	5,110	7.2	30,700	43.5	139,313	50.2
Renfrewshire	78,103	41,980	53.7	34,008	43.5	2,115	2.7	162,708	51.7
Scottish Borders	50,610	29,012	57.3	21,181	41.9	227	0.4	115,472	55.2
Shetland Islands	9,004	1,860	20.7	5,019	55.7	2,124	23.6	26,616	18.1
South Ayrshire	49,477	26,865	54.3	7,056	14.3	15,515	31.4	105,684	56.0
South Lanarkshire	147,086	60,525	41.1	63,879	43.4	22,682	15.4	338,618	41.0
Stirling	40,209	20,648	51.4	660	1.6	18,901	47.0	83,988	50.9
West Dunbartonshire	43,897	17,042	38.8	2,874	6.5	23,981	54.6	110,189	35.6
West Lothian	78,064	35,849	45.9	36,830	47.2	5,385	6.9	161,141	41.3
<b>Total Scotland</b>	<b>2,334,659</b>	<b>1,012,045</b>	<b>43.3</b>	<b>736,277</b>	<b>31.5</b>	<b>585,461</b>	<b>25.1</b>	<b>5,542,725</b>	<b>43.0</b>

\*All Recycled and Other diversion from landfill figures are calculated by a revised method in which metals from incineration bottom ash, which are recycled, contribute to Recycled figures. Previously, these were part of the Other diversion from landfill figures.

<sup>3</sup> Note: The carbon impact of mixed residual household waste is based on a national [waste composition study](#) and therefore does not reflect any difference in waste composition which may exist between Local Authorities.

Table 2. Scottish Household Waste Generated and Managed per person in 2022 - summary data<sup>4</sup>

LOCAL AUTHORITY	GENERATED (TONNES PER PERSON)	RECYCLED (TONNES PER PERSON)	OTHER DIVERSION FROM LANDFILL (TONNES PER PERSON)	LANDFILLED (TONNES PER PERSON)	CARBON IMPACT (TCO <sub>2</sub> e PER PERSON)
Aberdeen City	0.40	0.17	0.10	0.13	1.01
Aberdeenshire	0.42	0.17	0.02	0.23	1.12
Angus	0.44	0.23	0.21	0.01	0.91
Argyll and Bute	0.57	0.23	0.08	0.26	1.36
City of Edinburgh	0.37	0.14	0.22	0.01	0.90
Clackmannanshire	0.47	0.24	0.00	0.23	1.06
Dumfries and Galloway	0.45	0.20	0.21	0.04	1.10
Dundee City	0.41	0.14	0.26	0.01	0.97
East Ayrshire	0.41	0.20	0.14	0.07	0.93
East Dunbartonshire	0.50	0.26	0.22	0.02	1.14
East Lothian	0.44	0.23	0.17	0.04	0.95
East Renfrewshire	0.43	0.24	0.15	0.03	0.90
Falkirk	0.41	0.21	0.00	0.20	0.95
Fife	0.46	0.21	0.04	0.21	1.05
Glasgow City	0.39	0.11	0.19	0.10	1.15
Highland	0.47	0.18	0.02	0.28	1.21
Inverclyde	0.32	0.15	0.02	0.15	0.74
Midlothian	0.43	0.20	0.17	0.05	1.01
Moray	0.52	0.30	0.00	0.22	1.00
Na h-Eileanan Siar	0.51	0.16	0.00	0.35	1.39
North Ayrshire	0.44	0.25	0.19	0.00	0.88
North Lanarkshire	0.43	0.18	0.18	0.07	0.98
Orkney Islands	0.45	0.11	0.20	0.11	1.19
Perth and Kinross	0.47	0.23	0.03	0.20	0.92
Renfrewshire	0.42	0.23	0.19	0.01	0.89
Scottish Borders	0.43	0.25	0.18	0.00	0.99
Shetland Islands	0.39	0.08	0.22	0.09	1.16
South Ayrshire	0.44	0.24	0.06	0.14	0.95
South Lanarkshire	0.45	0.18	0.20	0.07	1.03
Stirling	0.43	0.22	0.01	0.20	0.91
West Dunbartonshire	0.50	0.19	0.03	0.27	1.25
West Lothian	0.43	0.20	0.20	0.03	0.89
<b>Total Scotland</b>	<b>0.43</b>	<b>0.19</b>	<b>0.14</b>	<b>0.11</b>	<b>1.02</b>

<sup>4</sup> Note: The carbon impact of mixed residual household waste is based on a national [waste composition study](#) and therefore does not reflect any difference in waste composition which may exist between Local Authorities. Population data is from the National Records of Scotland - [Scotland's Census 2022 - rounded population estimates](#).

## Trends

### Waste Generated

The total amount of household waste generated in Scotland in 2022 was 2.33 million tonnes, a decrease of 148,000 tonnes (6.0%) from 2021.

The decrease follows a 61,000 tonne (2.5%) increase between 2019 and 2021. The increase, and subsequent reduction in 2022, has been attributed by several local authorities to COVID-19 restrictions with an increase in waste from home working and home improvements, and a decrease for 2022 following the easing of restrictions. This is the lowest amount of Scottish household waste generated that has been recorded (see Figure 1 below).

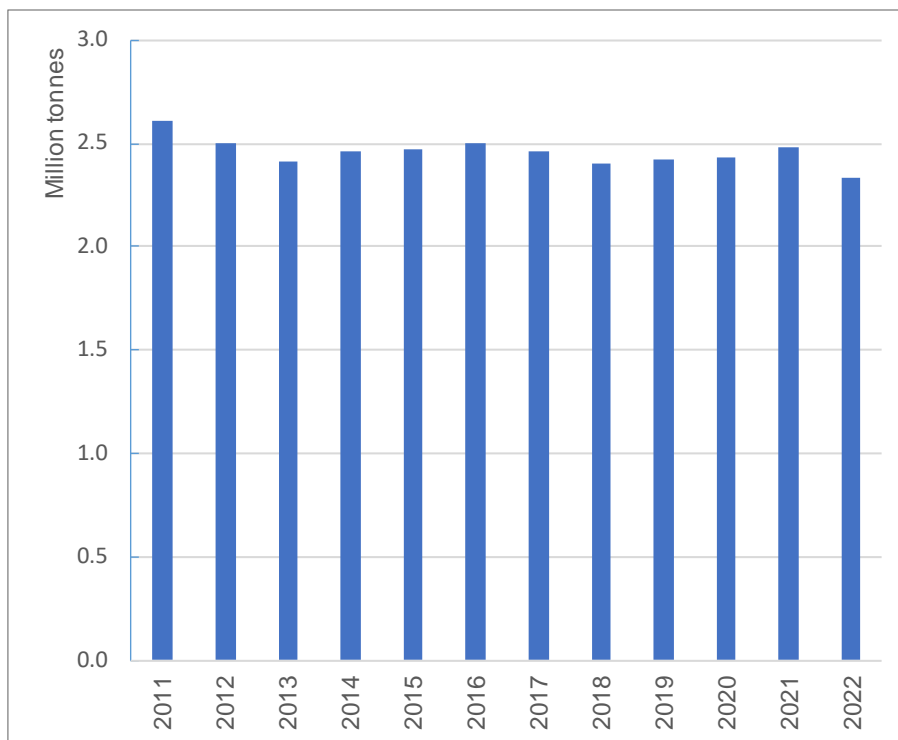
The amount of segregated recyclate collected for recycling via kerbside collections in 2022 was 663,000 tonnes, a decrease of 59,000 tonnes (8.1%) from 2021, reflecting the overall reduction in waste generated.

The percentage of recyclate collected via kerbside schemes, as a total of all recyclate collected, decreased between 2021 and 2022 by 1.5 percentage units. The reduction followed a spike in the percentage of waste collected by kerbside collection between 2019 and 2020, due to the unavailability of other methods of collection during the COVID-19 restrictions, such as household waste recycling centres. The 66.4% of segregated recyclate collected by kerbside collection in 2022 is consistent with a longer-term increasing trend since 2013 (see Figure 2 below).

The change in kerbside collection between 2021 and 2022 was less pronounced for rural authorities<sup>5</sup> (a decrease of 16,000 tonnes, 5.6%) compared to urban authorities (a decrease of 42,000 tonnes, 9.9%, see Figure 3 below).

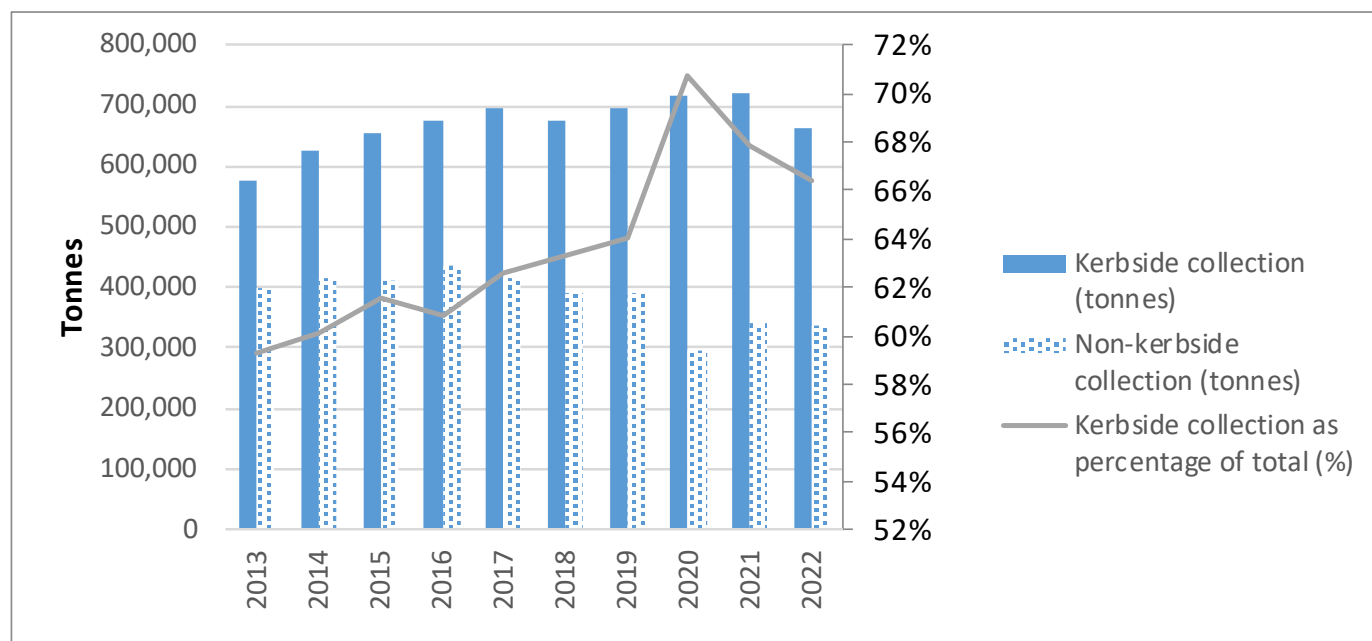
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<sup>5</sup> Urban authorities are defined as those with greater than 75% population residing in "Large Urban Areas" or "Other Urban Areas" as listed in the [Scottish Government Urban Rural Classification 2020 - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/urban-rural-classification-2020/pages/introduction.aspx).

**Figure 1. Household waste generated in Scotland 2011 - 2022****Table 3. Household waste generated in Scotland 2011 - 2022**

YEAR	WASTE GENERATED (TONNES)
2011	2,606,759
2012	2,500,933
2013	2,412,630
2014	2,459,558
2015	2,468,781
2016	2,498,978
2017	2,460,820
2018	2,405,246
2019	2,421,790
2020	2,428,253
2021	2,482,604
2022	2,334,659

**Figure 2. Scottish segregated recyclate collected at the kerbside by authority type 2013 - 2022 (tonnes)**

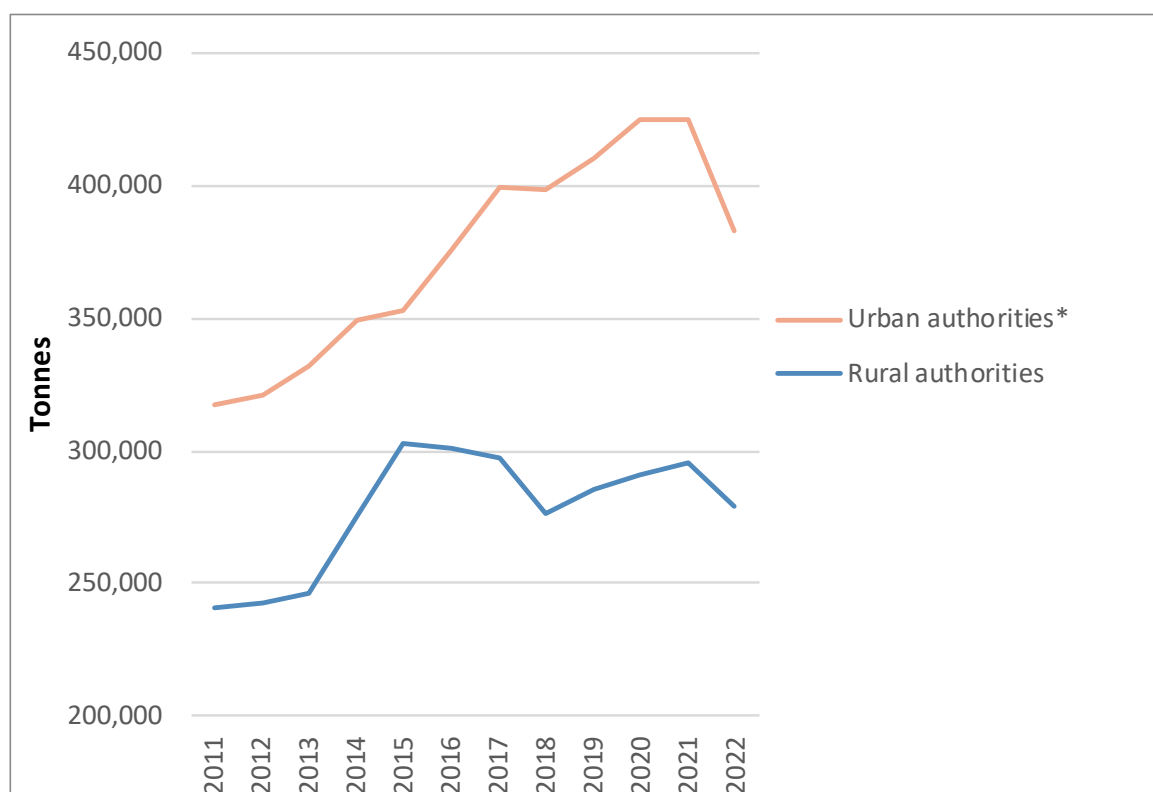


**Table 4. Scottish segregated recyclate collected at the kerbside by authority type 2013 - 2022 (tonnes)**

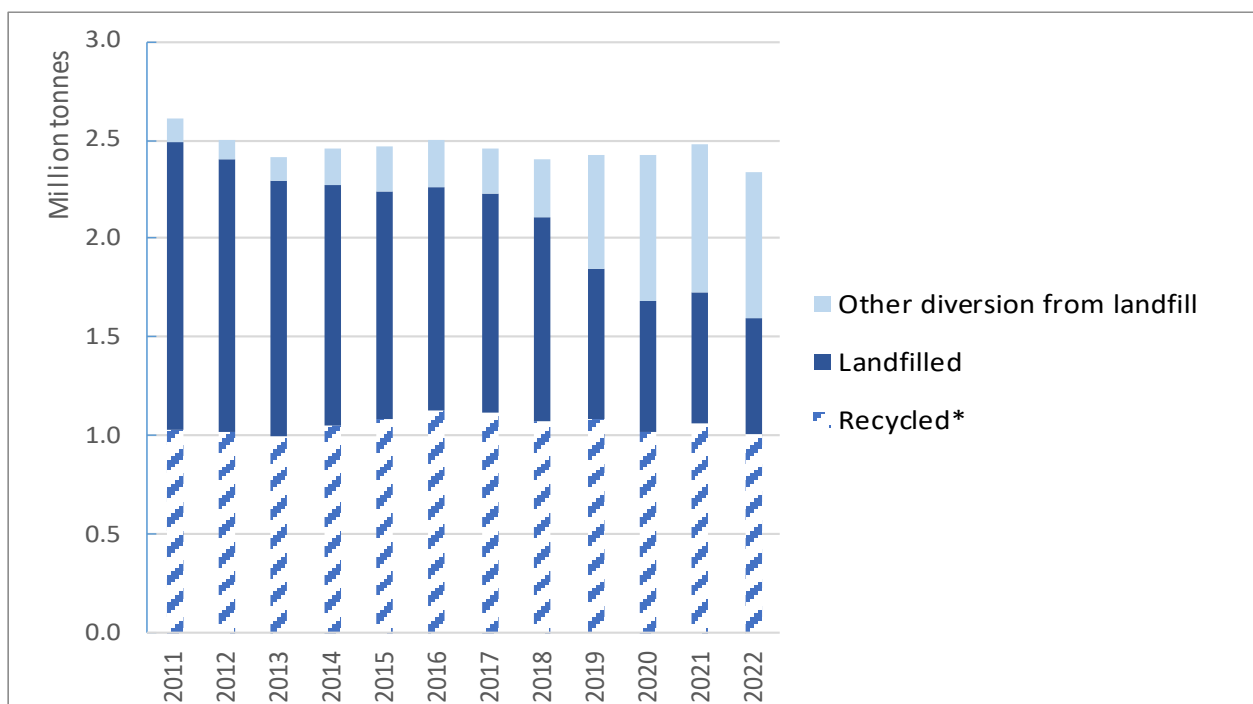
YEAR	KERBSIDE COLLECTION (TONNES)	NON-KERBSIDE COLLECTION (TONNES)	TOTAL (TONNES)	KERBSIDE COLLECTION AS PERCENTAGE OF TOTAL (%)
2013	578,096	397,481	975,578	59.3%
2014	624,548	415,169	1,039,718	60.1%
2015	655,866	409,845	1,065,710	61.5%
2016	676,979	435,485	1,112,464	60.9%
2017	696,414	416,542	1,112,956	62.6%
2018	674,830	390,916	1,065,746	63.3%
2019	695,937	390,359	1,086,297	64.1%
2020	715,911	296,013	1,011,924	70.7%
2021	721,275	342,384	1,063,659	67.8%
2022	662,734	335,998	998,732	66.4%

Note: Data series starts with 2013, which is the start for the data source of WasteDataFlow question 100



**Figure 3. Scottish segregated recyclate collected at the kerbside 2011 - 2022 by rurality<sup>5</sup>****Table 5. Scottish segregated recyclate collected at the kerbside 2011 - 2022 by rurality<sup>5</sup> (tonnes)**

YEAR	URBAN AUTHORITIES	RURAL AUTHORITIES	TOTAL
2011	317,141	241,294	558,435
2012	320,639	242,774	563,413
2013	332,139	245,958	578,096
2014	349,189	275,360	624,548
2015	353,069	302,797	655,866
2016	375,525	301,453	676,979
2017	399,300	297,114	696,414
2018	398,718	276,113	674,830
2019	410,790	285,147	695,937
2020	424,651	291,261	715,911
2021	425,275	296,000	721,275
2022	383,170	279,564	662,734

**Figure 4. Household waste managed in Scotland 2011 - 2022<sup>7</sup>****Table 6. Household waste managed in Scotland 2011-2022<sup>7</sup>**

YEAR	RECYCLED*	LANDFILLED	OTHER DIVERSION FROM LANDFILL	TOTAL MANAGED
<b>2011</b>	1,032,156	1,453,789	120,688	2,606,633
<b>2012</b>	1,015,021	1,382,153	99,821	2,496,995
<b>2013</b>	1,002,840	1,290,829	119,861	2,413,530
<b>2014</b>	1,054,208	1,212,479	192,179	2,458,865
<b>2015</b>	1,089,407	1,150,537	228,541	2,468,485
<b>2016</b>	1,125,938	1,131,806	240,772	2,498,516
<b>2017</b>	1,121,683	1,106,959	231,423	2,460,065
<b>2018</b>	1,075,960	1,031,467	297,074	2,404,501
<b>2019</b>	1,087,997	758,141	575,071	2,421,209
<b>2020</b>	1,023,063	659,406	745,017	2,427,487
<b>2021</b>	1,067,599	663,140	750,781	2,481,520
<b>2022</b>	1,012,045	585,461	736,277	2,333,783

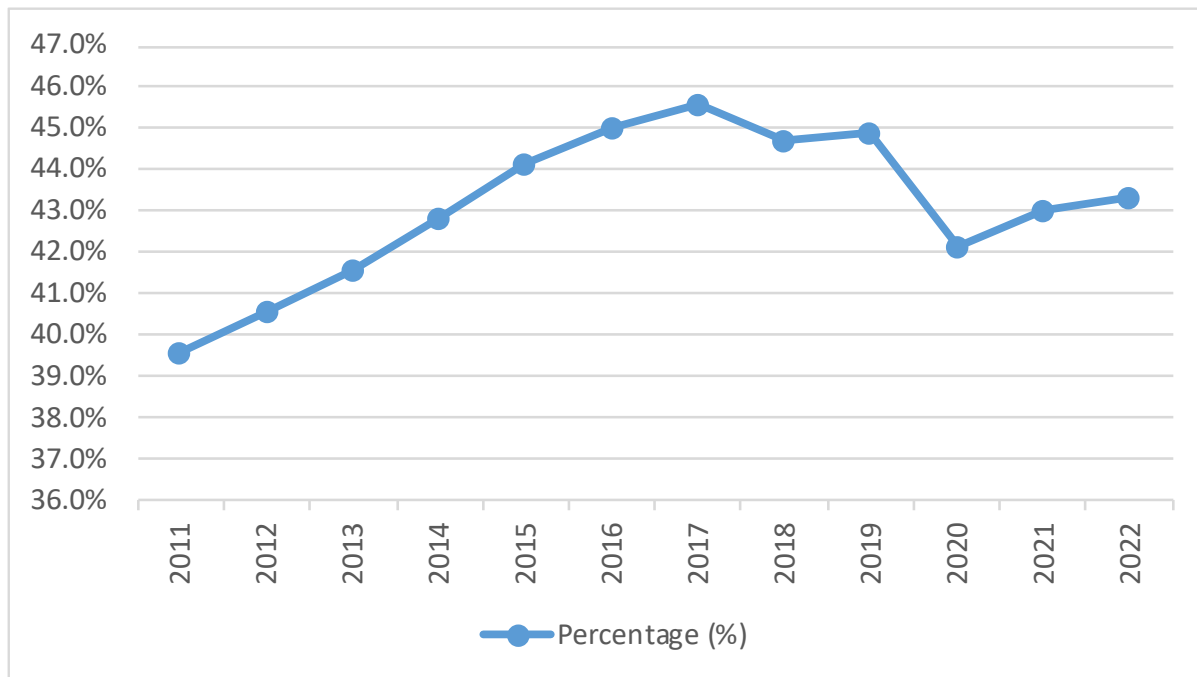
## Waste Recycled

Waste recycled includes waste reused or recycled and composted. A full description of recycling is given in the glossary.

For 2022, the Scottish household waste recycling rate was 43.3% (see Figure 5 below and Figure 4 above), an increase of 0.3 percentage points from the 43.0% recycling rate achieved in 2021, and an increase of 3.8 percentage points from the 39.6% achieved in 2011<sup>7</sup>.

For 2022, the total tonnage of Scottish household waste recycled was 1.01 million tonnes, a decrease of 56,000 tonnes (5.2%) from 2021 and 20,000 tonnes (1.9%) less than the 1.03 million tonnes of waste recycled in 2011<sup>7</sup>.

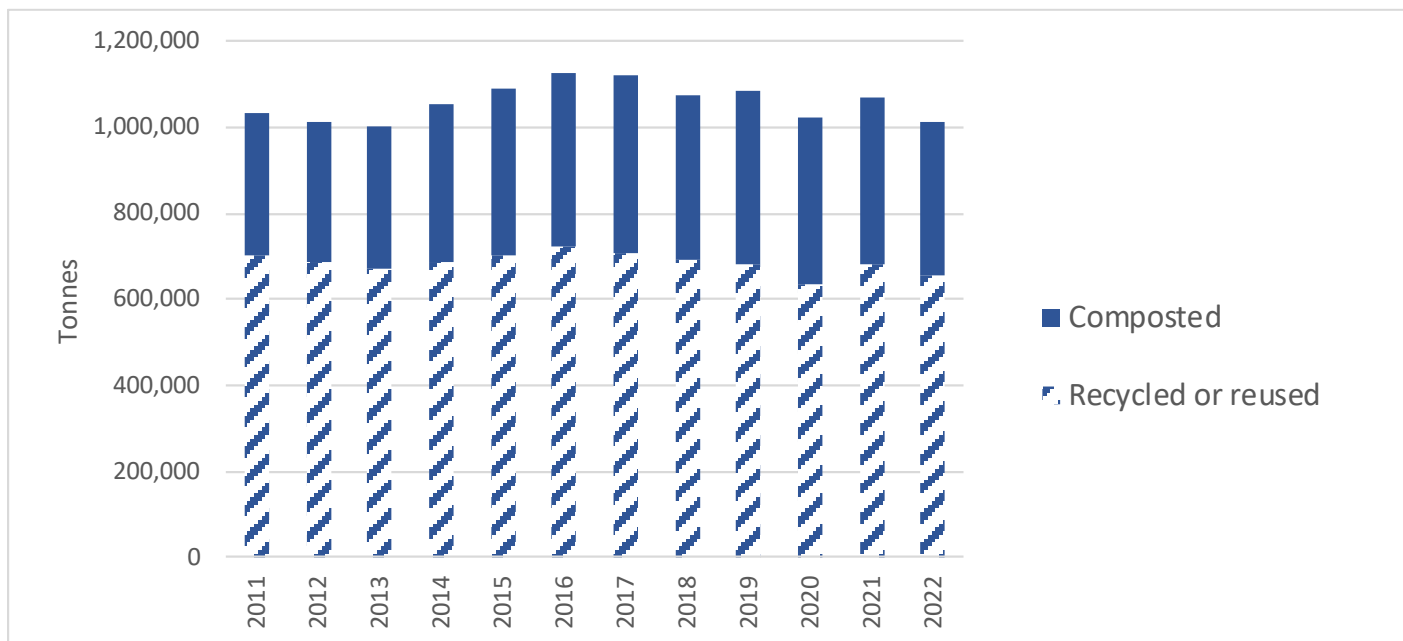
In 2022, of the 1.01 million tonnes of household waste recycled, the majority (657,000 tonnes, 65.0%) was recycled or reused, with household waste composted contributing the remaining 355,000 (35.0%) (see Figure 6 below).

**Figure 5. Scottish household waste recycling rates 2011-2022<sup>7</sup>**

Note: Recycled includes waste recycled or reused and waste composted.

**Table 7. Scottish household waste recycling rates 2011-2022<sup>7</sup>**

YEAR	PERCENTAGE (%)
2011	39.6%
2012	40.6%
2013	41.6%
2014	42.9%
2015	44.1%
2016	45.1%
2017	45.6%
2018	44.7%
2019	44.9%
2020	42.1%
2021	43.0%
2022	43.3%

**Figure 6. Breakdown of Scottish household waste recycled 2011-2022<sup>7</sup>****Table 8. Breakdown of Scottish household waste recycled 2011-2022<sup>7</sup> (tonnes)**

YEAR	RECYCLED OR REUSED	COMPOSTED	TOTAL
2011	700,316	331,840	1,032,156
2012	686,024	328,997	1,015,021
2013	670,354	332,486	1,002,840
2014	685,168	369,040	1,054,208
2015	704,133	385,273	1,089,407
2016	722,194	403,743	1,125,938
2017	706,485	415,198	1,121,683
2018	693,244	382,716	1,075,960
2019	683,427	404,571	1,087,997
2020	634,693	388,370	1,023,063
2021	683,997	383,603	1,067,599
2022	657,444	354,601	1,012,045

## Waste recycled or reused

The 657,000 tonnes of Scottish household waste recycled or reused in 2022 was a decrease of 27,000 tonnes (3.9%) compared with 2021, which is broadly in line with the decrease in waste generated.

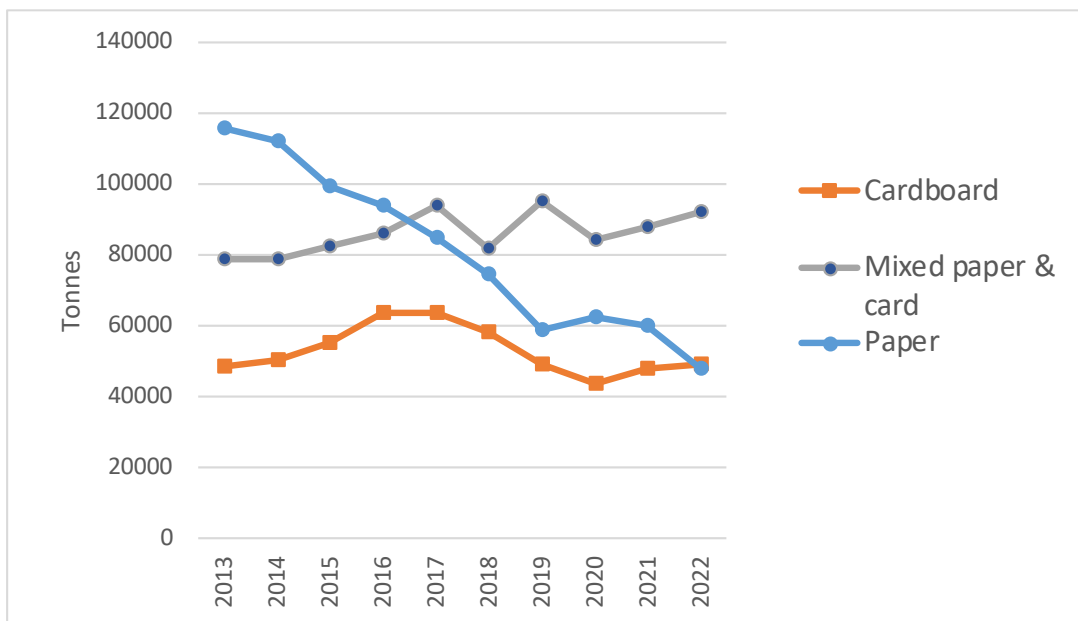
The amount of Scottish waste recycled or reused has remained fairly constant since 2011 (see Figure 6 above), and, with the exception of the 2020 COVID-19 year, has not varied by more than 5.3% from the average of 686,000 tonnes recycled or reused from 2011 to 2022.

The largest material category of Scottish household waste recycled or reused in 2022 was Paper and cardboard wastes (181,000 tonnes, 27.6% of all waste recycled or reused, see Table 9 below). There was a decrease of 2.7% for these materials recycled or reused between 2021 and 2022, which fits with the longer-term downward trend of Paper and cardboard wastes recycled or reused, which reduced by 59,000 tonnes (24.6%) from 2011.

Of the seven material categories that comprised the highest amount of waste recycled or reused in 2022 (see Figure 8 below), Plastic wastes showed the largest increase compared with 2021 (increase of 3,000 tonnes, 4.2%) followed by Mixed and undifferentiated materials (an increase of 1,000 tonnes, 3.7%). The largest reductions in waste recycled or reused were Glass wastes (a decrease of 10,000 tonnes, 8.1%) followed by Construction and soils (a decrease of 9,000 tonnes, 8.6%).

The WasteDataFlow categories that contribute to Paper and cardboard wastes recycled or reused, as depicted in Figure 7 below, indicates that the recycling or reuse of segregated paper waste have been trending downward since 2013, while that of cardboard wastes, and mixed paper and cardboard wastes have remained constant or increased over time. The decrease in segregated paper recycled or reused is also likely to be partly due to a move away from print media to electronic media.

**Figure 7. Scottish Paper and cardboard wastes recycled or reused by WasteDataFlow categories (tonnes) 2013 – 2022**



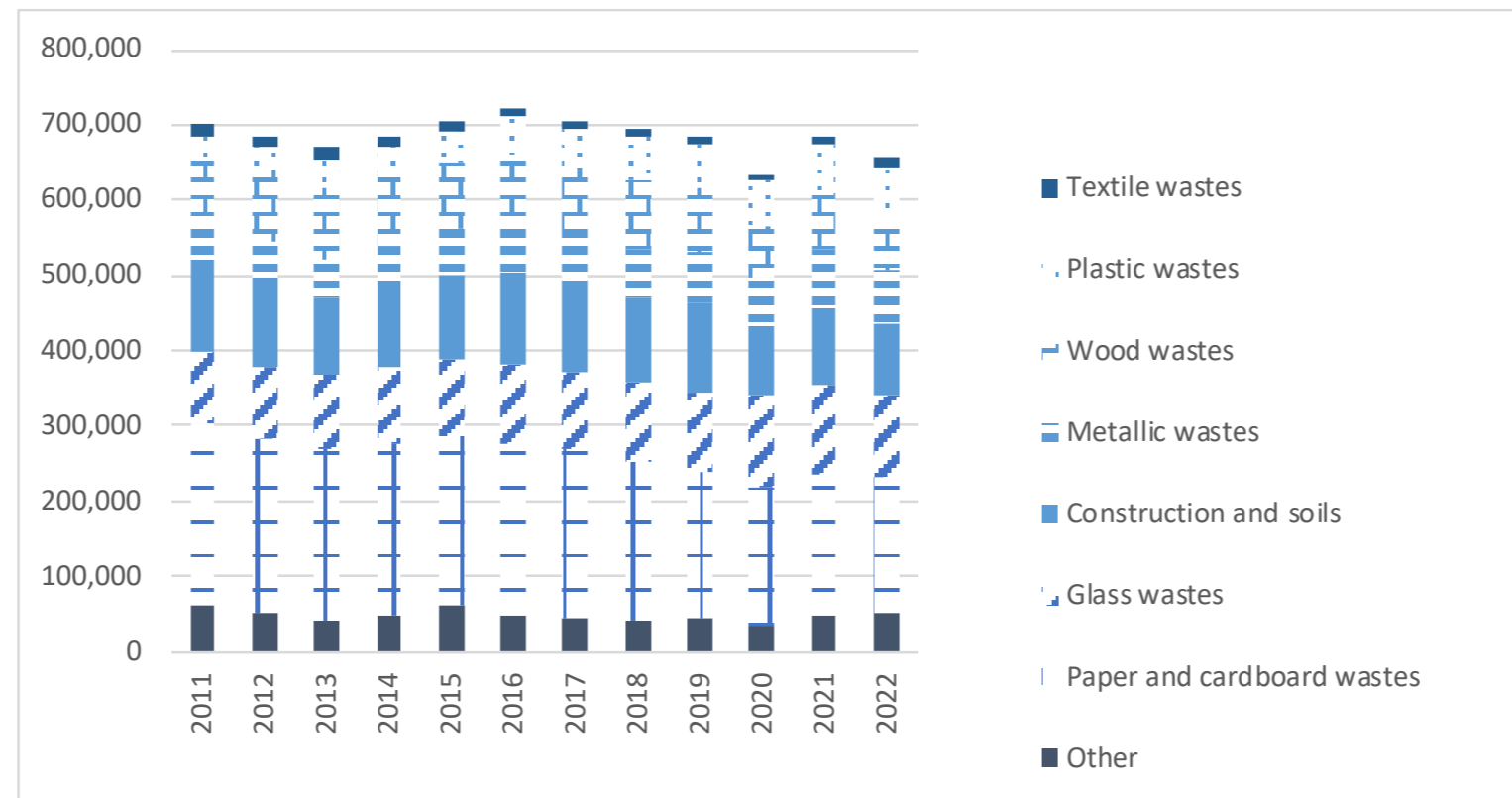
Notes:

Recycled includes waste recycled or reused and waste composted.

Segregated paper includes the WasteDataFlow category of Books

Data series starts with 2013, which is the start for the data source of WasteDataFlow question 100

**Figure 8. Scottish household waste recycled or reused by material 2011-2022<sup>6</sup>**



**Table 9. Scottish Household waste recycled or reused by material 2011— 2022 (tonnes)<sup>6</sup>**

YEAR	PAPER AND CARDBOARD WASTES	GLASS WASTES	CONSTRUCTION AND SOILS	METALLIC WASTES	WOOD WASTES	PLASTIC WASTES	MIXED AND UNDIFFERENTIATED MATERIALS	OTHER	TOTAL
2011	240,346	94,903	124,335	45,668	89,002	29,299	15,111	61,652	700,316
2012	231,776	96,658	118,167	48,148	92,403	34,528	7,054	57,291	686,024
2013	227,899	99,973	102,126	48,625	96,827	38,097	2,483	54,324	670,354
2014	226,463	100,580	111,046	52,094	92,324	39,525	8,949	54,186	685,168
2015	222,403	102,033	114,901	59,098	89,212	41,285	17,600	57,601	704,133
2016	227,921	106,548	120,559	65,630	93,897	48,422	1,567	57,650	722,194
2017	225,495	104,679	115,345	66,168	89,426	51,833	1,485	52,057	706,485
2018	209,120	107,380	112,869	64,440	90,547	56,586	4,496	47,808	693,244
2019	192,562	106,637	119,095	69,604	83,232	57,379	4,141	50,779	683,427
2020	182,309	121,996	93,485	65,710	65,320	62,151	7,634	36,088	634,693
2021	186,368	120,340	101,835	77,026	74,881	64,144	16,064	43,339	683,997
2022	181,244	110,620	93,085	74,164	68,165	66,809	16,662	46,695	657,444

<sup>6</sup> The methodology to calculate recycling was revised in 2022 to include metals from incinerator bottom ash recycled, and applied to all historic data.



## Waste Composted

Waste composted is waste recycled by biological treatment through composting at a composting plant or through digestion at an anaerobic digestion facility.

For 2022, the amount of Scottish household waste composted was 355,000 tonnes, a decrease of 29,000 tonnes (7.6%) from 2021. This was however, an increase of 23,000 tonnes (6.9%) from 2011<sup>7</sup>.

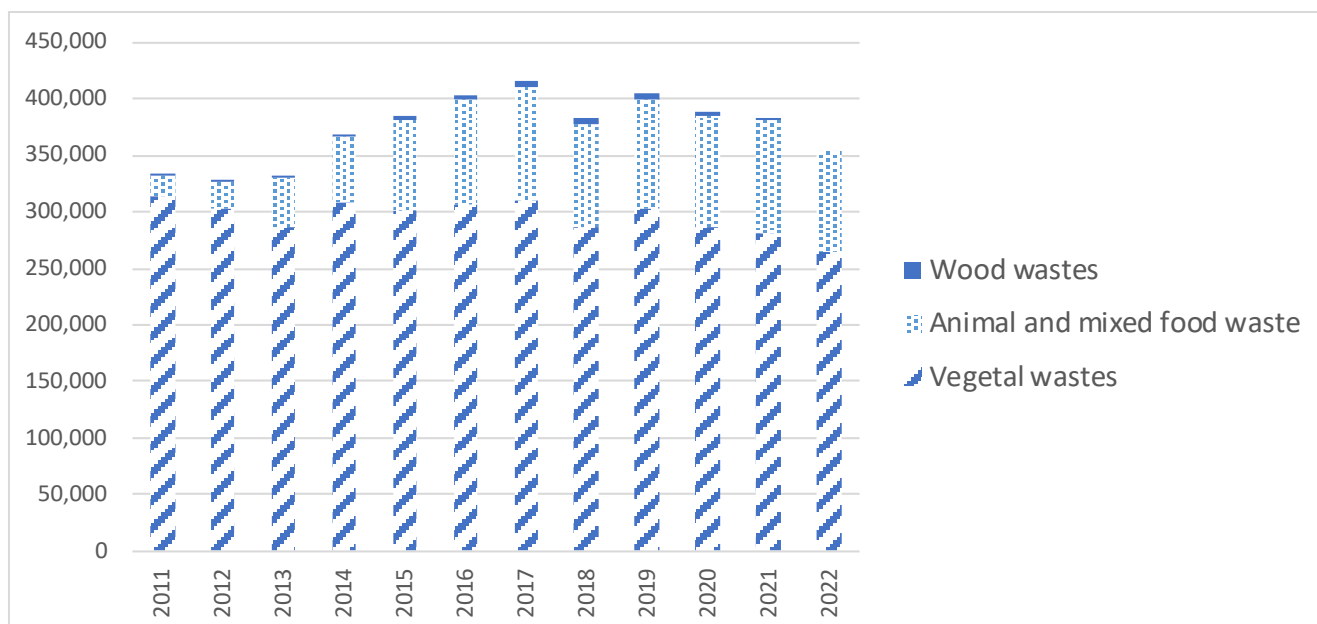
In 2022, just under three-quarters of the household waste composted was Vegetal wastes (74.8%) with animal and mixed food waste making up the remainder (25.2%, see Figure 9 below). These proportions were similar in 2021. In 2011, however, the percentage of vegetal waste was higher (94.6%) and the percentages of animal and mixed food waste was lower (5.3%). The increase in the proportion of animal and mixed food waste over time corresponds to the roll out of segregated food waste collections by urban local authorities<sup>8</sup>.

For 2022, the total tonnage of Vegetal wastes composted was 265,000 tonnes, a decrease of 16,000 tonnes (5.8%) from 2021 and a reduction of 49,000 tonnes (15.5%) from 2011<sup>7</sup>. The Animal and mixed food waste composted in 2022 reduced by 10,000 tonnes (9.9%) from 2021 to 89,000 tonnes. The longer term trend for the composting of animal and mixed food waste was an increase of 72,000 tonnes (413%) between 2021 and 2022.

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<sup>7</sup> The definition of recycling changed in 2014 to exclude non PAS compost. Recycling data for 2011 - 2013 has been modelled under the new definition to provide consistency for the time series. The methodology to calculate recycling was revised in 2022 to include metals from incinerator bottom ash recycled, and applied to all historic data.

<sup>8</sup> [The Waste \(Scotland\) Regulations 2012 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

**Figure 9. Scottish household waste composted by material 2011— 2022 (tonnes)<sup>7</sup>****Table 10. Scottish household waste composted by material 2011— 2022 (tonnes)<sup>7</sup>**

YEAR	VEGETAL WASTES	ANIMAL AND MIXED FOOD WASTE	WOOD WASTES	TOTAL
<b>2011</b>	313,948	17,426	466	<b>331,840</b>
<b>2012</b>	302,224	25,319	1,454	<b>328,997</b>
<b>2013</b>	286,885	43,740	1,861	<b>332,486</b>
<b>2014</b>	308,705	57,858	2,477	<b>369,040</b>
<b>2015</b>	300,463	80,951	3,860	<b>385,273</b>
<b>2016</b>	306,681	93,287	3,775	<b>403,743</b>
<b>2017</b>	310,962	99,722	4,514	<b>415,198</b>
<b>2018</b>	287,309	91,076	4,331	<b>382,716</b>
<b>2019</b>	302,986	97,063	4,521	<b>404,571</b>
<b>2020</b>	285,813	99,363	3,195	<b>388,370</b>
<b>2021</b>	281,480	99,175	2,948	<b>383,603</b>
<b>2022</b>	265,288	89,312	0	<b>354,601</b>

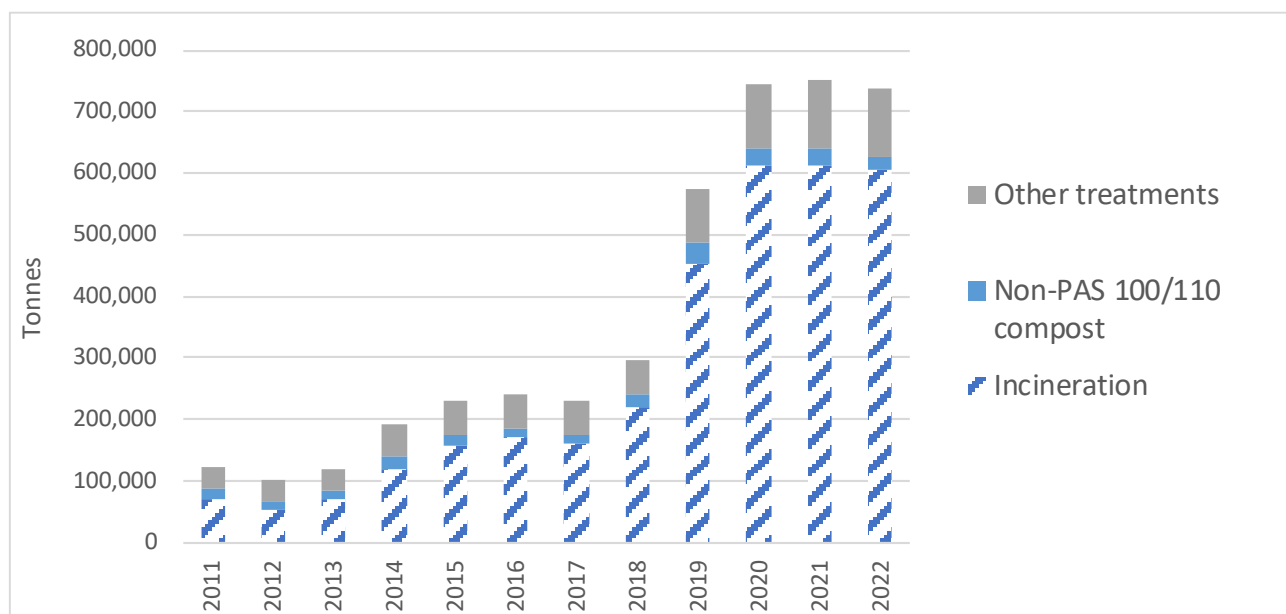
## Other Diversion from Landfill

Other diversion from landfill is waste material not recycled or landfilled. This includes net waste incinerated, incinerator bottom ash recycled (excluding metals), and organic material recycled that does not meet quality standards. A full description is found in the glossary.

For 2022, the total amount of Scottish household waste managed by other diversion from landfill was 736,000 tonnes, a decrease of 15,000 tonnes (1.9%) from 2021, however an increase of 616,000 tonnes (510%) from 2011 (see Figure 10 below)<sup>7</sup>.

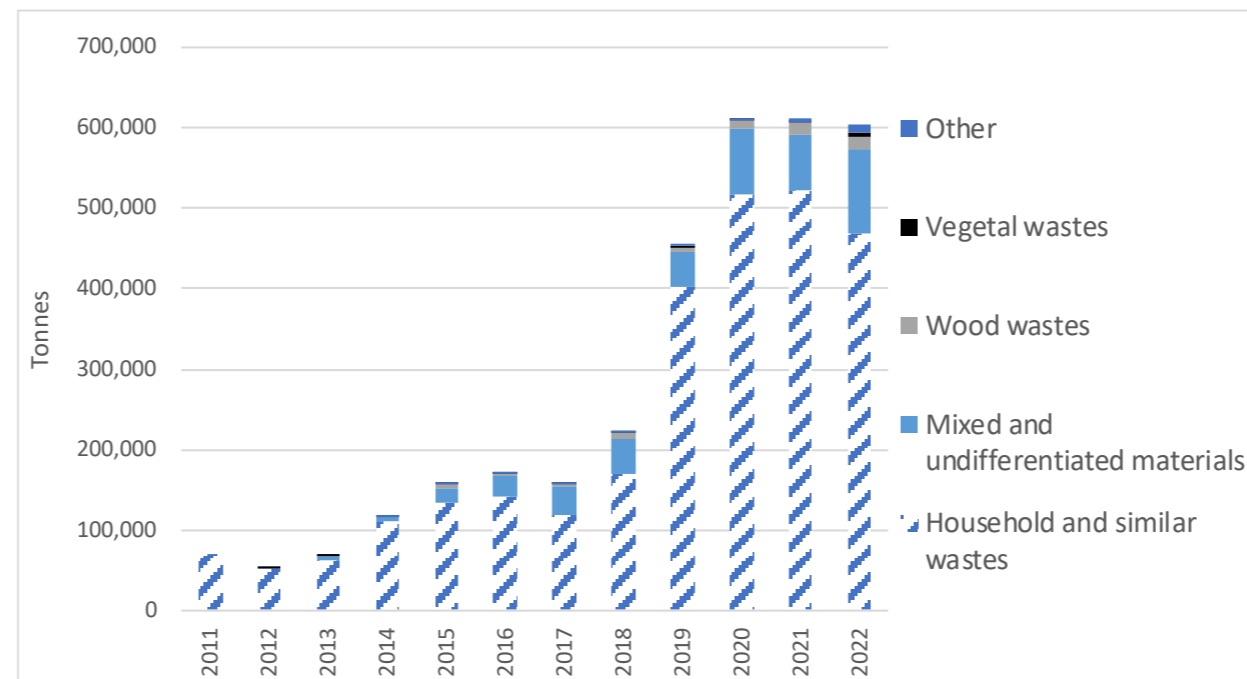
In 2022, most of the waste diverted was managed by incineration (604,000 tonnes, 82.0%).

The 604,000 tonnes of Scottish household waste diverted from landfill through incineration in 2022 was 8,000 tonnes (1.2%) less than in 2021, however 534,000 tonnes (761%) greater than in 2011. The decrease between 2021 and 2022 was mainly due to a decrease in Household and similar wastes incinerated (55,000 tonnes, 10.4%), which was partly offset by an increase in the incineration of Mixed and undifferentiated materials (an increase of 35,000 tonnes, 50.0%) and Wood wastes (an increase of 2,000 tonnes, 15.8%). Household and similar wastes comprise primarily general refuse, and Mixed and undifferentiated materials comprise primarily rejects from sorting of general refuse and sorting of mixed wastes collected for recycling. In previous years the main management route for these waste streams would be landfilling.

**Figure 10. Breakdown of treatment for Scottish household waste managed by other diversion from landfill 2011— 2022**<sup>Error! Bookmark not defined.9</sup>

**Table 11. Breakdown of treatment for Scottish household waste managed by other diversion from landfill 2011— 2022**<sup>Error! Bookmark not defined.</sup>

YEAR	INCINERATION	NON-PAS 100/110 COMPOST	OTHER TREATMENTS	TOTAL
2011	70,134	15,269	35,286	120,688
2012	51,473	14,504	33,844	99,821
2013	68,511	15,946	35,404	119,861
2014	118,678	19,713	53,788	192,179
2015	157,090	16,785	54,666	228,541
2016	170,601	13,002	57,170	240,772
2017	160,271	12,864	58,289	231,423
2018	220,792	17,984	58,297	297,074
2019	453,738	32,107	89,227	575,071
2020	612,727	26,903	105,388	745,017
2021	611,457	27,403	111,920	750,781
2022	603,825	23,658	108,794	736,277

<sup>9</sup> The definition of Other diversion from landfill changed in 2014 to include non PAS compost. Other diversion data for 2011 - 2013 has been modelled under the new definition to provide consistency for the time series. The methodology to calculate Other diversion was revised in 2022 to exclude metals from incinerator bottom ash recycled, which are now counted in Recycling, and applied to all historic data.

**Figure 11. Scottish household waste diverted from landfill through incineration by waste category 2011— 2022<sup>9</sup>**

Note: Incineration is net incineration.

**Table 12. Scottish household waste diverted from landfill by incineration by waste category 2011— 2022 (tonnes)<sup>9</sup>**

YEAR	HOUSEHOLD AND SIMILAR WASTES	MIXED AND UNDIFFERENTIATED MATERIALS	WOOD WASTES	VEGETAL WASTES	OTHER	TOTAL
2011	70,134	0	0	0	0	70,134
2012	50,541	429	0	502	0	51,473
2013	62,298	4,621	694	898	0	68,511
2014	111,587	4,131	534	496	1,930	118,678
2015	133,418	17,803	4,514	406	948	157,090
2016	140,699	25,198	4,094	515	95	170,601
2017	119,335	33,980	3,476	660	2,819	160,271
2018	170,008	44,019	6,005	525	235	220,792
2019	401,664	44,575	5,550	621	1,327	453,738
2020	517,090	83,223	8,507	529	3,377	612,727
2021	522,190	70,710	14,244	1,085	3,229	611,457
2022	467,683	106,096	16,493	3,104	10,448	603,825

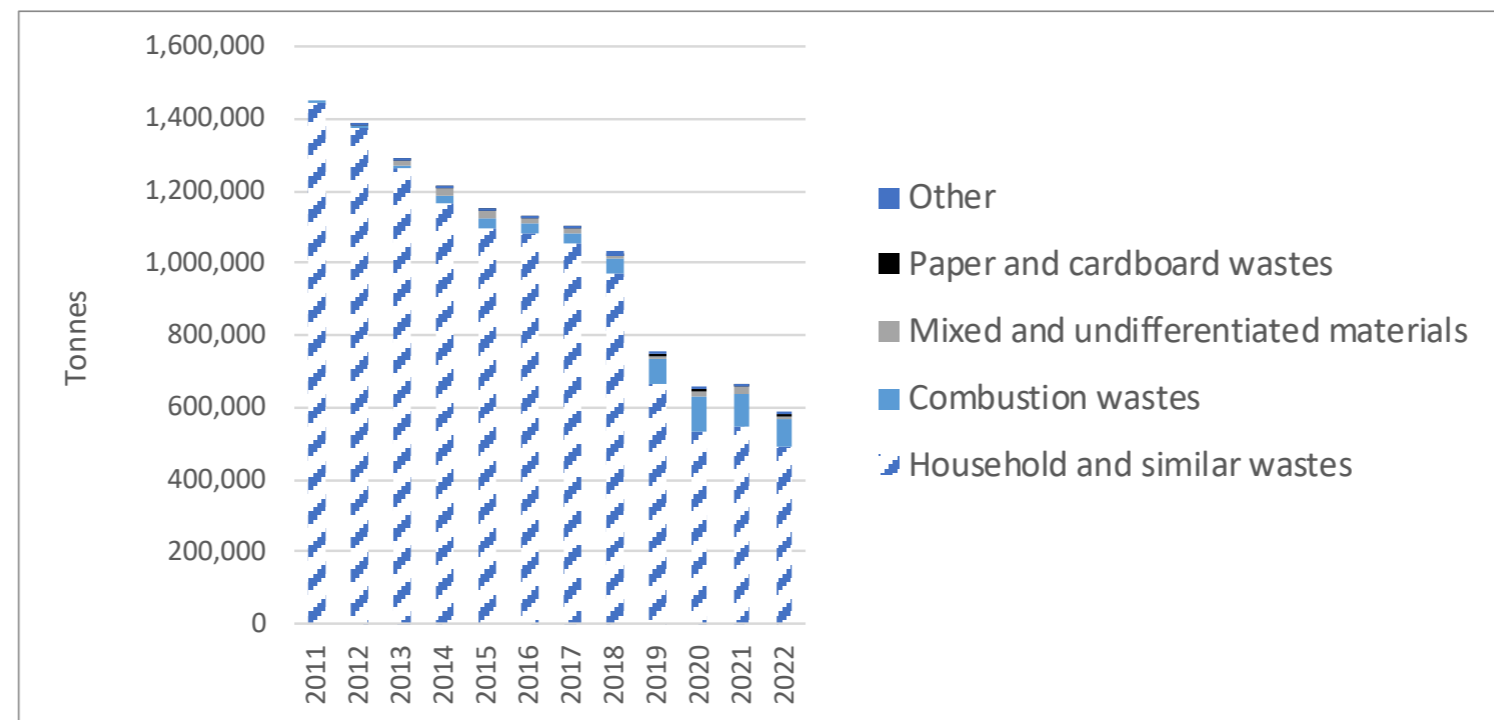
Note: Incineration is net incineration.

## Waste Landfilled

The amount of Scottish household waste landfilled in 2022 was 585,000 tonnes, a decrease of 78,000 tonnes (11.7%) from 2021. This continues a long-term trend, with a reduction of 868,000 tonnes (59.7%) of household waste landfilled since 2011 (see Figure 12 below).

For 2022, Scottish household waste landfilled as a percentage of waste generated was 25.1%. This is 1.6 percentage points lower than 2021 (26.7%) and a decrease of 30.7 percentage points from 2011 (55.8%).

In 2022, most of the Scottish household waste landfilled comprised Household and similar wastes (488,000 tonnes, 83.4% of total, see Figure 12 below), followed by Combustion wastes which comprised 77,000 tonnes (13.1% of the total). Combustion wastes decreased by 16,000 tonnes (17.0%) compared with 2021, however increased by 66,000 tonnes (630%) from 2011, and much of that from 2019 onwards.

**Figure 12. Scottish household waste landfilled by waste category 2011 - 2022****Table 13. Scottish household waste landfilled by waste category 2011 - 2022 (tonnes)**

YEAR	HOUSEHOLD AND SIMILAR WASTES	COMBUSTION WASTES	MIXED AND UNDIFFERENTIATED MATERIALS	PAPER AND CARDBOARD WASTES	OTHER	TOTAL
<b>2011</b>	1,443,265	10,524	0	0	0	<b>1,453,789</b>
<b>2012</b>	1,372,426	8,050	0	8	1,669	<b>1,382,153</b>
<b>2013</b>	1,264,485	7,815	15,256	37	3,236	<b>1,290,829</b>
<b>2014</b>	1,169,886	18,281	18,905	119	5,288	<b>1,212,479</b>
<b>2015</b>	1,099,661	25,918	17,487	283	7,187	<b>1,150,537</b>
<b>2016</b>	1,081,587	26,917	14,643	663	7,997	<b>1,131,806</b>
<b>2017</b>	1,055,166	27,170	14,756	1,155	8,712	<b>1,106,959</b>
<b>2018</b>	973,437	36,804	8,035	4,962	8,230	<b>1,031,467</b>
<b>2019</b>	663,675	70,432	8,125	6,286	9,623	<b>758,141</b>
<b>2020</b>	535,210	96,962	14,476	8,230	4,528	<b>659,406</b>
<b>2021</b>	545,383	92,580	17,039	3,199	4,940	<b>663,140</b>
<b>2022</b>	488,070	76,861	13,071	3,698	3,760	<b>585,461</b>

## Carbon impacts of Scottish household waste

The carbon impact is a measure of the whole-life carbon impacts of waste, from resource extraction and manufacturing emissions, right through to waste management emissions.

Further information is available in the glossary.

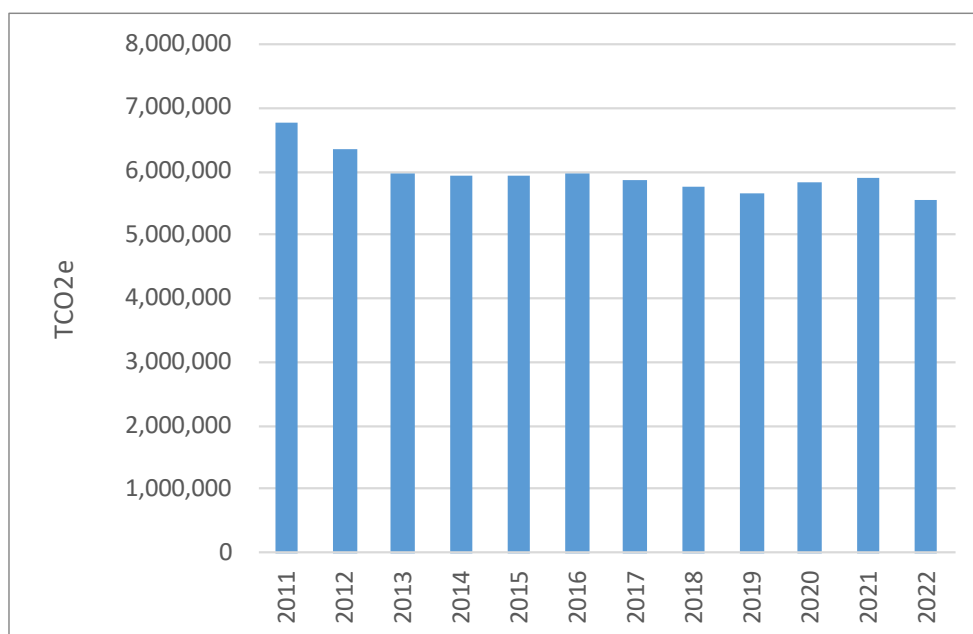
Most carbon impacts are associated with the waste generated (Table 14 below) which encapsulates the cradle-to-grave impacts of the material. Negative values for Recycling and Other Diversion indicate that these management methods result in a net carbon saving through avoided raw material or energy demand.

The carbon impact of Scottish household waste generated and managed in 2022 was 5.5 million tonnes of carbon dioxide equivalent (TCO<sub>2</sub>e, see Table 14 below), a decrease of 357,000 TCO<sub>2</sub>e (6.1%) from 2021. This is equivalent to 1.02 TCO<sub>2</sub>e per person (Table 2).

The amount of waste generated by Scottish households in 2022 was 10.4% below 2011 levels (see Table 3 on page 6). In contrast, the carbon impact of Scottish household waste generated and managed in 2022 was 18.1% (1.22 million TCO<sub>2</sub>e) below the 2011 level.

The carbon impact of a tonne of Scottish household waste (TCO<sub>2</sub>e/tonnes of waste generated) has declined by 8.5% between 2011 and 2022 (data not shown). This is largely a result of increased recycling rates, particularly for high impact waste materials such as non-ferrous metallic wastes and glass wastes, as well as a reduction in waste generated and reduced landfilling of biodegradable waste.



**Figure 13. Carbon impact of Scottish household waste generated and managed 2011— 2022 (TCO2e)****Table 14. Carbon impact of Scottish household waste generated and managed 2011 – 2022 (TCO2e)**

YEAR	GENERATED	RECYCLED	INCINERATED	LANDFILLED	OTHER DIVERSION	TOTAL
2011	6,622,467	-497,896	19,156	626,519	-5,281	6,764,965
2012	6,208,226	-502,690	13,035	621,489	-421	6,339,638
2013	5,872,541	-506,827	14,601	597,019	678	5,978,011
2014	5,899,607	-520,049	25,730	540,921	904	5,947,112
2015	5,946,447	-544,199	28,018	506,859	882	5,938,008
2016	5,989,293	-547,654	32,511	498,495	867	5,973,512
2017	5,881,279	-540,354	30,109	494,101	1,049	5,866,184
2018	5,787,919	-543,944	50,919	467,012	-1,134	5,760,771
2019	5,775,984	-549,424	129,683	312,314	-659	5,667,898
2020	5,971,187	-545,222	177,349	248,334	-5,126	5,846,521
2021	6,087,380	-618,097	180,618	250,623	-338	5,900,187
2022	5,773,472	-623,017	161,681	230,845	-256	5,542,725

# Data Uses, Feedback, Revisions Policy, Methodology, Glossary of Terms and Measures, and References

## User Statement

Data on Scottish household waste generation and management are collected to support policy development and monitor policy effectiveness, particularly the commitments in [Making Things Last - A Circular Economy Strategy for Scotland](#). The data contribute to the [UK Statistics on waste](#) and are also used extensively by local and central government, the waste industry, researchers and the general public.

## Feedback

We welcome feedback on the data from all users including how and why the data are used. This helps us to understand the value of the statistics to external users. Please see our contact details at the bottom of the first page of this notice or [e-mail: WasteData.Flow@sepa.org.uk](mailto:WasteData.Flow@sepa.org.uk).

## Revisions Policy

SEPA will provide information about any revisions made to published information in this statistics release and the associated datasets. Revisions could occur for various reasons, including when data from third parties are unavailable or provisional at the time of publishing or if there are subsequent methodological improvements or refinements.

The figures are accurate at the time of publication. However, the data may be updated if further revisions are necessary. Normally these revisions will be published concurrent with the next official release.

Revision to 2021 data has resulted from:

- Amendments to WasteDataFlow returns for two authorities;
- Change in recycling methodology to include metals from incinerator bottom ash recycled.

Revisions are depicted in Tables 15 and 16 below.

## Methodology

Data was submitted by all 32 Scottish local authorities using the web-based reporting tool WasteDataFlow.

Composted wastes that did not reach the quality standards set by PAS 100/110 were accounted for as other wastes diverted from landfill and not as wastes composted, except where waste was processed at a new composting or anaerobic digestion site and the site indicated they had applied for and were working toward PAS compliance, in which case a 12-month grace period was applied for the purpose of including of wastes composted in household recycling data. In 2022 there were no new sites that met this criterion.

### **Metals from incineration recorded as recycled**

This is the first dataset in which a change has been made to include metals from incineration bottom ash (IBA) in recycling figures. Previously these metals formed part of the Other diversion from landfill figures. The change in methodology was discussed by SEPA with Scotland's [Waste Data Strategy](#) board and there was broad agreement with the change, which recognises that metals from IBA are of high value and reflects what actually happens to these materials. Scotland already includes metals from incineration in recycling rates reported to Defra for UK statistics, and the methodology is recommended by the EU in the EU Circular Economy Package.

All historical household data dating back to 2011 was revised to reallocate metals from IBA that is sent for recycling from Other diversion from landfill to Recycling.

Scottish waste recycled (tonnes, percentage) and waste diverted from landfill (tonnes, percentage) for 2022 calculated using the old and new method is depicted in Table 15 below.

Table 15. Scottish household waste recycled and diverted from landfill 2022 - new methodology compared with old methodology

LOCAL AUTHORITY	RECYCLED (NEW METHOD, TONNES)	RECYCLED (OLD METHOD, TONNES)	RECYCLED (NEW METHOD, %)	RECYCLED (OLD METHOD, %)	OTHER DIVERSION (NEW METHOD, TONNES)	OTHER DIVERSION (OLD METHOD, TONNES)	OTHER DIVERSION (NEW METHOD, %)	OTHER DIVERSION (OLD METHOD, %)
Aberdeen City	37,091	36,368	41.8	41.0	22,007	22,729	24.8	25.6
Aberdeenshire	44,130	44,104	40.2	40.2	5,517	5,543	5.0	5.1
Angus	26,208	26,208	51.7	51.7	23,549	23,549	46.4	46.4
Argyll and Bute	19,963	19,963	40.8	40.8	7,029	7,029	14.4	14.4
City of Edinburgh	69,656	67,435	37.1	35.9	112,758	114,979	60.1	61.3
Clackmannanshire	12,453	12,453	51.2	51.2	0	0	0.0	0.0
Dumfries and Galloway	29,747	29,747	45.1	45.1	30,246	30,246	45.8	45.8
Dundee City	20,469	20,469	33.8	33.8	38,812	38,812	64.2	64.2
East Ayrshire	24,060	24,060	48.5	48.5	17,325	17,325	34.9	34.9
East Dunbartonshire	28,272	28,272	51.8	51.8	24,160	24,160	44.3	44.3
East Lothian	26,245	26,245	53.1	53.1	18,603	18,603	37.6	37.6
East Renfrewshire	23,193	23,193	56.0	56.0	14,968	14,968	36.1	36.1
Falkirk	33,060	33,060	51.4	51.4	33	33	0.1	0.1
Fife	78,572	78,572	45.7	45.7	16,185	16,185	9.4	9.4
Glasgow City	67,435	66,681	27.6	27.3	115,829	116,583	47.4	47.7
Highland	41,295	41,278	37.2	37.1	3,749	3,765	3.4	3.4
Inverclyde	11,685	11,685	46.8	46.8	1,534	1,534	6.1	6.1
Midlothian	19,401	19,401	47.2	47.2	16,644	16,644	40.5	40.5
Moray	28,154	28,154	57.8	57.8	1	1	0.0	0.0
Na h-Eileanan Siar	4,289	4,289	31.8	31.8	92	92	0.7	0.7
North Ayrshire	32,726	32,697	55.3	55.3	25,986	26,015	43.9	44.0
North Lanarkshire	63,055	62,948	43.0	43.0	60,128	60,235	41.0	41.1
Orkney Islands	2,314	2,263	23.3	22.7	4,506	4,557	45.3	45.8
Perth and Kinross	34,793	34,748	49.3	49.2	5,110	5,155	7.2	7.3
Renfrewshire	41,980	41,980	53.7	53.7	34,008	34,008	43.5	43.5
Scottish Borders	29,012	29,012	57.3	57.3	21,181	21,181	41.9	41.9
Shetland Islands	1,860	1,777	20.7	19.7	5,019	5,102	55.7	56.7
South Ayrshire	26,865	26,738	54.3	54.0	7,056	7,182	14.3	14.5
South Lanarkshire	60,525	59,504	41.1	40.5	63,879	64,901	43.4	44.1
Stirling	20,648	20,622	51.4	51.3	660	686	1.6	1.7
West Dunbartonshire	17,042	17,021	38.8	38.8	2,874	2,895	6.5	6.6
West Lothian	35,848.63	35,836	45.9	45.9	36,830	36,843	47.2	47.2
<b>Total Scotland</b>	<b>1,012,045</b>	<b>1,006,780</b>	<b>43.3</b>	<b>43.1</b>	<b>736,277</b>	<b>741,542</b>	<b>31.5</b>	<b>31.8</b>

Table 16. Revisions to 2021 Scottish household waste data\*

LOCAL AUTHORITY	GENERATED (TONNES)		RECYCLED (TONNES)		PERCENTAGE RECYCLED (%)		OTHER DIVERSION FROM LANDFILL* (TONNES)		PERCENTAGE OTHER DIVERSION FROM LANDFILL (%)		LANDFILLED (TONNES)		PERCENTAGE LANDFILLED (%)		CARBON IMPACT (TCO2E)	
	ORIGINAL	REVISED	ORIGINAL	REVISED	ORIGINAL	REVISED	ORIGINAL	REVISED	ORIGINAL	REVISED	ORIGINAL	REVISED	ORIGINAL	REVISED	ORIGINAL	REVISED
Aberdeen City	93,747	93,749	42,574	43,865	45.4	46.8	41,799	40,508	44.6	43.2	9,376	9,376	10.0	10.0	224,549	224,495
Aberdeenshire	117,505	117,503	48,268	48,301	41.1	41.1	2,946	2,911	2.5	2.5	66,292	66,292	56.4	56.4	316,787	316,786
Angus	54,058	54,058	29,592	29,592	54.7	54.7	22,803	22,805	42.2	42.2	1,661	1,661	3.1	3.1	105,955	106,042
Argyll and Bute	49,042	49,042	19,285	19,286	39.3	39.3	6,806	6,806	13.9	13.9	22,950	22,950	46.8	46.8	119,612	119,610
City of Edinburgh	207,205	207,204	79,270	82,739	38.3	39.9	120,927	117,459	58.4	56.7	7,006	7,005	3.4	3.4	496,442	496,298
Clackmannanshire	23,777	23,777	11,880	11,880	50.0	50.0	6	6	0.0	0.0	11,891	11,891	50.0	50.0	54,991	54,989
Dumfries and Galloway	65,775	65,774	26,473	26,203	40.2	39.8	32,090	32,090	48.8	48.8	7,212	7,211	11.0	11.0	174,785	175,470
Dundee City	65,011	65,012	21,224	21,225	32.6	32.6	41,337	41,335	63.6	63.6	2,452	2,452	3.8	3.8	150,179	150,681
East Ayrshire	53,330	53,329	25,876	25,876	48.5	48.5	5,101	5,101	9.6	9.6	22,352	22,352	41.9	41.9	125,236	125,237
East Dunbartonshire	57,693	57,694	26,110	26,108	45.3	45.3	25,519	25,519	44.2	44.2	6,063	6,064	10.5	10.5	129,610	129,607
East Lothian	53,952	53,952	29,091	29,093	53.9	53.9	19,372	19,372	35.9	35.9	5,487	5,487	10.2	10.2	115,300	115,300
East Renfrewshire	40,574	40,574	23,573	23,573	58.1	58.1	16,015	16,016	39.5	39.5	985	985	2.4	2.4	82,061	82,060
Falkirk	75,818	75,127	36,258	36,179	47.8	48.2	3,976	3,976	5.2	5.3	35,583	34,971	46.9	46.5	171,527	169,230
Fife	166,981	166,981	72,787	72,788	43.6	43.6	14,651	14,651	8.8	8.8	79,543	79,542	47.6	47.6	390,154	390,154
Glasgow City	258,941	258,941	70,670	70,669	27.3	27.3	90,856	90,855	35.1	35.1	97,417	97,416	37.6	37.6	779,740	779,741
Highland	116,068	116,066	43,339	43,362	37.3	37.4	6,021	5,997	5.2	5.2	66,707	66,707	57.5	57.5	293,160	293,220
Inverclyde	26,632	26,632	12,905	12,906	48.5	48.5	2,651	2,426	10.0	9.1	10,822	11,046	40.6	41.5	59,684	59,722
Midlothian	43,837	43,835	20,761	20,758	47.4	47.4	17,651	17,650	40.3	40.3	5,428	5,427	12.4	12.4	101,518	101,482
Moray	42,539	42,539	22,211	22,210	52.2	52.2	0	0	0.0	0.0	20,329	20,329	47.8	47.8	89,111	89,109
Na h-Eileanan Siar	14,125	14,125	4,734	4,733	33.5	33.5	55	55	0.4	0.4	9,337	9,337	66.1	66.1	37,940	37,938
North Ayrshire	63,051	63,050	35,512	35,856	56.3	56.9	24,138	23,796	38.3	37.7	3,470	3,469	5.5	5.5	124,955	124,088
North Lanarkshire	161,069	161,070	69,610	69,858	43.2	43.4	72,273	72,022	44.9	44.7	19,190	19,190	11.9	11.9	359,363	360,344
Orkney Islands	9,360	9,361	2,215	2,267	23.7	24.2	4,603	4,552	49.2	48.6	1,956	1,956	20.9	20.9	24,662	24,662
Perth and Kinross	77,372	77,370	38,803	38,803	50.2	50.2	5,862	5,860	7.6	7.6	32,707	32,707	42.3	42.3	148,586	148,585
Renfrewshire	85,449	85,448	44,194	44,194	51.7	51.7	34,255	34,256	40.1	40.1	6,999	6,998	8.2	8.2	179,380	179,347
Scottish Borders	54,563	54,562	29,910	30,111	54.8	55.2	24,435	24,235	44.8	44.4	172	172	0.3	0.3	124,538	124,033
Shetland Islands	9,625	9,626	1,630	1,745	16.9	18.1	5,594	5,481	58.1	56.9	2,400	2,400	24.9	24.9	29,049	29,111
South Ayrshire	57,828	57,828	32,367	32,370	56.0	56.0	5,755	5,752	10.0	9.9	19,706	19,706	34.1	34.1	121,313	121,315
South Lanarkshire	164,764	164,765	66,492	67,583	40.4	41.0	60,608	59,519	36.8	36.1	37,663	37,663	22.9	22.9	373,975	374,162
Stirling	43,955	43,957	22,345	22,364	50.8	50.9	744	726	1.7	1.7	20,868	20,867	47.5	47.5	90,816	90,814
West Dunbartonshire	42,507	42,505	15,125	15,144	35.6	35.6	5,013	4,992	11.8	11.7	22,369	22,369	52.6	52.6	109,851	109,864
West Lothian	87,151	87,149	35,958	35,958	41.3	41.3	44,051	44,052	50.5	50.5	7,140	7,140	8.2	8.2	196,691	196,690
<b>Total Scotland</b>	<b>2,483,304</b>	<b>2,482,604</b>	<b>1,061,042</b>	<b>1,067,599</b>	<b>42.7</b>	<b>43.0</b>	<b>757,913</b>	<b>750,781</b>	<b>30.5</b>	<b>30.2</b>	<b>663,533</b>	<b>663,140</b>	<b>26.7</b>	<b>26.7</b>	<b>5,901,520</b>	<b>5,900,187</b>

\*Cells shaded in grey represent revisions amounting to a change of greater than 50 tonnes, greater than 100 TCO2e, or greater than 0.1 percentage point

Revised data contains the change to new recycling method to include metals from incinerator bottom ash, and Other diversion from landfill to exclude metals from incineration bottom ash.

## Carbon Metric

For the 2022 dataset, the 2021 factors were used in the carbon metric to calculate CO<sub>2</sub>e.

Specific factors for 2022 were not developed as:

- year-on-year changes in factors are relatively minor;
- effort was focused on developing factors for Scotland’s Waste Environmental Footprint Tool (SWEFT)<sup>10</sup>, which will replace the carbon metric from 2023 onwards.

## National Method vs UK method

Recycling figures are calculated according to Scotland’s national recycling rate methodology. This methodology differs to the Waste from households measure published by Defra in its [UK Statistics on waste](#) publication. The differences are summarised in Table 17 below.

**Table 17. Comparison of Scotland’s national recycling measure vs UK waste from households measure (key differences)**

MEASURE	SCOTLAND NATIONAL METHOD	UK WASTE FROM HOUSEHOLDS
Include waste sent to non-PAS compost facility	✘	✔
Include construction waste from householders	✔	✘
Include metals from incineration recycled*	✔	✔

\* Metals from incineration were first included in Scotland’s national method in 2022, and all historical data revised to include metals. This publication is the first publication to use this revised national method.

Further information about differences between the national recycling measures of the four UK countries may be found in the [Recycling Explainer](#) published by Defra.

Further details on the methodology used to produce the figures in this document are provided in the “Household waste quality report” at [Household waste data | Scottish Environment Protection Agency \(SEPA\)](#).

<sup>10</sup> For further information on SWEFT see [Targeted approach \(circularonline.co.uk\)](#)

Waste categories used in this document are those described in the [EC2150/2002 Waste Statistics Regulation](#). Further information about the mapping of WasteDataFlow waste material categories to the statistical waste category can be found in the household waste quality report. For intelligibility, in this document the statistical waste categories “Metallic wastes, ferrous”, “Metallic wastes, non-ferrous”, and “Metallic wastes, mixed ferrous and non-ferrous” have been combined into the one category “Metallic wastes”, and the statistical waste categories “Mineral waste from construction and demolition” and “Soils” have been combined into one “Construction and soils” category. The [Household Waste Discover Data tool](#) retains the original statistical categories.

## Release

The release of this publication is in line with release practices specified in the [Code of Practice for Statistics](#). The statistics are released at the standard time of 9.30 am on a pre-announced weekday date. Pre-release access to the statistics in their final form is provided to Scottish ministers and those on a list of named officials advising them five working days before the public release. This is to ensure that at the time of release Scottish ministers are able to comment publicly on the statistics based on a correct understanding of them.

## Glossary of terms

**BSI PAS 100 / 110** – a national compost/digestate benchmark that specifies the minimum requirements for the process of composting/anaerobic digestion, the selection of material from which compost/digestate is made, and standards for the compost/digestate product quality. PAS 100 is applicable to composting facilities while PAS 110 is applicable to anaerobic digestion facilities. The use of this standard to improve the quality of compost/digestate in Scotland became Scottish Government policy in 2011, with 2014 being the first year it was applied to the household waste official statistics.

**Carbon Impact** – a measure of the whole-life carbon impacts of waste, from resource extraction and manufacturing emissions, right through to waste management emissions, regardless of where in the world these impacts occur. The carbon impact of waste was developed by Zero Waste Scotland (<https://www.zerowastescotland.org.uk/content/what-carbon-metric>).

**Compost like output (CLO)** – partially digested waste outputs generated from the biological treatment of residual municipal solid wastes at a process that involves both mechanical and

biological treatment. Outputs typically do not conform to composting standards such as PAS 100/110.

**Household waste** – waste generated by households (see full definition in Paragraph 1.2 of the *Zero Waste Plan - guidance for local authorities* on the [WasteDataFlow web site](#)).

**Landfill rate** – waste landfilled as a percentage of all waste generated. Note that total waste generated does not equal total waste managed due to stockpiled waste, which is counted in the generation figures and will be included in the managed figures in the year it is sent to final management.

**Other diversion from landfill** – describes the fate of waste material not recycled or landfilled. It includes:

- Ash outputs from the incineration of household waste that is recycled,
- weight loss that occurs during the composting/digestion of waste to PAS 100/110 and non PAS 100/110 compost/digestate where the output is landfilled,
- CLO that is not landfilled,
- weight loss that occurs during mechanical and biological treatment processes (e.g. production of CLO and RDF),
- from 2014, any waste composted/digested that has not reached the quality standards set by PAS 100/110 and is not landfilled.

**Recycling rate** – waste recycled as a percentage of all waste generated. Note that total waste generated does not equal total waste managed due to stockpiled waste, which is counted in the generation figures and will be included in the managed figures in the year it is sent to final management.

**Refuse derived fuel (RDF)** – waste separated from residual municipal solid waste with a calorific value suitable for use as a fuel in combustion processes.

**Segregated recyclate** – waste materials collected for recycling separately from residual waste collections. This includes collection of single materials as well as co-mingled materials.



**TCO<sub>2e</sub>** – tonnes of carbon dioxide equivalent, which is a measure that allows the comparison of greenhouse gases relative to one unit of CO<sub>2</sub>.

**Vegetal wastes** – a statistical waste category that includes the WasteDataFlow categories *Green garden waste only*, *Mixed garden and food waste* (75% allocation to *Vegetal wastes*, 25% allocation to *Animal and mixed food waste* statistical categories), and *Other compostable waste*.

**Waste composted** - is waste recycled by biological treatment through composting at a composting plant or through digestion at an anaerobic digestion facility.

**Waste generated** - is waste collected by or on behalf of local authorities that is managed within the relevant reporting year. This might include treated waste stockpiled prior to final management.

**Waste landfilled** – includes all household waste that is disposed of at a landfill site instead of being recycled or diverted from landfill through other methods. It also includes incinerator ash that is landfilled, plus any recycling and composting rejects that occur during collection, sorting or further treatment that go to landfill.

**Waste managed** - includes all wastes recycled, diverted from landfill and landfilled within the relevant reporting year. This includes stockpiled waste from a previous year sent to final management but excludes treated waste stockpiled prior to final management.

**Waste recycled** - includes recyclable materials that have been recycled or reused and also biodegradable materials that have been composted or digested. The amount of waste recycled, reused and composted is that accepted by the reprocessor facility. As such it excludes any recycling rejects that occur during collection, sorting or further treatment. From 2015, the composting figures using the new calculation methodology do not include any waste composted that has not reached the quality standards set by PAS 100/110. From 2022, the waste recycled include metals from the outputs of incineration that have been recycled, previous to 2022 these were counted as Other diversion from landfill.

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