Waste from all sources – Summary data 2017

This release provides a summary of Scottish waste generated and managed in calendar year 2017. The data in this release represents Waste from all sources (WFAS). Further information including definition of terms is included in the methodology and glossary.

Key points

WFAS – 2017 calendar year[1]

- The estimated total quantity of WFAS generated in Scotland in 2017 was 11.82 million tonnes, an increase of 5.5% (0.62 million tonnes) from 2016. Most of this increase is due to wastes from Construction and Demolition (C&D) which increased by 10.8% (0.6 million tonnes) from 2016.
- The quantity of Combustion wastes generated again decreased in 2017 with a reduction of 82.1% (97,809 tonnes) from 2016. This was accompanied by an increase in the generation of source separated materials including Animal and mixed food waste (increase of 40,342 tonnes, 12.8%), Rubber wastes (increase of 35,865 tonnes, 148.5%), and Metallic wastes (increase of 56,353 tonnes, 11.3%). The changes for all these waste categories were predominantly from Commercial and Industrial (C&I) sources.
- The quantity of separately collected Paper and cardboard waste generated decreased in 2017 by 0.8% (821 tonnes) from 2016, and by 44.1% (83,009 tonnes) since 2011.
- In 2017, the estimated Scottish WFAS recycled was 6.93 million tonnes, which is 142,195 tonnes (2.1%) more waste recycled than in 2016. A contributory factor to this difference is an increase in recycling of Construction and Demolition (C&D) wastes such as Soils. Excluding Soils, there was a decrease in recycling of 92,709 tonnes (2.3%) from 2016, which included Common sludges (decrease of 155,013 tonnes, 44.7%), Glass wastes (decrease of 71,569 tonnes, 23.8%) and Mineral wastes from waste treatment and stabilised wastes (decrease of 67,786 tonnes, 48.6%).
- The WFAS recycling rate in 2017 was 58.9%, a decrease of 0.2 percentage points from the 59.1%[2] of waste recycled in 2016.
- The quantity of Animal and mixed food waste recycled by composting or anaerobic digestion in 2017 was 302,829 tonnes, which was 16.6% (43,095 tonnes) greater than the amount recycled in 2016.
- The amount of Scottish waste recovered (e.g. by incineration with energy recovery) in 2017 was 761,581 tonnes, an increase of 97,656 tonnes (14.7%) from 2016.
- Scottish waste disposed by landfill or disposed by incineration in 2017 was 4.0 million tonnes, an increase of 51,601 tonnes (1.3%) from 2016.
- In 2017, Scottish waste landfilled in Scotland and elsewhere increased by 100,677 tonnes (2.7%) from 2016 and accounted for 32.6% of all waste managed. Data on all waste landfilled in Scotland, including waste generated outwith Scotland, can be found in the Waste Landfilled in Scotland 2017 statistics.

Data for Scottish WFAS generated and managed by waste type for 2011 - 2017 and the trends for WFAS generated, recycled and managed is available from WFAS Discover Data tool on Scotland's Environment website. Annual WFAS summary data tables, including any revisions to historic data, are also available to download in Excel format on SEPA's website.

Enquiries on this publication to: Contact SEPA Communications Department: 01786 452546.

An Official Statistics publication. These statistics have been produced to the high professional standards set out in the Code of Practice for Official Statistics, which sets out eight principles including meeting user needs, impartiality and objectivity, integrity, sound methods and assured quality, frankness and accessibility. More information on the Official Statistics Code of Practice can be found here at http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html

[1] Revisions to historical data updated since the previous publication are detailed in the Revisions Policy section on page 28 of this document.

[2] The 2016 recycling rate has been revised downwards from the originally published 61.0%.

Table 1. Waste from all sources by waste type - Summary data 2017

Waste type [1]	Generated (tonnes)	Recycled (tonnes)	Recovered (tonnes)	Disposed (tonnes) [2]	Other Management (tonnes) [3]
Spent solvents	52,847	0	1,635	86	0
Acid, alkaline or saline wastes	4,686	0	0	4	0
Used oils	42,521	1	0	8	0
Chemical wastes	183,357	75	99	3,451	0
Industrial effluent sludges	56,385	1,641	8,605	18,661	0
Sludges and liquid wastes from waste treatment	38	29,828	0	696	1,264
Health care and biological wastes	29,549	0	0	8,123	0
Metallic wastes, ferrous	254,636	585,119	0	0	0
Metallic wastes, non-ferrous	36,691	70,172	0	0	0
Metallic wastes, mixed ferrous and non-ferrous	262,967	136,698	0	15	0
Glass wastes	166,011	229,294	0	19,435	0
Paper and cardboard wastes	105,341	213,431	0	335	550
Rubber wastes	60,206	199	65,855	710	0
Plastic wastes	45,374	59,927	0	2,479	0
Wood wastes	219,189	113,757	268,843	297	11
Textile wastes	14,475	84	0	2,864	0
Waste containing PCB	185	34	0	0	0
Discarded equipment (excluding discarded vehicles, batteries and accumulators wastes)	55,910	12,131	0	347	0
Discarded vehicles	86,139	32,656	0	0	0
Batteries and accumulators wastes	12,507	9,393	0	0	0
Animal and mixed food waste	355,824	329,788	0	5,918	2,845
Vegetal wastes	888,352	705,590	258	4,307	32,857
Animal faeces, urine and manure	78,596	5,574	71,819	61	245
Household and similar wastes	2,050,512	7,569	1,223	1,325,011	17,581
Mixed and undifferentiated materials	477,516	7,125	0	30,805	291
Sorting residues	9,163	11,030	313,941	890,716	0
Common sludges	175,625	221,991	29,278	2,756	61
Mineral waste from construction and demolition	1,456,675	1,011,659	0	97,834	0
Other mineral wastes	142,878	37,118	25	55,452	0
Combustion wastes	21,314	1,634	0	1,385	0
Soils	4,442,945	3,022,056	0	1,257,232	2,910
Dredging spoils	5,518	4,643	0	63	0
Mineral wastes from waste treatment and stabilised wastes	23,658	71,647	0	278,938	0
Total	**11,817,591**	**6,931,865**	**761,581**	**4,007,991**	**58,616**

1. The amount of waste recycled may be larger than the amount of waste generated because waste may be generated as mixed waste, for example as 'household and similar wastes' or 'Metallic wastes, mixed ferrous and non-ferrous', and at a subsequent stage it is treated to separate it into its component parts before being recycled. Similarly the amount of waste managed may be less than the amount of waste generated.
2. Waste disposed includes waste landfilled and waste inputs to incineration facilities that have not been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive. Waste recovered includes waste inputs to co-incineration facilities and to incineration facilities that have been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.
3. Other management comprises compost produced at non-PAS certified composting or anaerobic digestion plants.

Table 2. Key figures to support targets specified in Scottish waste policies*

Indicator	Year	Performance	Target / Target year
1. Reduce biodegradable municipal waste landfilled in Scotland	2005	2.16 million tonnes	**< 2.7 million tonnes / 2010**
	2006	2.03 million tonnes	**< 1.8 million tonnes / 2013**
	2007	1.97 million tonnes	**< 1.26 million tonnes / 2020**
	2008	1.78 million tonnes	
	2009	1.57 million tonnes	
	2010	1.48 million tonnes	
	2011	1.36 million tonnes	
	2012	1.33 million tonnes	
	2013	1.18 million tonnes	
	2014	1.14 million tonnes	
	2015	1.10 million tonnes	
	2016	1.14 million tonnes	
	2017	1.09 million tonnes	
2. Recycling and preparing for reuse of construction and demolition waste‡	2011	93.8%	**70% / 2020**
	2012	91.4%	
	2013	91.9%	
	2014	93.6%	
	2015	94.7%	
	2016	95.0%	
	2017	95.0%	
3. Recycling/composting and preparing for re-use of waste from all sources§	*2011 (old method)*	53.0%	**70% / 2025**
	2012 (old method)	50.8%	
	2013 (old method)	57.4%	
	2014 (old method)	53.8%	
	2014	53.2%	
	2015	56.6%	
	2016	59.1%	
	2017	58.9%	
4. Percentage of all waste sent to landfill§	2011	43.1%	**< 5% / 2025**
	2012	44.9%	
	2013	38.4%	
	2014	39.8%	
	2015	36.9%	
	2016	32.5%	
	2017	32.6%	
5. Reduce waste generated in Scotland	2012	84.5%	**<93% of 2011 baseline / 2017**
	2013	92.9%	**<85% of 2011 baseline / 2025**
	2014	83.7%	
	2015	95.5%	
	2016	90.7%	
	2017	95.7%	

* Making Things Last - A Circular Economy Strategy for Scotland (2016).
Figures for the carbon metric impacts of waste, targets and performance are published by Zero Waste Scotland at www.zerowastescotland.org.uk/content/scotland%E2%80%99s-carbon-metric-impact

‡ C&D recycling rates are from data provided to Europe for reporting under the Waste Framework Directive. C&D recycling excludes hazardous waste and soil and stone recycled.

§ The methodology used to calculate recycling tonnages changed in 2014. The figures for 2014 and 2015 have been revised under the new method to take into account waste composted or anaerobically digested at non-PAS certified facilities.

Data and trends

Waste generated

- The total quantity of waste generated in Scotland in 2017 was 11.82 million tonnes, an increase of 5.5% (0.62 million tonnes) from 2016 (11.20 million tonnes).
- In general, the change in waste generated year on year since 2011 has varied considerably (see Figure 1 below), primarily due to Construction and Demolition (C&D) waste generated, with year on year changes in that waste stream ranging from -25.2% to +23.9%. Over the same period, there has been an overall reduction in Commercial and Industrial (C&I) waste generated, with annual changes considerably less variable than C&D waste ranging from -12.5% to +9.1%. In comparison, Household waste generated varied by no more than 4.1% year on year during the same period.
- The generation of C&D waste is sensitive to large regional projects, which accounts for the large year on year variation in C&D waste generated. In 2017, the generation of C&D waste continued to be influenced by the works associated with the St James Centre in Edinburgh, with works for this project commencing in 2015 and continuing through 2017. Other projects include several major housing developments and a Scottish power project to install a new substation and associated underground cables in Scotland's central belt.
- When C&D waste is excluded, the waste generation trend has been generally downward for the 2011 – 2017 period (see Figure 2 on page 5).

Figure 1. WFAS generated by waste source in Scotland 2011-2017

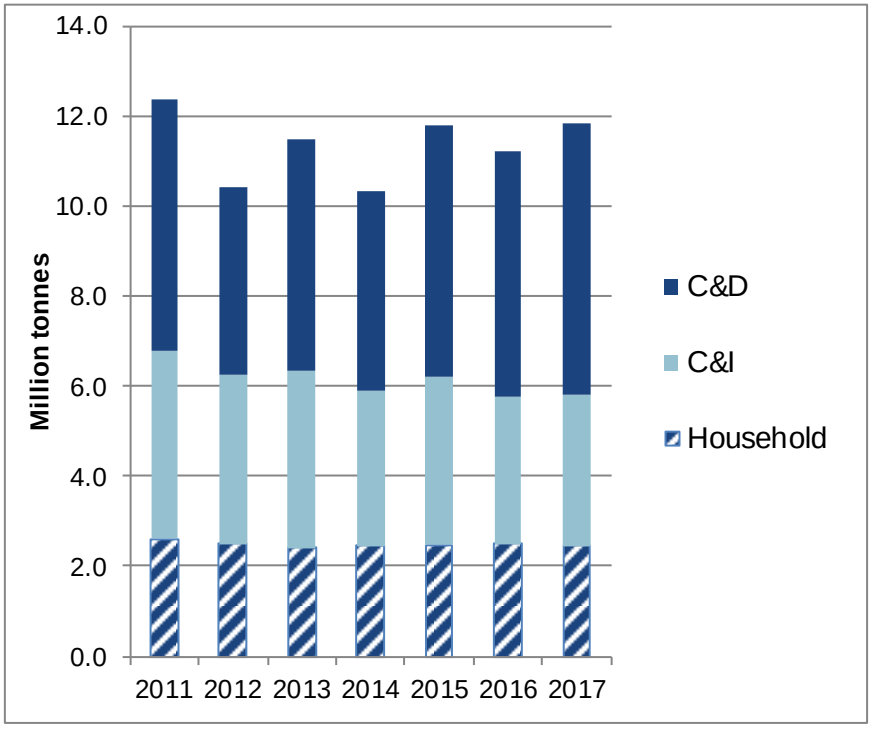
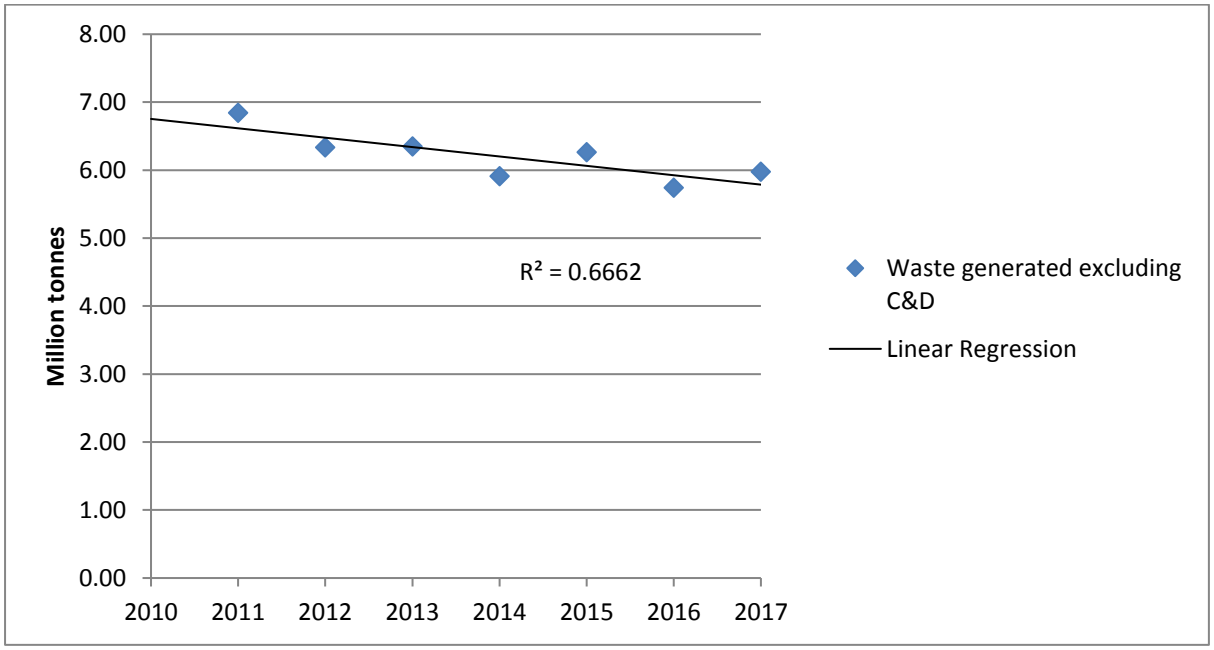


Table 3. Scottish WFAS generated by waste source 2011 - 2017

Year	C&I (tonnes)	C&D (tonnes)	Household (tonnes)	Total waste generated (tonnes)
2011	4,188,086	5,559,677	2,606,761	**12,354,524**
2012	3,771,714	4,160,998	2,500,997	**10,433,709**
2013	3,910,526	5,153,810	2,412,549	**11,476,885**
2014	3,421,330	4,460,946	2,459,501	**10,341,778**
2015	3,733,303	5,600,293	2,468,730	**11,802,325**
2016	3,265,893	5,434,898	2,498,925	**11,199,716**
2017	3,335,650	6,021,169	2,460,772	**11,817,591**

Figure 2. Waste generation trend excluding C&D sources 2011-2017

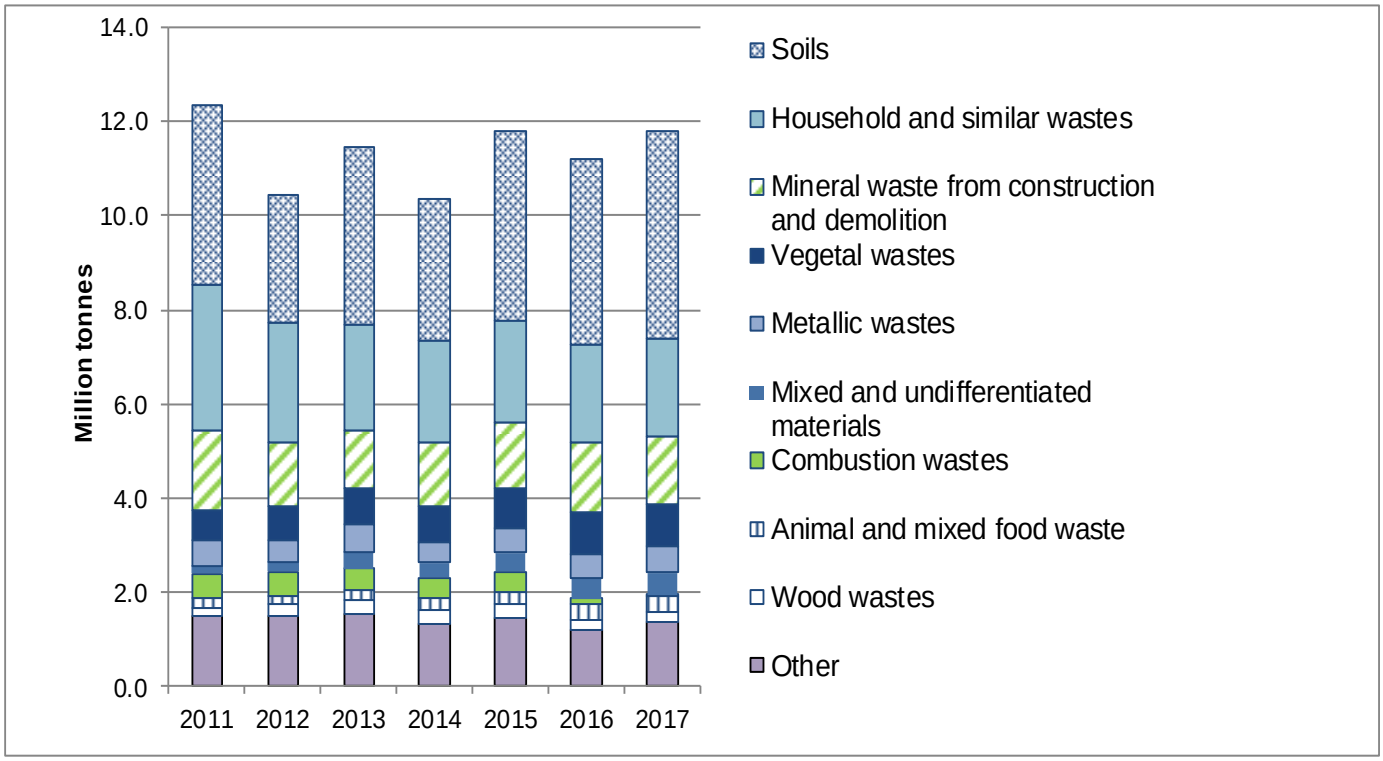


- The largest waste category generated in Scotland in 2017 was Soils (4.44 million tonnes, 37.6% of all waste generated), followed by Household and similar wastes (2.05 million tonnes,17.4%) and Mineral waste from construction and demolition (1.46 million tonnes, 12.3%) (see Figure 3 below).
- It should be noted that the category Household and similar wastes shown in Figure 3 (on page 6), includes waste generated by businesses as well as households. This category includes waste collected by local authorities and private waste management companies. It does not include all household waste, for example separated waste will be included under different waste categories (details of Scottish household waste generated and managed in 2017 can be found at www.sepa.org.uk/environment/waste/waste-data/waste-data-reporting/). In 2017, there were 1.35 million tonnes of Household and similar wastes generated by households, and 699,420 tonnes generated by Scottish businesses. Although Household and similar wastes generated has decreased from 3.11 million tonnes in 2011 to 2.05 million tonnes in 2017 (1.06 million tonne decrease, 34.1%), the figure has increased by 34,364 tonnes (1.6%) from 2016 (2.08 million tonnes). Around one third of the overall decrease since

2011 was due to a reduction by households and two thirds was due to a decrease in these wastes generated by business. The increase in 2017 was from Household and similar wastes generated by Scottish businesses.

- The long term reduction in Household and similar wastes is partly due to implementation of general policies targeted at reducing waste, including a legislative duty of care that requires all waste producers to segregate material for recycling, the implementation of source segregated recycling services to the commercial and public sector as required under the Waste Scotland Regulations (2012), and reduction in frequency of residual waste collections by local authorities.
- The generation of Rubber wastes increased by 35,869 tonnes to 60,206 in 2017 (data not shown), an increase of 147.4%. It is likely this increase is associated with a change in the Waste Management Licencing Regulations (Scotland) in 2016 in which used tyres are no longer permitted to be managed at sites exempt from waste management licencing. It is unknown whether this is a one-time increase, from removal of stockpiled tyres from permitted sites or if it is part of a longer term trend.

Figure 3. Scottish waste generated by waste category[1] 2011 - 2017



1. Other comprises waste categories not mentioned individually (see Table 1 on page 2 for full list of waste categories).

Table 4. Scottish waste generated by waste category[1] 2011 - 2017

Waste Category	Year						
	2011 (tonnes)	2012 (tonnes)	2013 (tonnes)	2014 (tonnes)	2015 (tonnes)	2016 (tonnes)	2017 (tonnes)
Soils	3,799,070	2,692,629	3,784,569	2,972,959	4,024,417	3,928,442	4,442,945
Household and similar wastes	3,111,161	2,557,330	2,243,014	2,179,594	2,158,665	2,084,876	2,050,512
Mineral waste from construction and demolition	1,701,524	1,367,533	1,247,019	1,366,820	1,398,443	1,502,313	1,456,675
Vegetal wastes	617,018	691,151	758,216	736,588	872,960	879,100	888,352
Metallic wastes	547,546	466,888	575,827	443,200	495,068	497,941	554,293
Mixed and undifferentiated materials	169,598	225,912	360,665	329,884	418,183	447,360	477,516
Animal and mixed food waste	177,841	172,171	201,016	256,466	290,735	315,483	355,824
Wood wastes	178,070	245,197	288,788	302,750	270,700	208,162	219,189
Combustion wastes	548,233	499,687	457,074	427,559	411,306	119,124	21,314
Other	**1,504,463**	**1,515,209**	**1,560,697**	**1,325,956**	**1,461,849**	**1,216,917**	**1,350,971**

1. Other comprises waste categories not mentioned individually (see Table 1 on page 2 for full list of waste categories).

- Between 2016 and 2017 Combustion wastes generated again decreased by 97,809 tonnes (82.1%). This is the first year that the Longannet coal power station was not operating for the full calendar year, and the change is primarily due to these wastes no longer being generated at this site.
- Separately collected Animal and mixed food waste generated from Household and C&I sources increased from 177,841 tonnes in 2011 to 355,824 tonnes in 2017 (see Figure 4 on page 8), an increase of 100.1%.
- Separately collected Animal and mixed food waste from C&I sources increased in 2017 consistent with the upward trend of this waste category from Household sources (see Figure 4 on page 8). This is also consistent with the implementation of the Waste (Scotland) Regulations 2012 that requires businesses in Scotland to source segregate materials, including food waste in urban areas, and requires local authorities to provide a minimum food waste recycling service to householders.

Figure 4. Separately collected Animal and mixed food waste generated by waste source 2011 - 2017

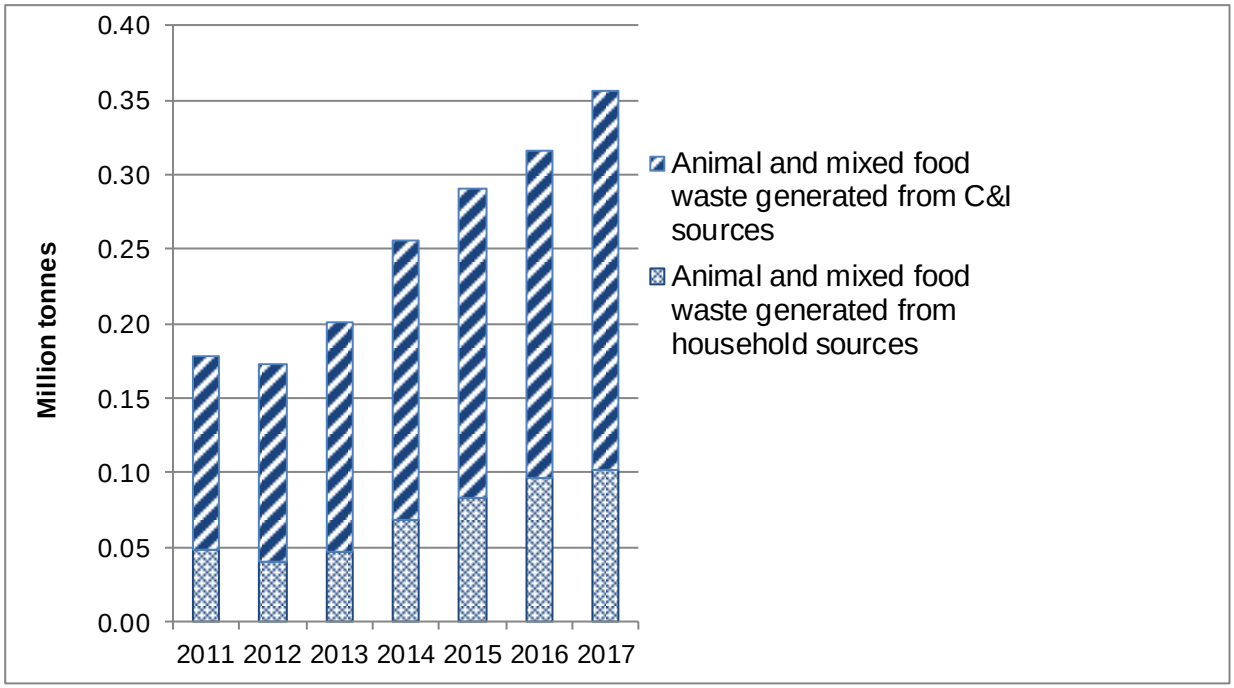


Table 5. Separately collected Animal and mixed food waste generated by waste source 2011 - 2017

Year	C&I (tonnes)	Household (tonnes)	Total (tonnes)
2011	129,331	48,510	**177,841**
2012	131,355	40,816	**172,171**
2013	153,506	47,509	**201,016**
2014	188,601	67,865	**256,466**
2015	208,331	82,404	**290,735**
2016	218,557	96,926	**315,483**
2017	254,422	101,403	**355,824**

- There was a small increase of 821 tonnes (0.8%) for the generation of separately collected Paper and cardboard increased in 2017. This was due to a combination of an increase of 2,460 tonnes from C&I sources and decrease of 1,639 tonnes from household sources. This is against a longer term reduction of these wastes from 2011 (33,253 tonnes out of a total of 49,755 tonnes) from C&I sources. Although separate data is not available for the individual paper or cardboard waste streams, the reduction in print media and increase in paperless offices are likely a contributing factor to the decrease in waste Paper and cardboard generated since 2011.

Figure 5. Separately collected Paper and cardboard waste generated by waste source 2011 - 2017

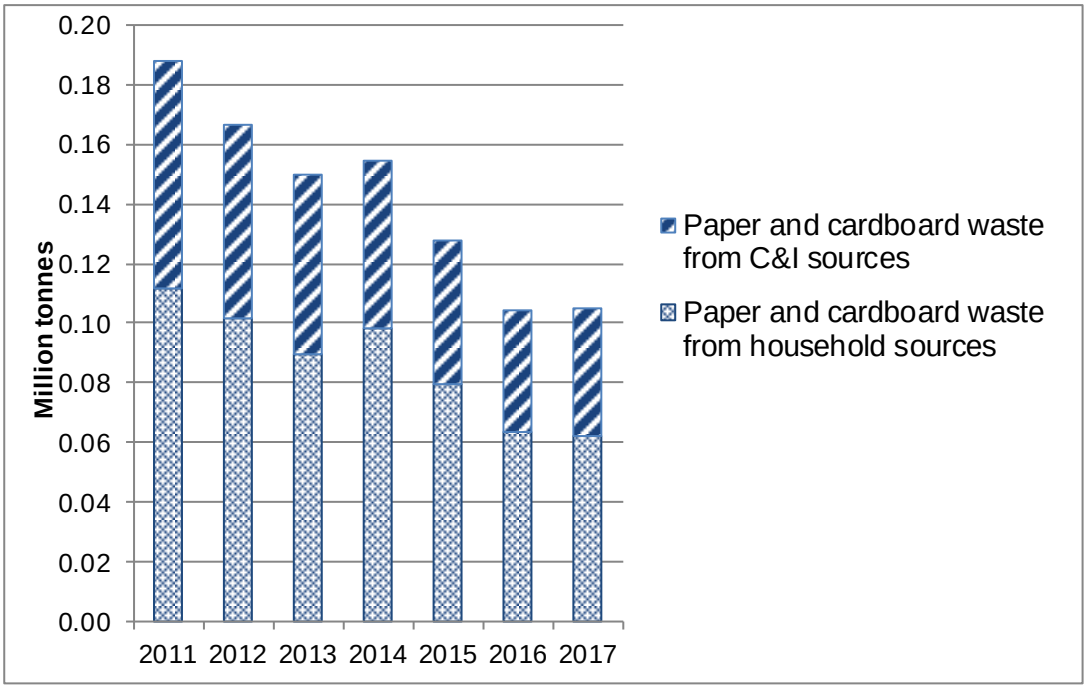


Table 6. Separately collected Paper and cardboard waste generated by waste source 2011 - 2017

Year	C&I (tonnes)	Household (tonnes)	Total (tonnes)
2011	76,416	111,933	**188,349**
2012	65,229	101,394	**166,623**
2013	60,534	89,629	**150,163**
2014	56,291	98,105	**154,396**
2015	48,205	79,613	**127,818**
2016	40,702	63,817	**104,519**
2017	43,162	62,178	**105,341**

- The total quantity of hazardous waste generated in Scotland was 546,844 tonnes in 2017, an increase of 33,150 tonnes (6.5%) compared with 2016 (see Figure 6 on page 10). Since 2011, there has been a decrease of 116,033 tonnes (17.5%) in the generation of Scottish hazardous waste, with the reduction occurring from C&D sources. As in previous years, most of the hazardous waste generated in 2017 (83.0%, 453,637 tonnes) was from C&I sources.
- In 2017, the main category of hazardous waste generated was Chemical wastes (173,494 tonnes, 31.7% of all hazardous waste), primarily waste of EWC code 13 05 07, oil / water wastes from offshore oil activities in the north of Scotland. Other hazardous wastes generated were Spent solvents (52,847 tonnes, 9.7%) and Other mineral wastes (49,479 tonnes, 9.0%) - see Figure 7 on page 11.

Figure 6. Scottish hazardous waste generated by waste source 2011 - 2017

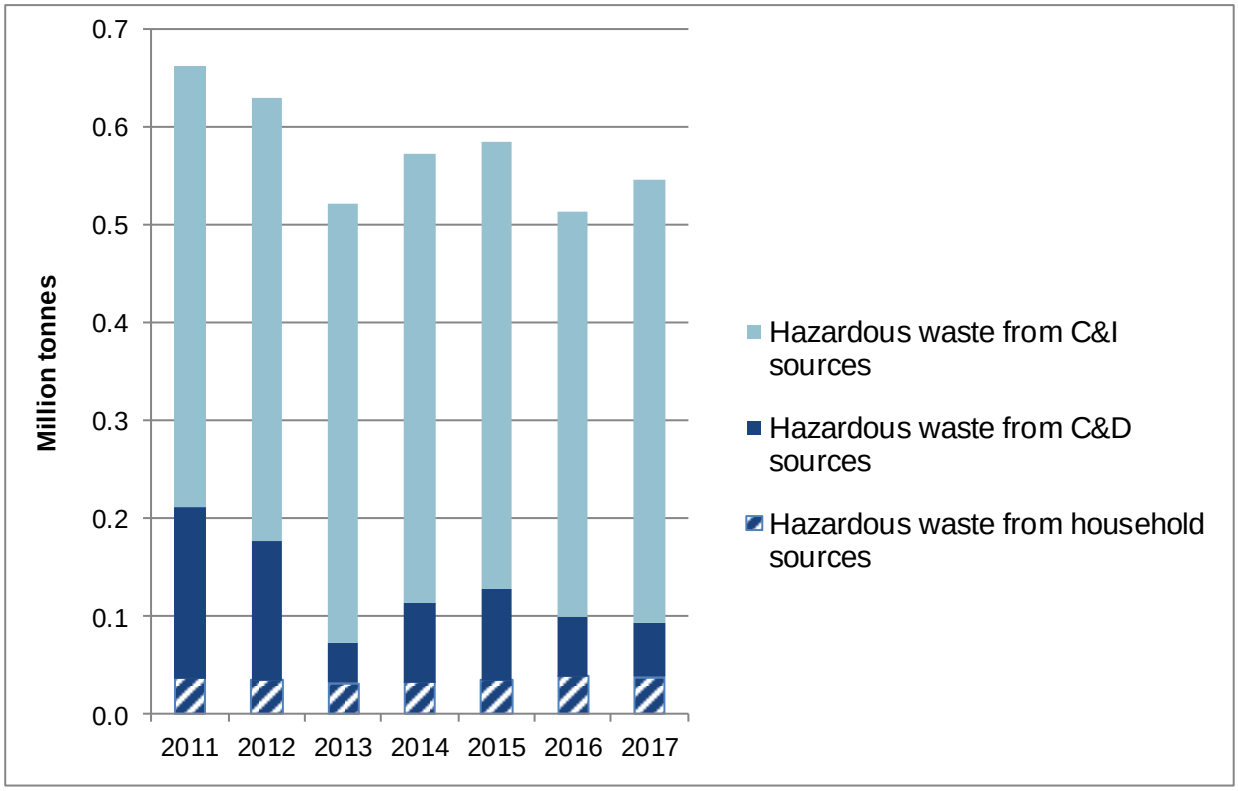
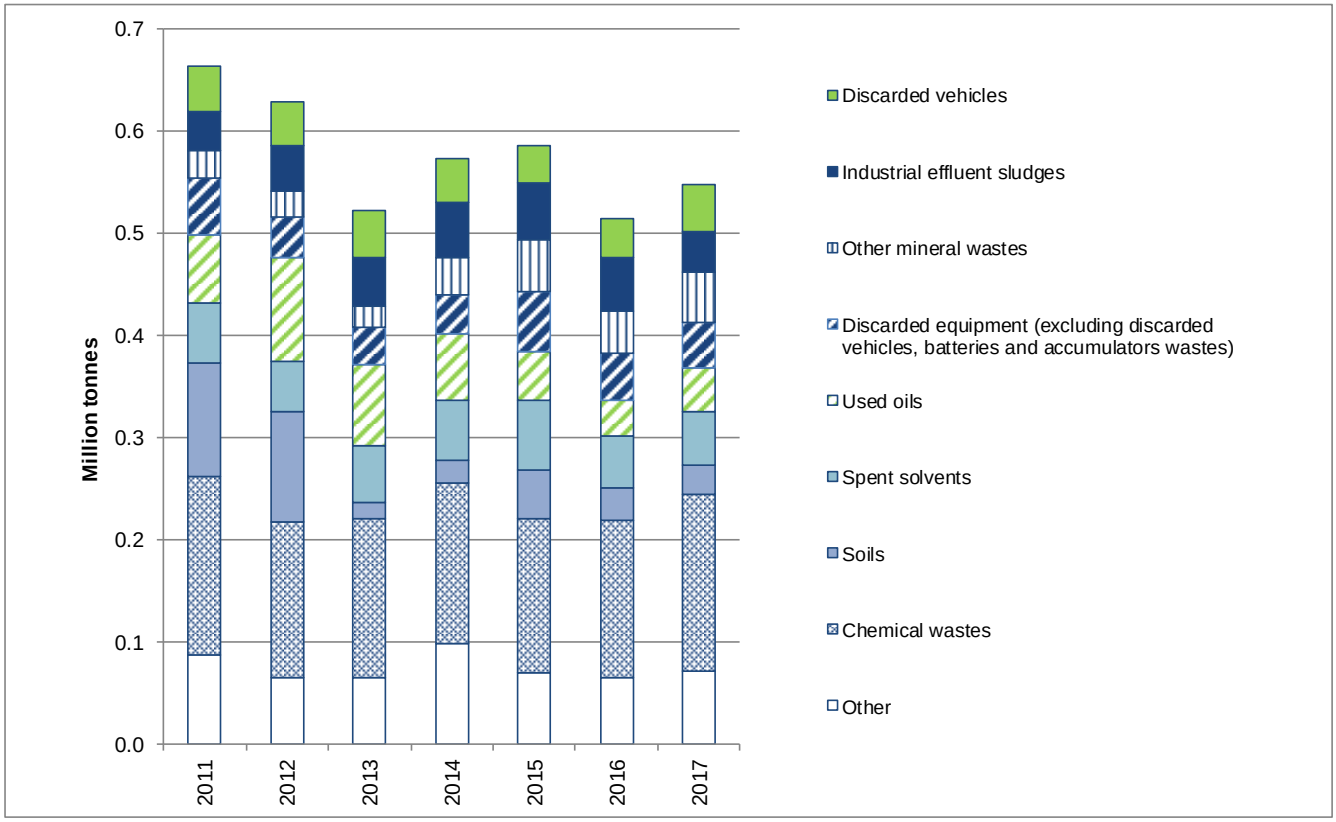


Table 7. Scottish hazardous waste generated by waste source 2011 - 2017

Year	C&I (tonnes)	C&D (tonnes)	Household (tonnes)	Total (tonnes)
2011	450,485	175,067	37,325	**662,877**
2012	452,009	141,755	35,000	**628,763**
2013	448,295	41,746	32,366	**522,408**
2014	458,760	81,583	32,861	**573,204**
2015	457,814	92,871	34,941	**585,626**
2016	413,964	60,853	38,877	**513,694**
2017	453,637	55,520	37,687	**546,844**

Figure 7. Scottish hazardous waste generated by waste category[1] 2011 - 2017



1. Other comprises waste categories not mentioned individually (see Table 1 on page 2 for full list of waste categories).

Table 8. Scottish hazardous waste generated by waste category[1] 2011 - 2017

Waste Type	Year						
	2011 (tonnes)	2012 (tonnes)	2013 (tonnes)	2014 (tonnes)	2015 (tonnes)	2016 (tonnes)	2017 (tonnes)
Chemical wastes	175,049	152,618	156,133	157,959	150,569	154,304	173,494
Spent solvents	58,101	48,567	55,480	58,291	67,682	50,893	52,847
Other mineral wastes	27,346	24,492	20,407	35,316	49,916	41,487	49,479
Discarded vehicles	43,594	43,558	46,481	42,675	37,187	38,066	45,786
Discarded equipment (excluding discarded vehicles, batteries and accumulators wastes)	55,760	39,576	37,249	39,253	58,910	45,824	44,058
Used oils	66,599	102,564	78,849	64,919	48,530	35,505	42,521
Industrial effluent sludges	38,098	44,350	47,353	55,098	55,211	51,918	39,221
Soils	111,458	108,851	15,688	22,204	48,402	30,707	28,079
Other	86,873	64,187	64,768	97,490	69,219	64,990	71,358
Total	**662,877**	**628,763**	**522,408**	**573,204**	**585,626**	**513,694**	**546,844**

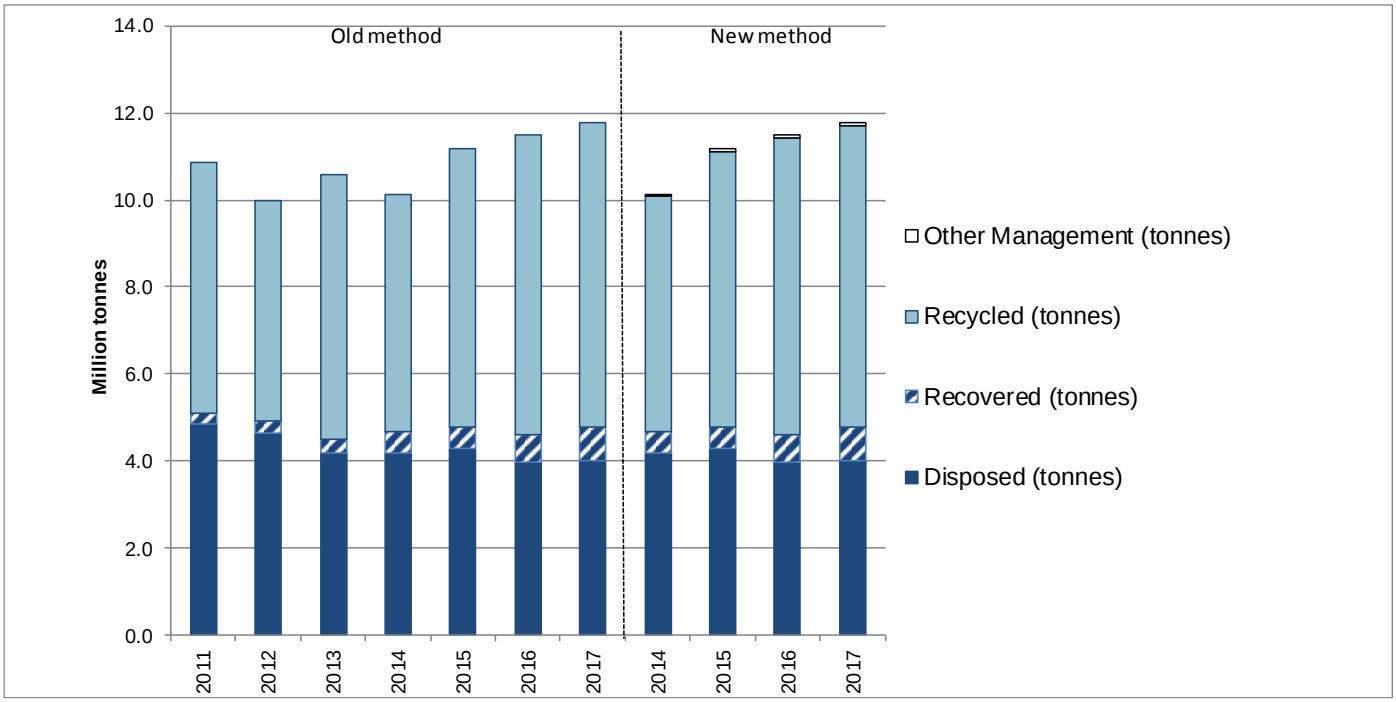
1. Other comprises waste categories not mentioned individually (see Table 1 on page 2 for full list of waste categories).

Waste managed

- In 2017, the total amount of Scottish waste recorded as recycled, recovered, disposed, or managed by other management[3] was 11.76 million tonnes which was 0.06 million tonnes (0.5%) less than the amount of waste generated (11.82 million tonnes). In historical publications the gap between waste managed and waste generated was larger, with the waste generated typically between 15% - 30% greater than waste managed. SEPA produced more robust methodology for estimating C&I data generated (introduced with the 2011 publication) and for C&D waste aggregates recycled (introduced with 2014 publication and applied to historical data). With these new methodologies the difference between waste generated and waste managed is less variable, ranging from 12.0% more waste generated than managed in 2011 to 2.5% less in 2016. For further information, please refer to the quality report on SEPA's website.
- Waste types managed do not necessarily correspond to the waste types generated. This is because waste may change form following collection and final management. For example, in 2017 there were only 9,163 tonnes of Scottish waste generated in the Sorting residues category. However, in the same period there were 1.22 million tonnes of Sorting residues recorded as managed, primarily disposed by landfill (0.81 million tonnes) disposed by incineration (78,451 tonnes) and recovered by incineration (310,114 tonnes). Sorting residues are typically produced as the result of the mechanical treatment of waste. A treatment plant may take waste inputs such as Mixed and undifferentiated materials (including co-mingled materials such as mixed packaging waste) and Household and similar waste. It can then produce products that can be reused or recycled, such as metal, plastic or glass, and also produces reject material that is disposed. Consequently, the tonnage of these materials will be different in the waste generated tables compared to the waste managed tables.

[3] Other management comprises waste composted or anaerobically digested at facilities not accredited to the BSI PAS 100 or PAS 110 standard.

Figure 8. Scottish waste managed[1, 2, 3 4] in 2011 - 2017.



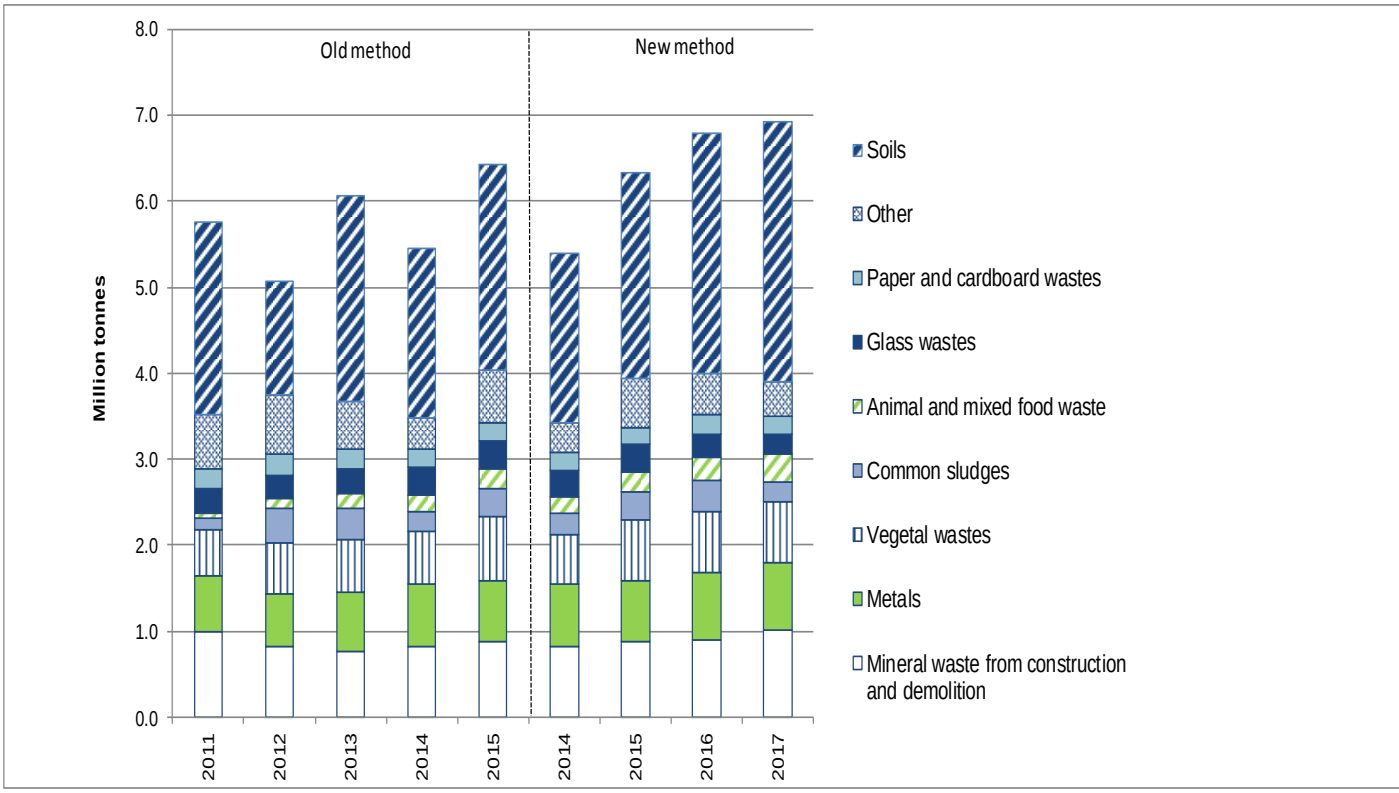
1. Recycled includes waste recycled, reused and waste composted. Disposal includes incineration by disposal and waste landfilled. Recovered includes incineration with energy recovery and co-incineration.
2. Waste managed is final management and excludes interim facilities.
3. From 2014, the total waste recycled was measured using a new methodology (New Method), which excluded figures for waste composted that did not reach the quality standards set by PAS 100/110. In the Old Method, all waste composted was included in the recycling figures regardless of PAS quality standard.
4. Other management comprises compost produced at non-PAS certified composting or anaerobic digestion plants.

Table 9. Scottish waste managed[1, 2, 3 4] in 2011 - 2017

Year	Recycled (tonnes)	Recovered (tonnes)	Disposed (tonnes)	Other Management (Tonnes)	Total (Tonnes)
2,011	5,764,912	269,479	4,842,589	0	10,876,980
2,012	5,073,948	278,470	4,632,242	0	9,984,660
2,013	6,067,069	333,435	4,173,084	0	10,573,588
2014 - Old Method	5,456,263	489,553	4,190,809	0	10,136,624
2015 - Old Method	6,420,757	474,332	4,299,417	0	11,194,506
2016 - Old Method	6,861,101	663,925	3,956,390	0	11,481,416
2017 - Old Method	6,990,480	761,581	4,007,991	0	11,760,053
2014 - New Method	5,393,644	489,553	4,190,809	62,619	10,136,624
2015 - New Method	6,339,364	474,332	4,299,417	81,393	11,194,506
2016 - New Method	6,789,670	663,925	3,956,390	71,431	11,481,416
2017 - New Method	6,931,865	761,581	4,007,991	58,616	11,760,053

1. Recycled includes waste recycled, reused and waste composted. Disposal includes incineration by disposal and waste landfilled. Recovered includes incineration with energy recovery and co-incineration.
2. Waste managed is final management and excludes interim facilities.
3. From 2014, the total waste recycled was measured using a new methodology (New Method), which excluded figures for waste composted that did not reach the quality standards set by PAS 100/110. In the Old Method, all waste composted was included in the recycling figures regardless of PAS quality standard.
4. Other management comprises compost produced at non-PAS certified composting or anaerobic digestion plants.

Figure 9. Scottish waste recycled[1, 2, 3] by waste category 2011 – 2017.



1. Recycled includes waste recycled, reused and waste composted. Disposal includes incineration by disposal and waste landfilled. Recovered includes incineration with energy recovery and co-incineration.
2. Waste managed is final management and excludes interim facilities.
3. From 2014, the total waste recycled was measured using a new methodology (New Method), which excluded figures for waste composted or anaerobically digested that did not reach the quality standards set by PAS 100/110. In the Old Method, all waste composted or anaerobically digested was included in the recycling figures regardless of PAS quality standard.

Table 10. Scottish waste recycled[1, 2, 3] by waste category 2011 –2017

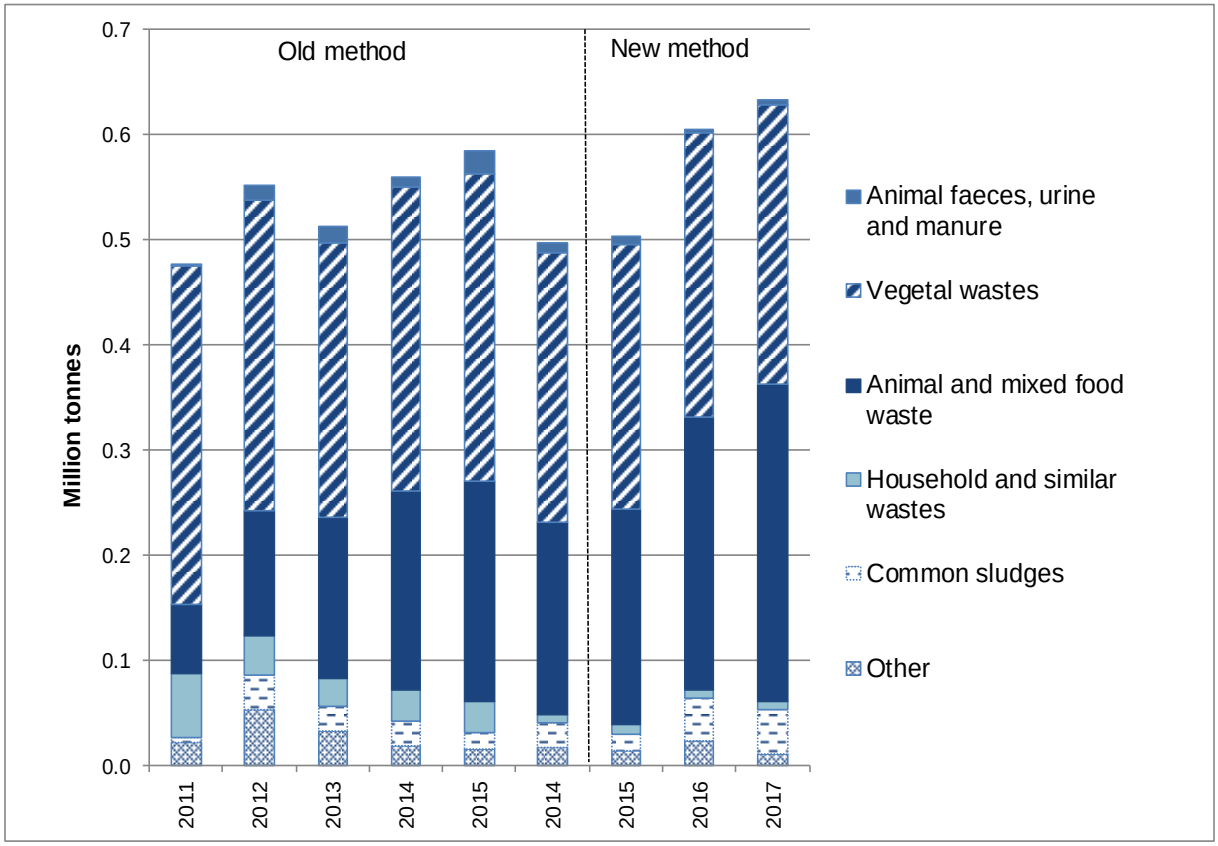
Waste Category	Year								
	2011 (tonnes)	2012 (tonnes)	2013 (tonnes)	2014 – Old Method (tonnes)	2015 – Old Method (tonnes)	2014 - New Method (tonnes)	2015 - New Method (tonnes)	2016 - New Method (tonnes)	2017 - New Method (tonnes)
Soils	2,235,722	1,323,499	2,388,995	1,965,431	2,393,660	1,965,431	2,393,660	2,787,153	3,022,056
Other	640,740	681,587	550,620	363,991	606,371	339,019	570,517	491,495	406,066
Paper and cardboard wastes	228,696	259,492	247,085	220,910	200,758	220,910	200,750	213,861	213,431
Glass wastes	279,404	256,353	272,866	314,298	327,981	314,298	327,981	268,406	229,294
Animal and mixed food waste	71,573	127,753	176,633	192,957	224,122	187,537	220,232	281,744	329,788
Common sludges	132,449	403,278	367,864	237,614	328,751	237,614	328,751	351,840	221,991
Vegetal wastes	540,004	581,506	611,754	607,081	756,444	574,855	714,803	708,247	705,590
Metals	649,597	618,286	681,980	722,680	708,606	722,680	708,606	788,164	791,989
Mineral waste from construction and demolition	986,726	822,194	769,271	831,300	874,064	831,300	874,064	898,760	1,011,659
Total	**5,764,912**	**5,073,948**	**6,067,069**	**5,456,263**	**6,420,757**	**5,393,644**	**6,339,364**	**6,789,670**	**6,931,865**

1. Recycled includes waste recycled, reused and waste composted. Disposal includes incineration by disposal and waste landfilled. Recovered includes incineration with energy recovery and co-incineration.
2. Waste managed is final management and excludes interim facilities.
3. From 2014, the total waste recycled was measured using a new methodology (New Method), which excluded figures for waste composted or anaerobically digested that did not reach the quality standards set by PAS 100/110. In the Old Method, all waste composted or anaerobically digested was included in the recycling figures regardless of PAS quality standard.

Waste recycled

- For the 2017 calendar year, the total tonnage of waste recycled was 6.93 million tonnes, an increase of 142,195 tonnes from the 6.79 million tonnes recycled in 2016.
- The 6.93 million tonnes of waste recycled in 2017 was an increase of 142,195 tonnes (2.1%) from the 6.79 million tonnes recycled in 2016. There were increases in recycling of Soils (increase of 234,904 tonnes, 8.4%) and Mineral waste from construction and demolition (increase of 112,898 tonnes,12.6%). These wastes are primarily from the C&D sector, which varies considerably year on year depending on construction activities and major projects in the country.
- In 2017, the waste category with the largest amount recycled was Soils (3.02 million tonnes, 43.6% of all waste recycled) followed by Mineral waste from construction and demolition (1,011,659 tonnes, 14.6%) (see Figure 9 on page 15). Excluding Soils, there was a decrease in recycling of 92,709 tonnes (2.3%) from 2016, which included Common sludges (decrease of 155,013 tonnes, 44.7%), Glass wastes (decrease of 71,569 tonnes, 23.8%) and Mineral wastes from waste treatment and stabilised wastes (decrease of 67,786 tonnes, 48.6%).
- In 2017, there were 633,629 tonnes of organic wastes recycled in composting or anaerobic digestion facilities (see Figure 10 on page 18). This is an increase of 28,015 tonnes (4.6%) from the 605,614 tonnes of organic wastes recycled by composting or digestion in 2016 The increasing trend in food waste recycling corresponds to the roll-out of separate food waste collections under the Waste Scotland Regulations (2012).
- In 2017, the tonnage of Animal and mixed food waste recycled by composting or anaerobic digestion (302,829 tonnes) was 16.6% (43,095 tonnes) greater than the amount recycled in 2016. However, the tonnage recycled was 14.9% less than the tonnage generated (355,824 tonnes). The difference is due to some of the Animal and mixed food waste generated, such as sludges from washing and cleaning of fish processing waste, being disposed as a mixed waste.

Figure 10. Scottish organic waste recycled[1] by composting or anaerobic digestion 2011 - 2017



1. From 2014, the total waste recycled was measured using a new methodology (New Method), which excluded figures for waste composted or anaerobically digested that did not reach the quality standards set by PAS 100/110. In the Old Method, all waste composted or anaerobically digested were included in the recycling figures regardless of PAS quality standard.

Table 11. Scottish organic waste recycled[1] by composting or anaerobic digestion by waste category 2011 - 2017

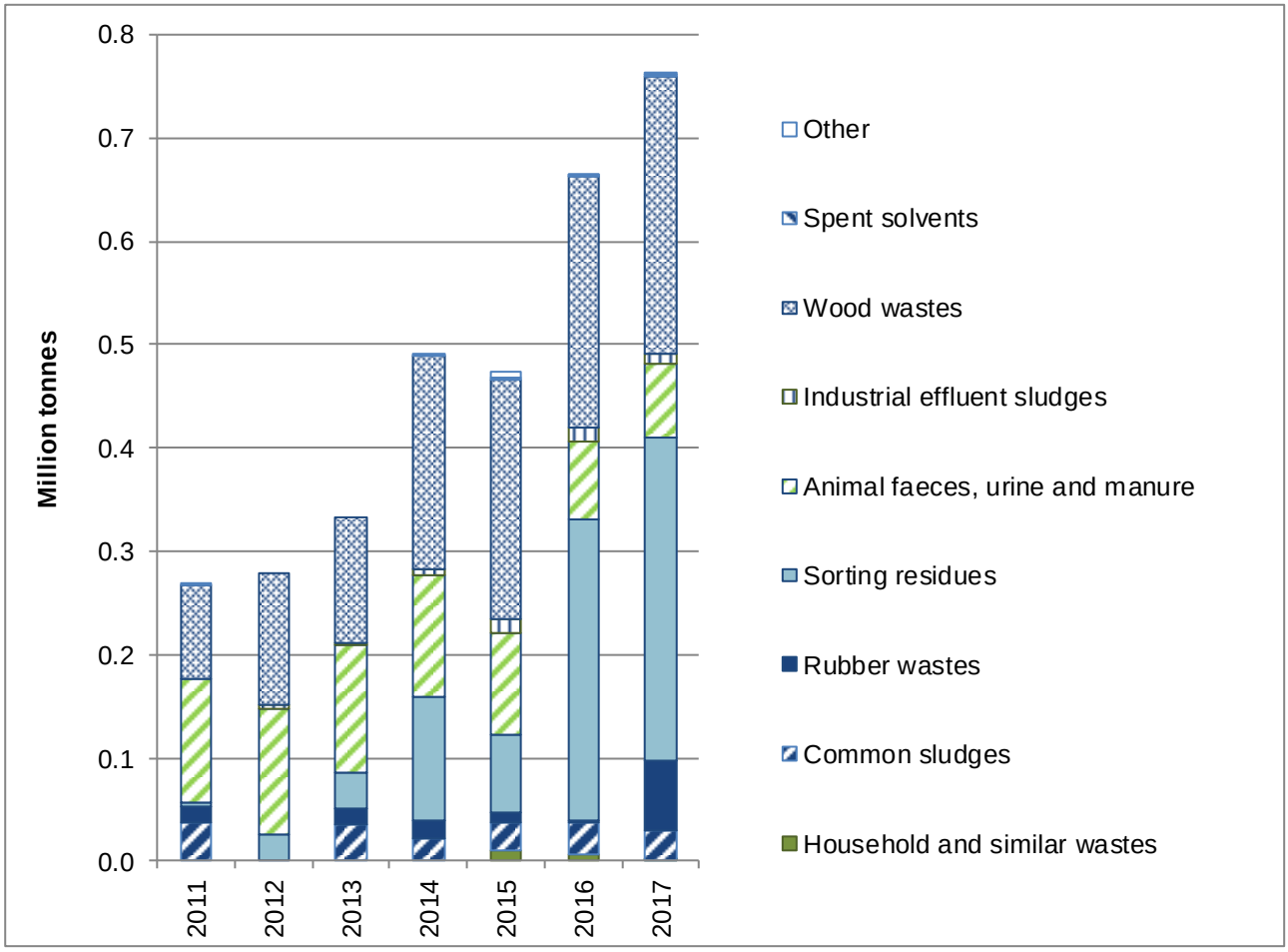
Waste Category	Year								
	2011 (tonnes)	2012 (tonnes)	2013 (tonnes)	2014 - Old Method (tonnes)	2015 - Old Method (tonnes)	2014 (tonnes)	2015 (tonnes)	2016 (tonnes)	2017 (tonnes)
Vegetal wastes	321,721	296,333	261,760	289,370	293,020	257,145	251,379	270,249	264,492
Animal and mixed food waste	66,501	119,496	152,469	188,436	209,164	183,015	205,274	259,734	302,829
Common sludges	5,160	33,256	23,204	23,351	15,665	23,351	15,665	39,447	41,913
Household and similar wastes	60,593	37,352	26,812	30,255	29,981	7,503	9,365	8,414	7,569
Animal faeces, urine and manure	150	12,738	15,201	9,727	21,368	9,615	7,552	3,653	5,574
Other	21,518	52,339	33,066	18,984	15,229	16,874	13,800	24,118	11,251
Total	**475,643**	**551,514**	**512,513**	**560,122**	**584,427**	**497,504**	**503,034**	**605,614**	**633,629**

1. From 2014, the total waste recycled was measured using a new methodology (New Method), which excluded figures for waste composted or anaerobically digested that did not reach the quality standards set by PAS 100/110. In the Old Method, all waste composted or anaerobically digested were included in the recycling figures regardless of PAS quality standard

Waste recovered by incineration

- In 2017, there were 761,581 tonnes of waste recovered by incineration with energy recovery or co-incineration. This is an increase of 97,656 tonnes (14.7%) from 2016. This follows the longer term trend of an increase in waste recovery, with an increase of 492,102 tonnes (182.6%) of waste recovered since 2011.
- The largest waste type recovered in 2017 was Sorting residues (313,941 tonnes, 41.2% of all waste recovered), followed by Wood wastes (268,843 tonnes, 35.3%). There was also a large increase in recovery of Rubber wastes (62,915 tonnes, 2,140.0%). It is likely this increase is associated with a change in the Waste Management Licencing Regulations (Scotland) in 2016 in which used tyres are no longer permitted to be managed at sites exempt from waste management licencing. It is unknown whether this is a one-time increase, from removal of stockpiled tyres from permitted sites or if it is part of a longer term trend

Figure 11. Scottish waste recovered by incineration[1] by waste category 2011 - 2017



1. Waste recovered includes waste inputs to co-incineration facilities and to incineration facilities that have been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.

Table 12. Scottish waste recovered by incineration[1] by waste category 2011 – 2017

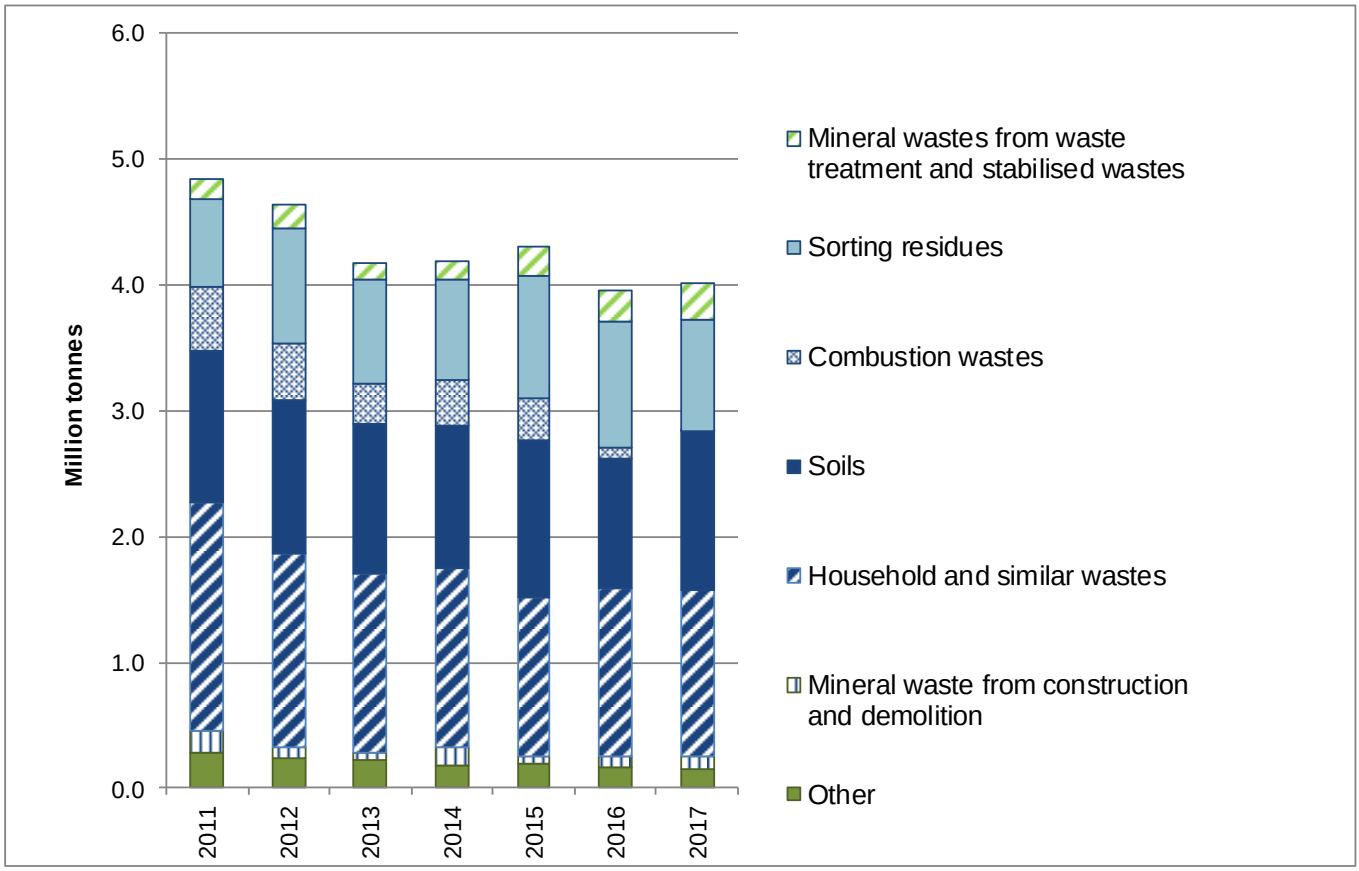
Waste Category	Year						
	2011 (tonnes)	2012 (tonnes)	2013 (tonnes)	2014 (tonnes)	2015 (tonnes)	2016 (tonnes)	2017 (tonnes)
Wood wastes	90,616	127,621	122,523	206,895	233,616	243,311	268,843
Animal faeces, urine and manure	119,309	120,509	123,748	117,431	97,731	75,901	71,819
Sorting residues	5,192	26,089	33,759	121,214	75,949	290,697	313,941
Common sludges	37,200	0	36,060	22,430	28,417	30,129	29,278
Rubber wastes	15,235	0	15,025	16,183	8,594	2,940	65,855
Industrial effluent sludges	0	4,252	2,319	5,295	12,985	12,929	8,605
Household and similar wastes	0	0	0	0	9,749	7,209	1,223
Spent solvents	0	0	0	0	565	491	1,635
Other	1,927	0	0	104	6,727	318	382
Total	**269,479**	**278,470**	**333,435**	**489,553**	**474,332**	**663,925**	**761,581**

1. Waste recovered includes waste inputs to co-incineration facilities and to incineration facilities that have been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.

Waste disposed

- In 2017, there were 4.0 million tonnes of waste disposed by landfill or incineration. This is an increase of 51,601 tonnes (1.3%) from 2016. This deviates from the longer term trend of a decrease in waste disposal, with a decrease of 834,598 tonnes (17.2%) of waste disposed compared with 2011.
- The waste type with the largest amount disposed in 2017 was Household and similar waste (1.33 million tonnes, 33.1% of all waste disposed) followed by Soils (1.26 million tonnes, 31.4%) and Sorting residues (890,716 tonnes, 22.2%) as depicted in Figure 12 below.

Figure 12. Scottish waste disposed[1] by waste category 2011 - 2017



1. Waste disposed includes waste landfilled and waste inputs to incineration facilities that have not been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.

Table 13. Scottish waste disposed[1] by waste category 2011 – 2017

Waste Category	Year						
	2011 (tonnes)	2012 (tonnes)	2013 (tonnes)	2014 (tonnes)	2015 (tonnes)	2016 (tonnes)	2017 (tonnes)
Household and similar wastes	1,817,999	1,528,441	1,416,073	1,420,395	1,264,155	1,346,169	1,325,011
Soils	1,202,936	1,217,230	1,198,189	1,132,942	1,239,766	1,027,517	1,257,232
Sorting residues	697,779	910,000	822,253	800,091	973,624	1,000,096	890,716
Mineral wastes from waste treatment and stabilised wastes	156,868	191,285	134,874	145,413	233,680	250,375	278,938
Mineral waste from construction and demolition	178,606	95,700	60,564	152,156	61,765	82,855	97,834
Combustion wastes	511,178	453,593	318,714	364,589	333,996	83,765	1,385
Other	277,222	235,993	222,417	175,223	192,431	165,613	156,875
Total	**4,842,589**	**4,632,242**	**4,173,084**	**4,190,809**	**4,299,417**	**3,956,390**	**4,007,991**

1. Waste disposed includes waste landfilled and waste inputs to incineration facilities that have not been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.

- The vast majority (99.3%) of waste landfilled in Scotland in 2017 was of Scottish origin. This document reports on the Scottish waste that was managed by disposal to landfill.

For more information on the trends and commentary for waste that was landfilled in Scotland in 2017, including waste generated outwith Scotland, please see the Waste Landfilled in Scotland 2017 statistics.

- Scottish waste disposed to landfill in 2017 was 3.83 million tonnes, an increase of 100,677 tonnes (2.7%) from the 3.73 million tonnes landfilled in 2016. This is a slight deviation from the longer term trend of decreasing disposal to landfill (see Figure 13 on page 23), with 3.18 million tonnes (45.4%) less waste disposed to landfill in 2017 than in 2005. Excluding Soils, the amount of Scottish waste disposed to landfill in 2017 was 129,038 tonnes (4.8%) less than that landfilled in 2016.
- In 2017, 28,113 tonnes of Scottish waste were disposed to landfill outside Scotland.
- As depicted in Figure 14 on page 24, there were 50,408 tonnes of Scottish Hazardous waste disposed to landfill in 2017, which amounts to 1.3% of all Scottish waste landfilled. This was an increase of 8,478 tonnes (20.2%) compared to 2016. The bulk of Scottish hazardous waste landfilled was Other mineral wastes, which primarily comprises insulating materials such as asbestos (23,518 tonnes, 46.7% of all hazardous waste landfilled), followed by Mineral wastes from waste treatment and stabilised wastes (14,314 tonnes, 28.4%).

Figure 13. Scottish waste disposed to landfill by waste category 2005 - 2017

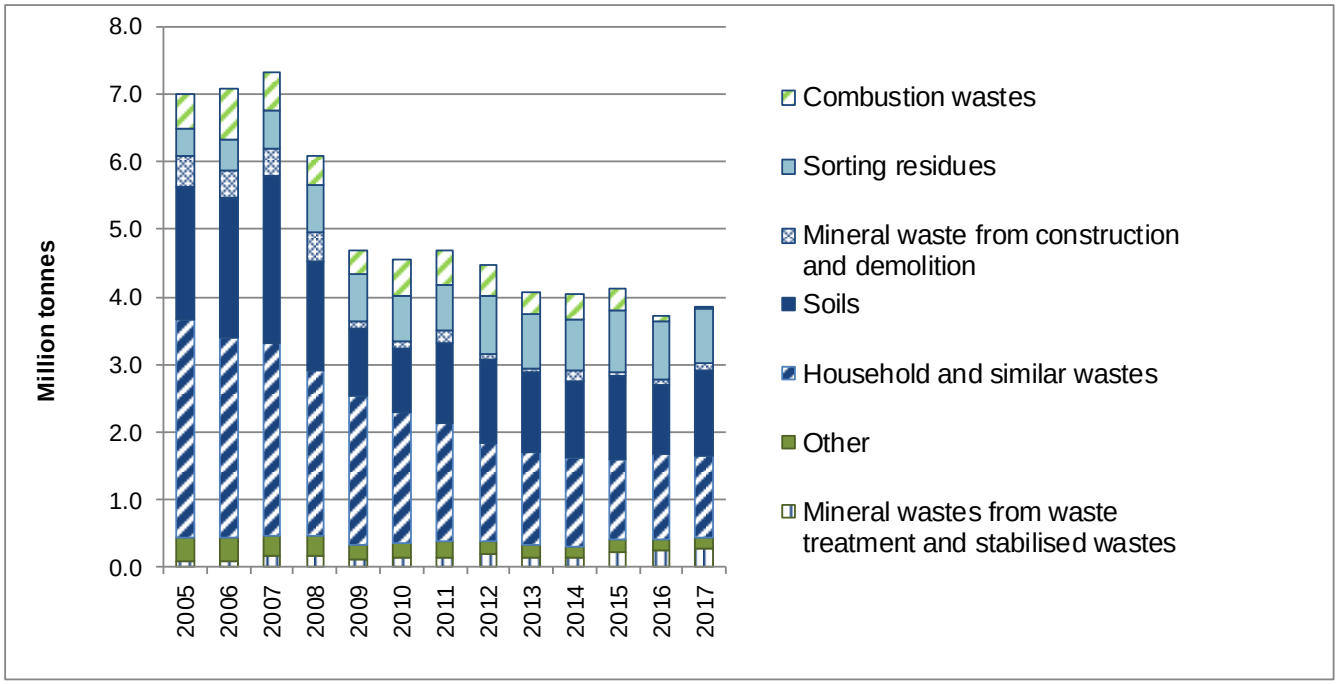


Figure 14. Scottish hazardous waste disposed to landfill by waste category 2005 - 2017

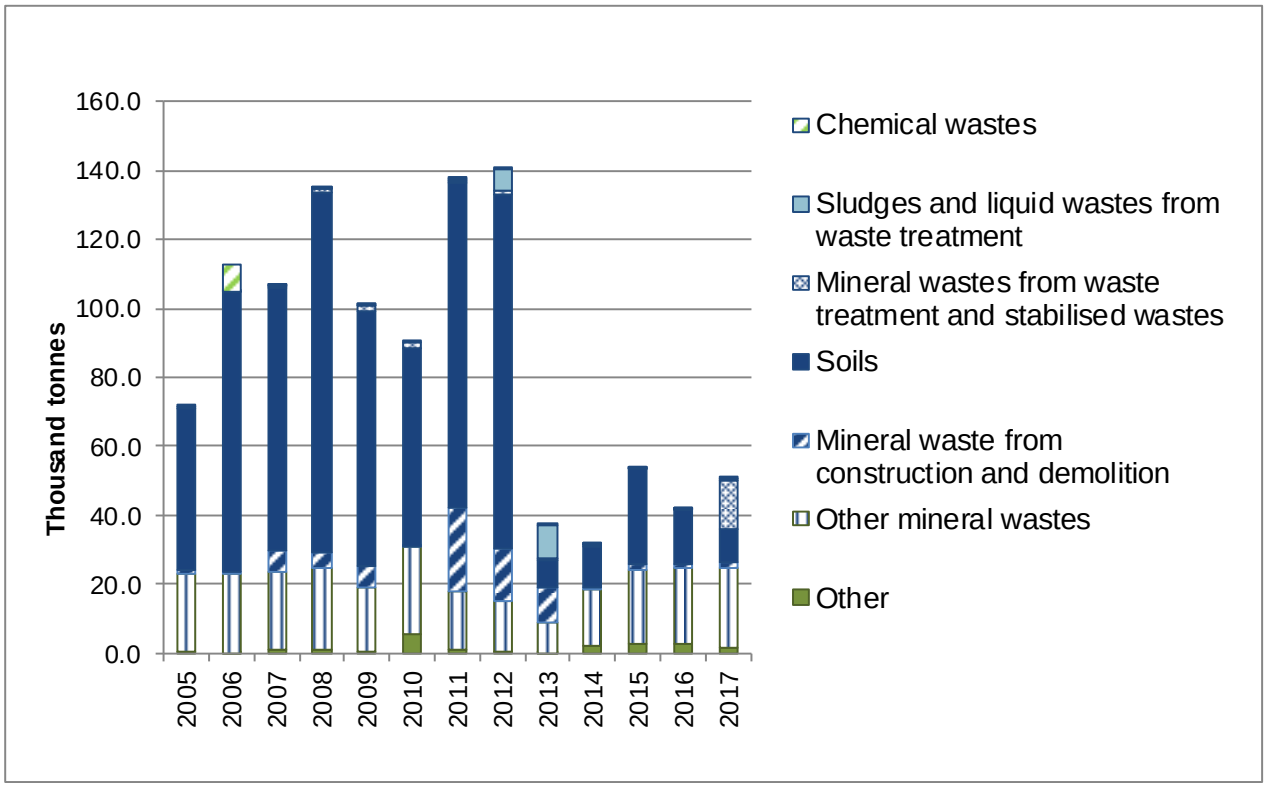


Table 14. Scottish waste disposed to landfill by waste category 2005 - 2017

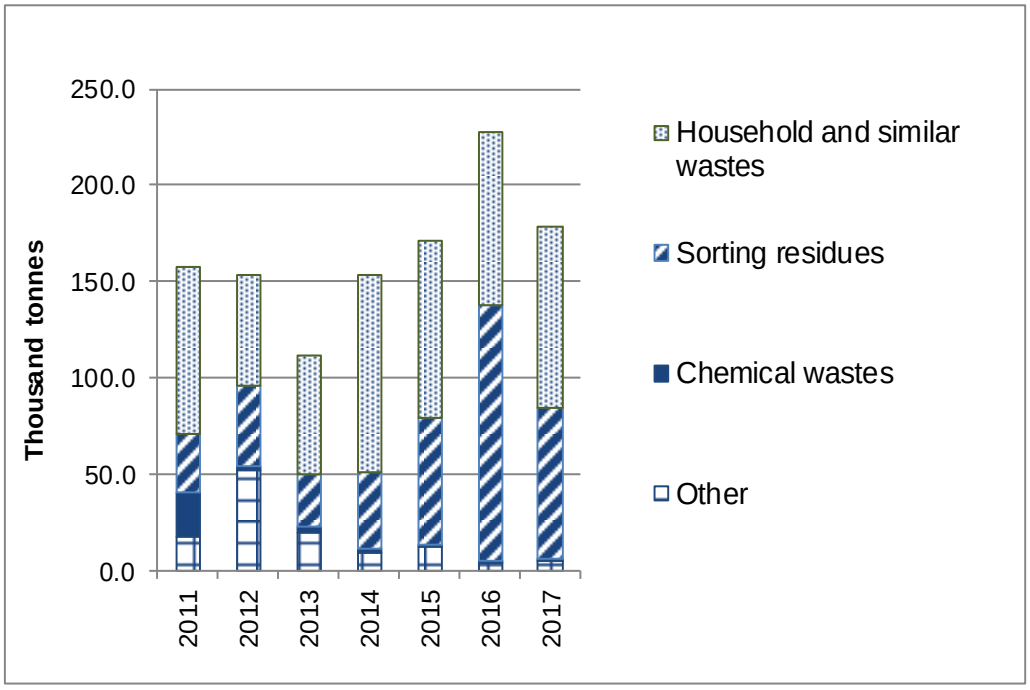
Waste Category	Year												
	2005 (tonnes)	2006 (tonnes)	2007 (tonnes)	2008 (tonnes)	2009 (tonnes)	2010 (tonnes)	2011 (tonnes)	2012 (tonnes)	2013 (tonnes)	2014 (tonnes)	2015 (tonnes)	2016 (tonnes)	2017 (tonnes)
Household and similar wastes	3,211,792	2,971,314	2,857,236	2,438,260	2,191,014	1,938,768	1,730,846	1,470,708	1,354,709	1,317,644	1,172,084	1,255,523	1,230,375
Soils	1,965,986	2,064,745	2,464,810	1,619,925	999,198	943,141	1,202,936	1,217,230	1,198,189	1,132,942	1,239,766	1,027,517	1,257,232
Sorting residues	390,914	441,827	560,868	717,022	708,176	677,837	668,129	868,404	794,755	760,525	907,841	868,012	812,265
Combustion wastes	532,420	758,621	555,924	436,725	353,903	521,327	511,178	453,593	318,714	364,589	333,996	83,765	1,385
Mineral waste from construction and demolition	456,289	411,431	426,459	413,372	100,578	97,696	178,606	95,700	60,527	150,915	61,746	82,855	97,834
Mineral wastes from waste treatment and stabilised wastes	79,464	88,267	164,963	176,634	124,431	143,225	156,868	191,285	134,874	145,413	233,680	250,375	278,938
Other	370,010	341,992	288,818	292,988	209,739	221,232	236,162	181,419	199,870	165,419	179,224	160,454	151,149
Total	**7,006,875**	**7,078,197**	**7,319,077**	**6,094,926**	**4,687,039**	**4,543,226**	**4,684,726**	**4,478,338**	**4,061,638**	**4,037,447**	**4,128,338**	**3,728,501**	**3,829,178**

Table 15. Scottish hazardous waste disposed to landfill by waste category 2005 - 2017

Waste Category	Year												
	2005 (tonnes)	2006 (tonnes)	2007 (tonnes)	2008 (tonnes)	2009 (tonnes)	2010 (tonnes)	2011 (tonnes)	2012 (tonnes)	2013 (tonnes)	2014 (tonnes)	2015 (tonnes)	2016 (tonnes)	2017 (tonnes)
Soils	46,766	80,851	76,120	104,669	73,987	57,530	93,805	102,497	7,509	12,147	27,210	15,859	9,424
Other mineral wastes	22,537	23,115	22,538	23,753	18,960	25,284	17,027	14,777	8,710	16,609	21,721	22,140	23,518
Mineral waste from construction and demolition	1,585	626	6,182	4,724	6,110	139	24,580	15,211	10,418	192	1,637	890	1,790
Mineral wastes from waste treatment and stabilised wastes	191	15	535	661	1,535	1,754	1,033	1,101	845	341	402	178	14,314
Sludges and liquid wastes from waste treatment	0	0	205	428	137	0	357	6,596	9,446	3	120	128	45
Chemical wastes	3	7,842	149	276	115	363	128	36	34	250	34	80	17
Other	245	85	1,149	746	243	5,706	850	378	112	2,098	2,652	2,657	1,301
Total	**71,328**	**112,534**	**106,877**	**135,257**	**101,087**	**90,776**	**137,782**	**140,594**	**37,075**	**31,641**	**53,776**	**41,931**	**50,408**

- Scottish waste disposed by incineration in 2017 was 178,813 tonnes, a decrease of 49,076 tonnes (21.5%) from the 227,889 tonnes disposed in 2016. The largest waste category disposed by incineration in 2017 was Household and similar wastes (94,636 tonnes, 52.9% of total), followed by Sorting residues (78,451 tonnes, 43.9%). Sorting residues disposed by incineration decreased by 53,633 tonnes (40.6%) between 2016 and 2017; most of this decrease is due to these wastes being sent to energy recovery facilities in Europe instead of being disposed in the UK.

Figure 15. Scottish waste disposed by incineration[1] by waste category 2011 – 2017



1. Waste disposed by incineration comprises waste inputs to incineration facilities that have not been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.

Table 16. Scottish waste disposed by incineration[1] by waste category 2011 – 2017

Waste Category	Year						
	2011 (tonnes)	2012 (tonnes)	2013 (tonnes)	2014 (tonnes)	2015 (tonnes)	2016 (tonnes)	2017 (tonnes)
Household and similar wastes	87,153	57,733	61,364	102,750	92,071	90,646	94,636
Sorting residues	29,650	41,596	27,499	39,566	65,783	132,084	78,451
Chemical wastes	23,899	2,463	2,596	2,270	921	835	829
Other	17,161	52,112	19,987	8,775	12,305	4,324	4,897
Total	**157,863**	**153,904**	**111,447**	**153,362**	**171,079**	**227,889**	**178,813**

1. Waste disposed by incineration comprises waste inputs to incineration facilities that have not been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.

DATA USES, FEEDBACK, REVISIONS POLICY, METHODOLOGY, GLOSSARY OF TERMS AND MEASURES, AND REFERENCES

User Statement

Data on WFAS generation and management are collected to monitor policy effectiveness, particularly the commitments in the Zero Waste Plan, Safeguarding Scotland's Resources, and Scotland's Circular Economy Strategy and to support policy development. The data are also used to meet legislative reporting targets on recycling targets set out in the Waste Framework Directive (2008/98/EC) and Commission Decision establishing rules and calculation methods for verifying compliance with the targets set in the Waste Framework Directive (2011/753/EU) and to supply data for the Waste Statistics Regulation (2002/2150/EC). The data are used extensively by local and central government, the waste industry, researchers and the public as well.

Feedback

We welcome feedback on the data from all users including how and why the data is 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: waste.data@sepa.org.uk.

Revisions Policy

SEPA will provide information about any revisions made to published information in this release and the associated datasets. Revisions could occur for various reasons, including when data from third parties is 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 release.

Revisions undertaken since the 2016 publication include:

C&I Dataset: Revised data takes into account site returns amended since the previous publication. Additionally, a refinement to the C&I methodology has been used for sector allocations where a site has returned C&I surveys for a number of year(s) but not the current year, the sector allocation is taken from an average of the other survey(s) rather than applying the standard sector allocation algorithm. This results in a reduction in C&I waste generated of around 2% in each year. Differences in published data to that of the previous publication is shown in Table 17 and Table 18 below.

C&D Dataset: Revised data takes into account site returns amended since the previous publication. The methodology to estimate C&D metal wastes generated has been refined. This results in an increase in C&D waste generated of some 7-10% each year. Differences in published data to that of the previous publication are shown in Table 17 and Table 18 below.

Table 17. Revisions to WFAS Generated 2011 - 2016 from Previous Publication

Year	C&I (tonnes)		C&D (tonnes)		Household (tonnes)	
	Original	Revised	Original	Revised	Original	Revised
2011	4,221,723	4,188,086	5,214,153	5,559,677	2,606,759	2,606,761
2012	3,817,487	3,771,714	3,800,835	4,160,998	2,500,995	2,500,997
2013	3,913,360	3,910,526	4,797,260	5,153,810	2,412,706	2,412,549
2014	3,434,560	3,421,330	4,126,921	4,460,946	2,459,559	2,459,501
2015	3,745,236	3,733,303	5,102,818	5,600,293	2,468,800	2,468,730
2016	3,265,488	3,265,893	5,020,685	5,434,898	2,498,981	2,498,925

Table 18. Revisions to Scottish Waste from all sources managed 2011 - 2016 from Previous Publication

Year	Recycled (tonnes)		Recovered (tonnes)		Disposed (tonnes)		Other Management (tonnes)		Total (tonnes)	
	Original	Revised	Original	Revised	Original	Revised	Original	Revised	Original	Revised
2011	5,708,360	5,764,912	269,479	269,479	4,812,817	4,842,589	0	0	10,790,656	10,876,980
2012	5,017,850	5,073,948	293,009	278,470	4,631,777	4,632,242	0	0	9,942,636	9,984,660
2013	6,165,454	6,067,069	333,435	333,435	4,171,775	4,173,084	0	0	10,670,664	10,573,588
2014	5,441,025	5,393,644	489,553	489,553	4,182,846	4,190,809	62,619	62,619	10,176,044	10,136,624
2015	6,277,690	6,339,364	474,332	474,332	4,306,030	4,299,417	81,393	81,393	11,139,445	11,194,506
2016	6,960,783	6,789,670	530,022	663,925	3,842,747	3,956,390	71,431	71,431	11,404,983	11,481,416

1. 2011 - 2013 data include composted wastes that do not reach the quality standards set by PAS 100/110 in the recycled figures

Methodology

Data is taken from licenced and permitted waste site returns and exempt activity returns submitted to SEPA, from accredited reprocessor returns, from voluntary returns provided by waste sites on the industry source of data provided to SEPA, from voluntary returns provided by aggregate producers on the quantity of waste used to produce an aggregate product, and from all 32 Scottish local authorities using the web-based reporting tool WasteDataFlow.

From 2014, composted wastes that do not reach the quality standards set by PAS 100/110 do not contribute to the waste composted figures. For 2016, such wastes have been considered to be subject to other management, outside of recycling, recovery or disposal. Further details on the methodology used to produce the figures are provided in the annual Waste Data Quality Reports on SEPA's website. Please note that WFAS figures published by countries within the UK may be based on alternative calculation methodologies and as such the figures may not be directly comparable.

As the tonnages of waste managed do not equal the tonnages of waste generated, the recycling and landfill rates referred to in this document (see Table 2 on page 3) are all relative to the total waste managed rather than waste generated. For further information, please refer to the quality report on SEPA's website.

Glossary of terms

BSI PAS 100 / 110 – a national compost benchmark that specifies the minimum requirements for the process of composting, the selection of material from which compost is made, and standards for the compost 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 in Scotland became part of Scottish Government policy in 2011, with 2014 being the first year it has been applied to the household official statistics. Organic wastes recycled that do not meet this standard have not been included in recycling statistics from 2014 onwards (see Old Method and New Method).

Co-incineration facility – an incineration facility in which the main purpose is the generation of energy or production or material products (e.g. cement) and which uses waste as an additional fuel. Note that co-incineration facilities are not eligible to qualify for R1 energy recovery efficiency as specified in the EU Waste Framework Directive.

C&D Waste – waste from the construction and demolition industry

C&I Waste – waste from commercial and industrial sources. Includes waste from business and industrial premises in Scotland, but excludes waste from the construction and demolition industry.

EWC Code – European Waste Catalogue waste code.

Hazardous Waste – waste with hazardous properties which may render it harmful to human health or the environment. Hazardous waste is also called Special Waste in Scotland as defined in the Special Waste Regulation 1996 (and amendments)

New Method – the methodology used from 2014 onwards to calculate the total waste recycled which does not include waste composted and/or anaerobically digested that did not reach the quality standards set by PAS 100/110.

Old Method – the methodology used until 2014 to calculate the total waste recycled which included all waste composted and/or anaerobically digested regardless of PAS quality standard.

Other Management – waste managed by methods outside of recycling, recovery or disposal. For 2016 this comprised exclusively waste composted at facilities not accredited to the BSI PAS 100/110 standard.

Recycling rate –waste recycled as a percentage of all waste managed. Note that total waste generated is not used to calculate the recycling rate as it does not equal total waste managed due to differences in methodologies used to calculate the report the data.

Waste disposed - waste landfilled and waste inputs to incineration facilities that have not been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.

Waste generated - is waste that directly arises from Scottish business' and households during the reporting year. C&I waste generated are estimated using data from licensed/permitted site returns and complex exempt activity return. C&D waste generated are estimated using data from licensed/permitted site returns, complex exempt activity returns and aggregate survey data. Household waste generated is taken from all 32 Scottish local authority returns using the web-based reporting tool WasteDataFlow (WDF). Waste generated does not include waste that does not directly arise from the business, for example waste that is taken in by a business from another business and subsequently disposed is excluded from the waste generation.

Waste disposed by incineration – waste inputs to incineration facilities that have not been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.

Waste landfilled –includes waste from all sources that is disposed of to landfill sites instead of being recycled or recovered. This includes incinerator ash, plus any recycling and composting rejects that occur during collection, sorting or further treatment that are landfilled.

Waste managed - includes all wastes recycled, disposed, recovered and managed by other management within the relevant reporting year.

Waste recovered by incineration – waste inputs to co-incineration facilities and to incineration facilities that incinerate mixed municipal waste and have been demonstrated to meet the R1 energy recovery efficiency specified in the EU Waste Framework Directive.

Waste recycled - includes recyclable materials that have been recycled or reused and also biodegradable materials that have been composted or anaerobically digested. From 2014, 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.

WFAS – waste from all sources. This includes waste from commercial and industrial sources, construction and demolition sources and household sources.