Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

2020 WASTE DATA QUALITY REPORT

WASTE LANDFILLED IN SCOTLAND

7th December 2020

Every day SEPA works to protect and enhance Scotland's environment, helping communities and businesses thrive within the resources of our planet.

We call this **One Planet Prosperity**



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Table of Contents

Table of Contents 2

Introduction 3

Revisions Policy 4

Progress against targets 5

Introduction 5

Biodegradable municipal waste to be sent to landfill 6

Waste Landfilled in Scotland 7

Introduction 7

Waste disposed via landfill 7

Further information 9

Appendix 1 10

European Waste Catalogue 10

European Waste Catalogue List of Waste (EWC 2000) 10

European Waste Catalogue for Statistics (EWC-STAT) 10

Appendix 2 12

Glossary 12

Appendix 3 13

Acronyms 13

Version Control 14

Introduction

This report describes the methodologies to produce summary waste landfilled in Scotland data for the 2020 calendar year. The report should be used alongside the 2020 Waste landfilled in Scotland official statistics and associated data tables

The 2020 data are presented as follows:

The Waste landfilled in Scotland and associated data tables are presented in a summary and commentary document. This narrative describes the major trends and provides an interpretation of the data. They are located at http://www.sepa.org.uk/environment/waste/waste-data/waste-data-reporting/waste-data-for-scotland/.

- Scotland's Environment Waste Discover Data tool presents the waste from all sources (WFAS) in an interactive and visual format and is found on Scotland's Environment web at http://www.environment.scotland.gov.uk/get-interactive/data/waste-from-all-sources/. This tool covers the total waste managed, whether it be waste from households, waste from construction and demolition, or waste from commerce and industry. This tool includes the landfill dataset, and includes waste generated and waste management methods including waste recycled, incinerated, composted as well as waste landfilled.

- It should be noted that to provide consistency across the datasets for the WFAS Discover tool, additional years of waste generation and management data, including landfill data, are updated at the same time. The statistical release and excel landfill data tables are released about six months before the annual update of the WFAS Discover tool. This is because the landfill data comes from one discrete dataset and can be prepared and published earlier.

Data sources referred to at various parts of the document are listed below. The agency that carries out the analysis of the dataset is provided in brackets.

- Scottish licensed/permitted site returns (SEPA)

In 2020, 41 permitted landfill sites contributed to the landfill. A copy of the return form can be downloaded from the SEPA website[1]. There was a 96% return rate for operational landfill sites in 2020.

The returns dataset is managed and checked by SEPA. The return form consists of Table B (Waste inputs to site), Table C (Waste treated on site), Table C4 (Waste landfilled or incinerated after treatment on-site – landfill or incineration sites only) and Table D (Waste sent off site).

SEPA carried out quality assurance of the dataset that included comparing individual site data with previous quarters/years, consistency of EWC codes with the description of waste provided by the operator and missing data. Submissions were collected, uploaded and checked by SEPA staff with the assistance of various automation and visual tools throughout the process.

Appendix 1 provides a brief summary of the coding of waste using European Waste Catalogue (EWC) and European Waste Catalogue for Statistics (EWC-STAT), which are used throughout this document.

Appendix 2 provides a glossary of terms.

Appendix 3 provides a list of acronyms.

Revisions Policy

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.

Where there have been changes in methodology for the waste data tables, the complete dataset is to be revised for all years to ensure that comparisons between years are valid.

[1] http://www.sepa.org.uk/environment/waste/waste-data/guidance-and-forms-for-operators/licensed-and-permitted-sites/

Progress against targets

Introduction

The Scottish Government's Making Things Last – A Circular Economy Strategy for Scotland sets out the Scottish Government's vision for a zero waste society. This vision describes a Scotland where **all** waste is seen as a resource, where waste is minimised, where valuable resources are not disposed of in landfills, and where most waste is sorted, leaving only limited amounts to be treated.

This policy document sets a number of objective and measurable targets for tracking progress against the objectives specified in the plan. Some of these targets are derived from EU directives such as the Waste Framework Directive. A summary of the targets related to landfilling of waste in Scotland are provided in Table 1 below.

In 2012, the Scottish parliament passed the Waste (Scotland) Regulations 2012[2], which included a ban on biodegradable municipal waste (BMW) being disposed to landfill. The ban was expected to take effect from January 2021, but in September 2020, it was announced that the ban had been delayed until 2025.

Table 1 Scottish Government Policy Targets related to landfilling of waste in Scotland

Target	Year	Set by
No more than 1.26 million tonnes of biodegradable municipal waste to be sent to landfill	2020	EU
No more than 5% of all waste to go to landfill	2025	Scottish Government
No biodegradable waste disposed to landfill	2025	Scottish Government

[2] https://www.legislation.gov.uk/ssi/2012/148/contents/made

Biodegradable municipal waste to be sent to landfill

Biodegradable Municipal Waste (BMW) is the fraction of municipal waste that will degrade within a landfill, giving rise to landfill gas emissions, primarily methane. It includes, amongst other materials, food waste, green waste, paper and cardboard.

The BMW of waste sent to landfill is calculated based on the EWC code of the waste. A percentage biodegradability has been determined for all waste sent to landfill, ranging from 100% for materials such as paper and food, 50% for materials such as textiles and furniture, and 0% for inert materials like tyres and metals.

It should be noted that this measure differs from that for the 2025 BMW landfill ban. The 2025 landfill ban applies to the whole amount of waste containing BMW, not just the BMW fraction. For example, 100 tonnes of 20 03 01 coded waste, which has a biodegradability factor of 63%, will contribute 63 tonnes of BMW landfilled for the 2020 BMW landfill target. However, the 2025 landfill ban for municipal BMW will apply to the entire 100 tonnes of this waste.

For all waste landfilled the percentage biodegradability factor was applied to the tonnes of waste for each EWC code. This gives the total biodegradable waste landfilled by waste type. This was then split down further to provide data on municipal and non-municipal biodegradable waste. Municipal waste was identified as all waste coded under EWC Chapter 20, selected codes under Chapter 15, and Chapter 19 where the source prior to treatment is deemed to be municipal. Conversely, non-municipal waste is determined to be the waste not coded according to these criteria.

In previous years, for chapter 19 sorting residues, the amount of municipal waste that contributed to the sorting residues landfilled was estimated from the proportion of net municipal waste and net non-municipal waste inputs from sites across Scotland that produced the sorting residue wastes. This was not possible for 2020, as the complete site returns dataset was not available following the cyber-attack on SEPA system on 24th December 2020. The amount of BMW from sorting residues landfilled in 2020 was estimated using the ratio of BMW from sorting residues landfilled in 2019 to the total amount of sorting residues landfilled in 2019. This ratio was 34.5%. This ratio was applied to the total amount of 653,922 tonnes of sorting residues landfilled in 2020, which resulted in the amount of 225,559 tonnes of BMW from sorting residues landfilled in 2020.

Waste Landfilled in Scotland

Introduction

This section describes how we report the disposal of wastes via landfill.

Waste type descriptions are separated into non-hazardous/hazardous using European Waste Catalogue (EWC) codes.

Waste disposed via landfill

Data on waste disposed to landfill in Scotland was taken from the licensed/permitted site returns dataset.

The data for landfilled in Scotland was taken from Tables B (Waste inputs to site) and C4 (Waste landfilled or incinerated after treatment on-site – landfill or incineration sites only) in the licensed/permitted site returns, with the management method ‘landfill’. Along with the standard data checks detailed in Section 0, we also checked the correct use of ‘landfill’ as a management method in Tables B and C4. Information from Table B on the origin of waste was used to split data into Scottish and non-Scottish waste landfilled in Scotland.

There were 41 Scottish landfill sites included in the analysis for 2020. The number of landfill sites that are actively disposing of waste to landfill varies from year to year. Table 2 below shows the number of active landfill sites that have contributed to the landfill data from 2005 to 2020. The number of landfill sites has decreased steadily between 2005 and 2020, consistent with the decrease of waste landfill from 7.1 million tonnes in 2005 to 2.6 million tonnes in 2020.

Table 2 The number of landfill sites that have contributed to the landfill data

Year	Number of Landfill Sites
2005	129
2006	117
2007	110
2008	83
2009	81
2010	74
2011	66
2012	65
2013	68
2014	70
2015	62
2016	57
2017	55
2018	49
2019	45
2020	41

Further information

Contacting Us

If you have any queries on the contents of this document or the accompanying waste data tables, please contact the Dataflows Unit by email, phone or in writing.

By Email

waste.data@sepa.org.uk

Note: During the COVID 19 emergency SEPA offices have been closed. Please refer all correspondence to the email address above.

By Phone

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Appendix 1

European Waste Catalogue

Throughout this document reference is made to both the European Waste Catalogue (EWC) list of wastes and European Waste Catalogue for Statistics (EWC-STAT). A brief explanation of each is given below, along with links to further information.

European Waste Catalogue List of Waste (EWC 2000)

The EWC 2000 is a harmonised, non-exhaustive list of waste types established by the European Commission (2000/532/EC). The list is used to categorise waste based on a combination of what they are, and the process or activity that produces them.

The full EWC 2000 list and further information is available here:

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2000D0532:20020101:EN:PDF

The list is divided into 20 chapters, most of which are industry-based, although some are based on materials and processes. Each chapter is represented by a two-digit code between 01 and 20 and comprises one or more subchapters. Individual waste types are detailed in the subchapters and are assigned a six-digit code that comprises two digits for the chapter, two for the subchapter and two specific to the waste type.

Hazardous wastes are signified by entries where the EWC code is marked by an asterisk (*).

The use of EWC codes to describe waste on waste transfer notes in Scotland has been statutory since April 2004. The majority of statutory waste data returns received by SEPA, including licensed/permitted site returns, exempt activity returns and special waste consignment notes require waste to be classified according to the EWC 2000.

European Waste Catalogue for Statistics (EWC-STAT)

The EWC-Stat is a (mainly) substance-oriented statistical classification of waste established by the European Commission (2004/574/EC). The EWC-STAT contains 13 categories, each represented by a two-digit code between 01 and 13. These are subdivided into individual waste types.

A table of equivalence allows wastes coded in the EWC 2002 to be converted into the EWC-Stat. However, because of the way the coding system operates, it is not possible to do the reverse conversion. The table of equivalence and further information is available here:

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:253:0002:0041:EN:PDF

Appendix 2

Glossary

BMW	The biodegradable fraction of Municipal Waste – waste that is capable of undergoing anaerobic or aerobic decomposition, such as; food and garden waste, and paper and cardboard.
EWC code	European Waste Catalogue 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).
Municipal BMW	BMW that originates from municipal sources. All wastes of EWC Chapter 20 and selected wastes of EWC Chapter 19 and Chapter 15 are considered municipal sources.
Municipal solid wastes	A collective term commonly used to describe household and similar commercial, industrial and institutional wastes
WFAS	Waste from all sources. This includes waste from commercial and industrial sources, construction and demolition sources as well as from household sources.
Waste Landfilled	WFAS that is disposed of to landfill.

Appendix 3

Acronyms

BMW	Biodegradable Municipal Waste
C&D	Construction and Demolition
C&I	Commercial and Industrial
EWC	European Waste Catalogue
EWC-STAT	European Waste Catalogue for Statistics
SEPA	Scottish Environment Protection Agency
WFAS	Waste From All Sources

Version Control

Version	Description	Date
1	Initial published report	29/9/2020

For information on accessing this document in an alternative format or language please contact SEPA by email at equalities@sepa.org.uk

If you are a user of British Sign Language (BSL) the Contact Scotland BSL service gives you access to an online interpreter enabling you to communicate with us using sign language.

http://contactscotland-bsl.org/

www.sepa.org.uk