

Waste incinerated in Scotland - 2019

This release provides a summary of all waste incinerated in Scotland for calendar year 2019. It excludes Scottish waste incinerated elsewhere. 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

Waste incinerated in Scotland – 2019 calendar year

- The total quantity of waste incinerated in Scotland in 2019 was 1.23 million tonnes, an increase of 0.52 million tonnes (72%) from 2018, and an increase of 0.82 million tonnes (199%) from 2011.
- The increase was largely due to the Household and similar wastes incinerated, which increased by 131% from 142,946 tonnes in 2018 to 330,368 tonnes in 2019. This increase is consistent with a decrease in the management of these wastes by landfill¹, and corresponds with several new Scottish municipal waste incinerators becoming fully operational throughout this period.
- The top category of waste incinerated in 2019 was Wood waste (490,292 tonnes, 40% of the total), an increase of 18% from 2018 (416,272 tonnes).
- Hazardous waste comprised 0.7% (8,304 tonnes) of waste incinerated in 2019, and was solely composed of hazardous Health care and biological wastes. The amount of Health care and biological wastes incinerated between 2018 and 2019 increased by 8,097 tonnes (3,912%).

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

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This is an Official Statistics publication. These statistics have been produced to the high professional standards defined in the Code of Practice for Official Statistics, which sets out fourteen principles under the pillars of Trustworthiness, Quality and Value. More information on the Official Statistics Code of Practice can be found here: <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>.

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¹ For statistical information about waste landfilled in Scotland, refer to the 2019 Waste landfilled in Scotland official statistics available at <https://www.sepa.org.uk/environment/waste/waste-data/waste-data-reporting/waste-data-for-scotland/>

Table 1. Waste incinerated in Scotland – Summary data 2019

Waste Category	Total incinerated (tonnes)
Acid, alkaline or saline wastes	0
Animal and mixed food waste	410
Animal faeces, urine and manure	87,080
Batteries and accumulators wastes	0
Chemical wastes	0
Combustion wastes	0
Common sludges	0
Discarded equipment (excluding discarded vehicles, batteries and accumulators wastes)	0
Discarded vehicles	0
Dredging spoils	0
Glass wastes	0
Health care and biological wastes	9,448
Household and similar wastes	330,368
Industrial effluent sludges	10,410
Metallic wastes, ferrous	0
Metallic wastes, mixed ferrous and non-ferrous	0
Metallic wastes, non-ferrous	0
Mineral waste from construction and demolition	0
Mineral wastes from waste treatment and stabilised wastes	0
Mixed and undifferentiated materials	28
Other mineral wastes	0
Paper and cardboard wastes	2
Plastic wastes	1
Rubber wastes	16,424
Sludges and liquid wastes from waste treatment	10,583
Soils	0
Sorting residues	271,993
Spent solvents	0
Textile wastes	0
Used oils	0
Vegetal wastes	0
Waste containing PCB	0
Wood wastes	490,292
Total	1,227,039

Data and Trends

Waste Incinerated in Scotland

- In 2019, 1.23 million tonnes of waste were incinerated in Scotland across 24 permitted incineration facilities. This was an increase of 0.52 million tonnes (72%) from 2018. This increase is consistent with the longer term incineration trend, with 0.82 million tonnes (199%) more waste incinerated in Scotland than in 2011 (see Figure 1 below).
- The increase was due to Household and similar wastes incinerated, which rose by 131% from 142,946 tonnes in 2018 to 330,368 tonnes in 2019, and an increase in the incineration of Sorting residues which rose from 31,858 tonnes in 2018 to 271,993 tonnes in 2019 (see Figure 3 below).
- It should be noted that a significant proportion of the increased Sorting residues wastes were generated from the treatment of Household and similar wastes. For example, one new Scottish incinerator recorded 93,541 tonnes of Sorting residues incinerated following on-site treatment of waste; however 95% of wastes treated at that site during 2019 were Household and similar wastes. Taken together, the Household and similar wastes and Sorting residues comprised nearly half (602,361 tonnes, 49%) of the total waste incinerated in Scotland in 2019 and increased by 427,557 tonnes compared with 2018. This increase is consistent with a decrease of 430,463 tonnes in the management of Household and similar wastes by landfill², and corresponds with several new Scottish municipal waste incinerators becoming fully operational throughout this period.
- The rise in incineration of Municipal wastes such as Household and similar wastes is likely the start of an increasing trend as Scottish local authorities and waste management companies divert waste from landfill ahead of the ban of biodegradable municipal waste to Scottish landfills in 2025.
- Wood wastes was the largest single category of waste incinerated in Scotland in 2019 (490,292 tonnes), comprising over one third (40%) of all waste incinerated. Of the Wood wastes incinerated, 44% originated in the UK outwith Scotland (data not shown). This compares with 4% in 2011.
- There were 8,304 tonnes of hazardous waste incinerated in Scotland in 2019 (see Figure 3 below), which was solely composed of Health care and biological wastes and amounted to 0.7% of all waste incinerated in Scotland. The amount of hazardous waste incinerated between 2018 and 2019 increased by 223% (5,732 tonnes). The majority of this increase was due to one incinerator site, fully operational for the first time during 2019, which incinerated 7,057 tonnes of Health care and biological wastes.
- The increase in incineration of Healthcare and biological wastes was consistent with an increase of 28% between 2018 and 2019 for the input of these wastes to Scottish waste facilities (data not shown). This is due to a change in management following the closure of the main site that managed these wastes in 2018.
- In addition to the amounts of waste incinerated, the statistics also tell us about the efficiency of incineration. Municipal incinerators are classified dependent on their energy efficiency with those failing to meet the R1 energy efficiency standard classed as incineration by disposal rather than incineration by recovery. In 2019, nearly half the waste incinerated in Scotland was recovered by co-incineration (49%), with the remaining 51% incinerated by disposal. There was no incineration recorded as incineration by recovery in 2019 as there are currently no municipal waste incinerators in Scotland that have applied to become accredited to the R1 energy efficiency standard. The percentage of waste incinerated by recovery (R1 or co-incineration) processes is a decrease of 26.0 percentage points from 2018.

² For statistical information about waste landfilled in Scotland, refer to the 2019 Waste landfilled in Scotland official statistics available at <https://www.sepa.org.uk/environment/waste/waste-data/waste-data-reporting/waste-data-for-scotland/>

Figure 1. Waste incinerated in Scotland by waste category 2011 - 2019

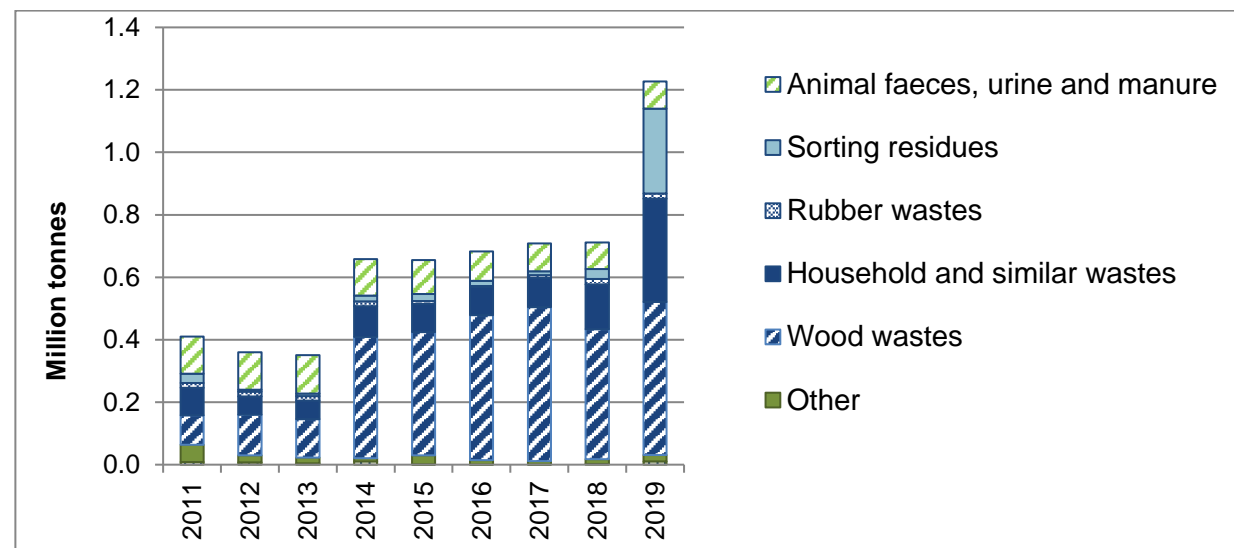


Table 2. Waste incinerated in Scotland by waste category 2011 – 2019

Waste Category	Year								
	2011 (tonnes)	2012 (tonnes)	2013 (tonnes)	2014 (tonnes)	2015 (tonnes)	2016 (tonnes)	2017 (tonnes)	2018 (tonnes)	2019 (tonnes)
Wood wastes	94,477	130,449	123,121	388,394	394,199	464,310	493,081	416,272	490,292
Household and similar wastes	87,693	58,759	59,034	98,041	90,837	90,646	94,636	142,946	330,368
Sorting residues	29,648	6,270	7,578	17,836	22,912	16,582	12,043	31,858	271,993
Animal faeces, urine and manure	119,309	120,509	123,748	117,431	108,194	94,685	89,009	85,320	87,080
Rubber wastes	15,235	14,539	15,025	16,183	8,594	2,940	8,039	17,511	16,424
Sludges and liquid wastes from waste treatment	8,745	7,150	4,082	10,410	1,476	82	112	2,307	10,583
Other	54,952	22,457	18,557	10,211	28,584	13,980	11,244	15,290	20,299
Total	410,059	360,132	351,145	658,506	654,797	683,225	708,164	711,504	1,227,039

Figure 2. Waste incinerated in Scotland by incineration method 2011 - 2019

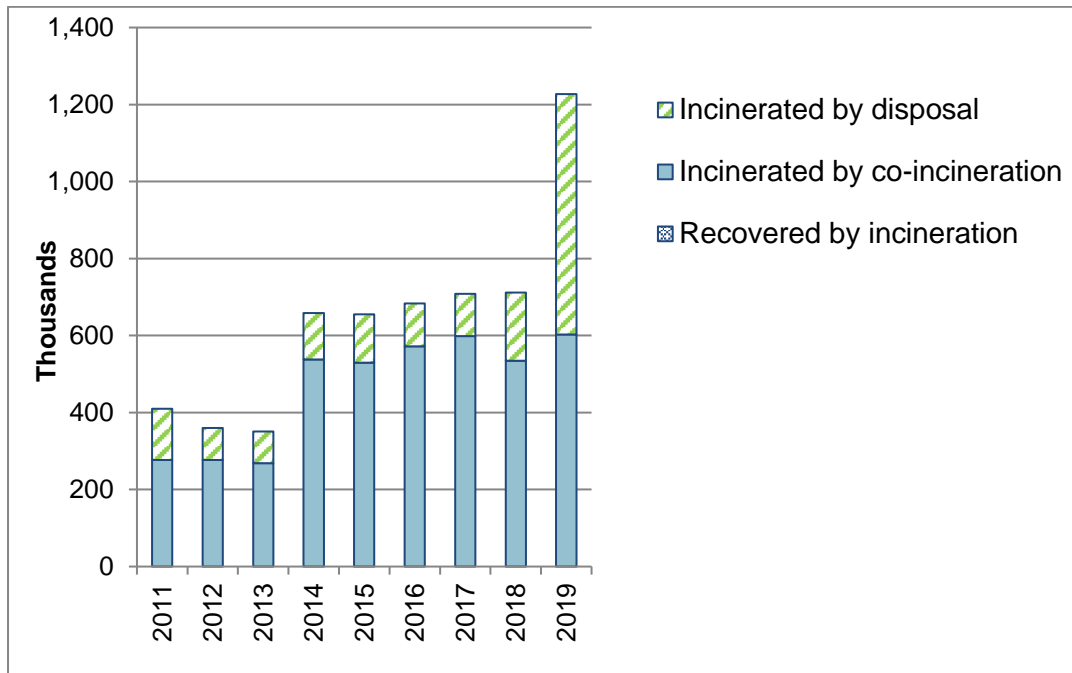


Table 3. Waste incinerated in Scotland by incineration method 2011 - 2019

Year	Recovered by incineration	Incinerated by co-incineration	Incinerated by disposal	Total
2011	0	276,869	133,190	410,059
2012	0	276,899	83,234	360,132
2013	0	268,295	82,850	351,145
2014	0	537,817	120,689	658,506
2015	0	529,303	125,494	654,797
2016	0	572,008	111,217	683,225
2017	0	598,944	109,220	708,164
2018	0	534,357	177,147	711,504
2019	0	602,672	624,367	1,227,039

Figure 3. Hazardous waste incinerated in Scotland 2011 – 2019

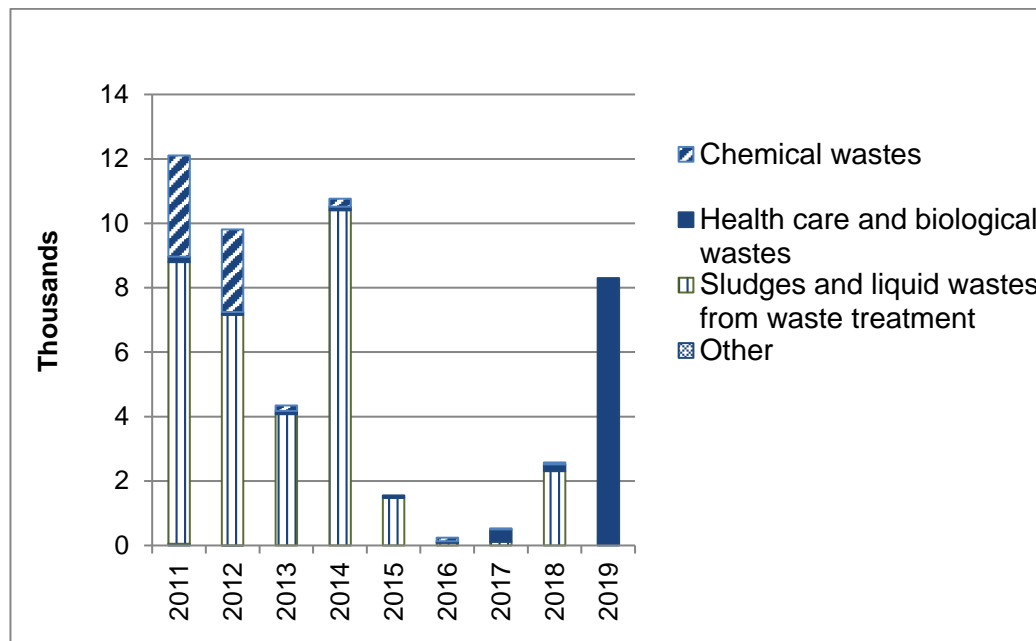


Table 4. Hazardous waste incinerated in Scotland 2011 – 2019

Waste Category	Year								
	2011 (tonnes)	2012 (tonnes)	2013 (tonnes)	2014 (tonnes)	2015 (tonnes)	2016 (tonnes)	2017 (tonnes)	2018 (tonnes)	2019 (tonnes)
Health care and biological wastes	172	90	94	107	82	49	387	207	8,304
Sludges and liquid wastes from waste treatment	8,745	7,150	4,082	10,410	1,476	82	112	2,307	0
Chemical wastes	3,134	2,567	172	244	0	114	33	58	0
Other	52	3	0	0	0	0	0	0	0
Total	12,103	9,811	4,348	10,761	1,558	245	532	2,572	8,304

Data uses, feedback, revisions policy, methodology, glossary of terms and measures, and references

User Statement

Data on waste generation and management is collected to monitor policy effectiveness, particularly the commitments in the Scottish Government's [Making Things Last – A Circular Economy Strategy for Scotland](#) and to support policy development. The data is also used to supply data for the Waste Statistics Regulation (2002/2150/EC). The data is used extensively by local and central government, the waste industry, researchers and the public.

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 this release and any 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.

There were no revisions to 2018 waste incinerated in Scotland data since the last statistical publication.

Methodology

Data is taken from licensed/permitted site returns or reports submitted to SEPA. Further details on the methodology used to produce the figures are provided in the annual Waste Data Quality Reports on [SEPA's web site](#).

Glossary of terms

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).

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

Waste incinerated by co-incineration – wastes used principally as a fuel and incinerated at an incineration facility in which the main purpose is the generation of energy or production of material products (e.g. cement) and which uses waste as an additional fuel.

Waste incinerated by disposal - wastes incinerated at an incineration facility where the energy efficiency has not been demonstrated to meet the R1 criteria specified in the EU Waste Framework Directive (Directive 2008/98/EC).

Waste incinerated by recovery - wastes used principally as a fuel to generate energy and incinerated at an incineration facility where the energy efficiency has been demonstrated to meet the R1 energy efficiency criteria specified in the EU Waste Framework Directive (Directive 2008/98/EC).

Waste recovered by incineration - wastes incinerated by co-incineration and waste incinerated by recovery.

Waste incinerated –WFAS that is incinerated in Scotland including waste incineration by disposal and waste incineration by recovery.