



Waste Data Digest 5

WDD5

2003 and 2003/2004 data



Contents

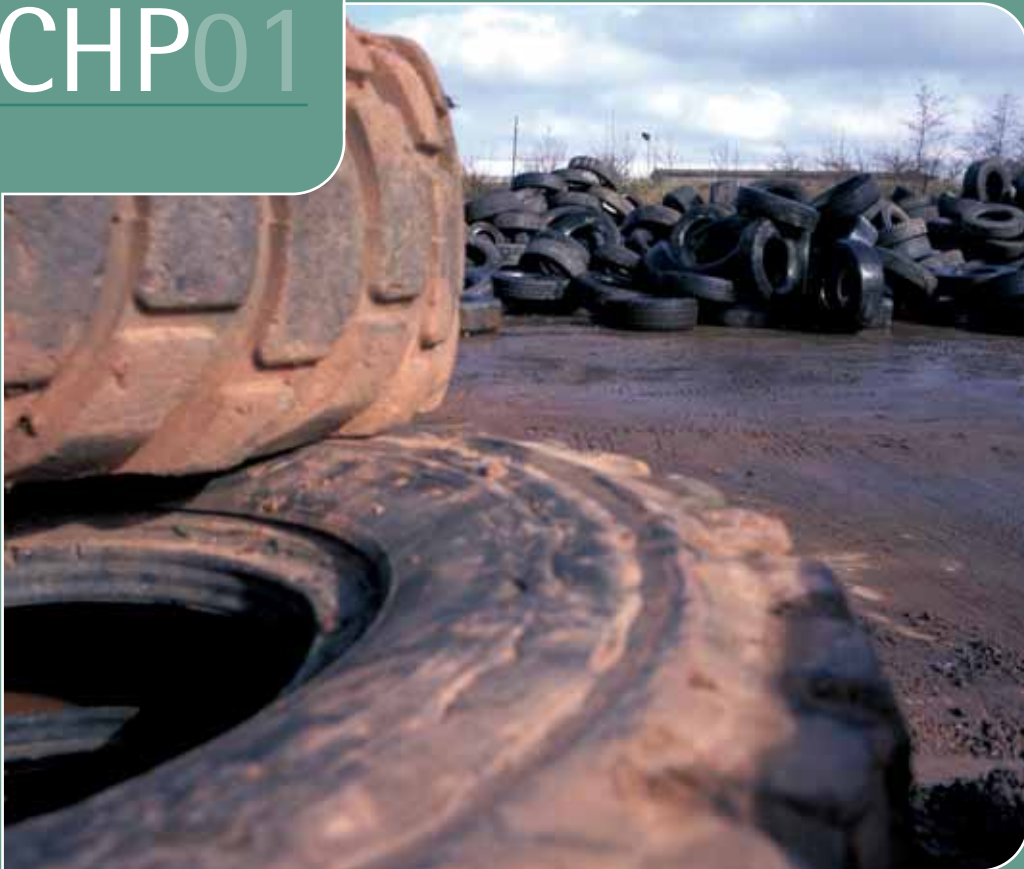
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Introduction



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Introduction

The Scottish Environment Protection Agency (SEPA) is committed to promoting sustainable waste management practices throughout Scotland. Accurate, up-to-date waste management data are required to aid policy development, to monitor policy change, to monitor regulatory activity, to implement the National Waste Strategy, and to meet internal and external reporting requirements.

This fifth Waste Data Digest published by SEPA details data collected by, or on behalf of, SEPA on controlled waste in Scotland. Data are reported, as far as possible, for the 2003 calendar year. However, in some instances, only financial year information is available and this is reported for 2003/2004. The data are presented in five chapters dealing with arisings, recovery, disposal, waste related operational activities, and trends and conclusions.

The annual Local Authority Waste Arisings Survey (LAWAS) remains SEPA's main source of data on municipal waste. The LAWAS is a voluntary survey completed by all 32 Scottish local authorities at the request of SEPA. It is a key tool for determining local authority waste arisings in Scotland and for collating information on the waste management activities carried out by, or on behalf of, Scottish local authorities.

SEPA collects information on non-municipal waste from two main sources. First, details of the waste dealt with by all licensed waste management sites are reported quarterly by operators using SEPA's waste management licence site return form. Data from the form are recorded in SEPA's waste data strategy database. Second, information from special waste consignment notes received by SEPA is recorded in its special waste database.

In 2004, SEPA initiated a national survey of commercial and industrial waste producers. This survey sought data on waste arisings, recycling and recovery and disposal to provide, for the first time, a comprehensive picture of commercial and industrial waste in Scotland. The findings will be published on SEPA's website in summer 2005.

As part of the development of a framework to address non-municipal wastes, National Best Practice Projects for industry sectors were introduced in April 2004. The aim of these projects is to obtain data on waste produced in specific industrial sectors and to help waste producers identify and develop the most sustainable option for wastes produced by their business. The scope of existing Priority Waste Stream Projects is being reviewed and, where appropriate, they will be incorporated within the extended National Best Practice Project framework.

Waste data information is available on SEPA's website at www.sepa.org.uk/nws/data/index.htm

Please note that where the sum of the figures in a table does not equal the total this is due to rounding.

A glossary of technical terms and an explanation of the acronyms used in this Data Digest can be found in Appendices I and II, respectively.

The next data digest, Waste Data Digest 6, reporting on 2004 and 2004/2005 waste data, will be published in spring 2006.



Waste Arisings

Local Authority Waste Arisings

Composition of Household Waste

Non-Municipal Waste Arisings

Packaging and packaging waste

Hazardous and special wastes

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Waste Arisings

Local Authority Waste Arisings

The data presented in this section are based on the returns provided for the Local Authority Waste Arisings Survey (LAWAS) 2003/2004. All 32 Scottish local authorities responded to SEPA's 2003/2004 LAWAS.

In 2003/2004, a total of 3.32 million tonnes of controlled wastes was collected by, or on behalf of, local authorities in Scotland. A breakdown of this total by waste type is shown in Table 1, and by individual local authority in Figure 1 and Table 2.

Table 1 – Total controlled waste collected by, or on behalf of, Scottish local authorities 2003/2004

Waste type	Tonnes	%
Waste collected for disposal		
Household*	2,015,578	60.76
Civic amenity sites†	359,875	10.85
Commercial sources	452,428	13.64
Industrial sources	29,987	0.90
Other non-household sources‡	62,473	1.88
Total	2,920,341	88.04
Waste collected for recycling and composting		
Household	330,396	9.96
Non-household§	66,283	2.00
Total	396,678	11.96
Total arisings¶	3,317,019	100.00

* For many local authorities, the mainstream household waste collection service is a mixed collection and includes household, commercial and industrial wastes. For the purpose of the LAWAS, local authorities provided the data for household, commercial and industrial waste from this collection round separately. In some cases, the percentage breakdown was estimated by the local authority

† Civic amenity sites waste includes both household and commercial waste

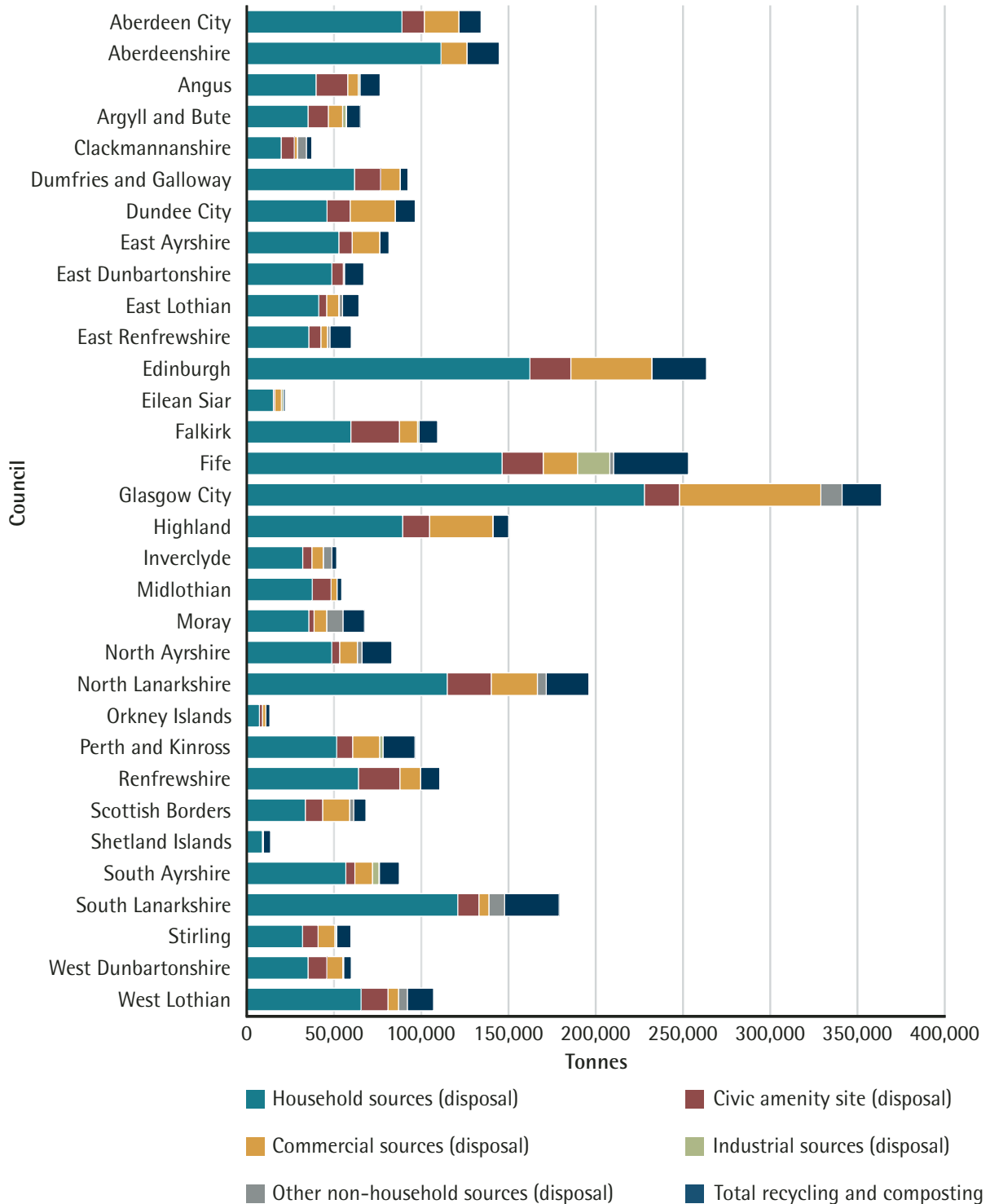
‡ Other non-household waste includes: local authority parks and gardens waste; beach cleaning waste; clearance of fly tipped waste; abandoned vehicles; and waste not otherwise specified

§ Includes incinerator residues

¶ Waste arisings do not include home composting tonnages

Waste Arisings

Figure 1 - Controlled waste collected by, or on behalf of, individual Scottish local authorities 2003/2004



Waste Arisings

Table 2 – Controlled waste collected by, or on behalf of, individual Scottish local authorities 2003/2004

Local authority	Number of households*	Total local authority waste arisings (tonnes)	Waste collected for disposal (tonnes)					Waste collected for recycling and composting (tonnes)		Household waste produced per household (tonnes)
			Household	Civic amenity site†	Commercial	Industrial‡	Other non-household	Household	Non-household§	
Aberdeen	106,754	133,688	88,536	12,778	19,769	0	0	10,799	1,889	1.05
Aberdeenshire	100,738	144,203	110,888	0	14,797	0	0	16,382	2,136	1.26
Angus	50,010	76,032	39,434	18,126	6,031	928	0	6,890	4,634	1.29
Argyll and Bute	45,123	64,746	34,854	11,585	8,221	1,891	285	5,017	2,893	1.14
Clackmannanshire	22,054	37,017	19,501	7,487	1,762	0	5,188	2,776	303	1.35
Dumfries and Galloway	68,963	91,993	61,447	14,900	11,157	0	0	4,198	256	1.17
Dundee	74,012	96,109	45,713	13,199	25,747	0	0	8,341	3,110	0.91
East Ayrshire	53,654	81,078	52,473	7,595	15,743	0	0	3,985	1,282	1.19
East Dunbartonshire	43,092	68,718	48,473	6,533	2,636	0	0	9,995	1,081	1.51
East Lothian	40,834	63,975	41,019	4,500	6,913	326	1,870	7,994	1,353	1.31
East Renfrewshire	37,816	59,515	35,300	6,945	3,699	0	1,397	11,469	763	1.42
Edinburgh	219,000	262,585	161,657	23,383	46,260	0	0	25,590	5,695	0.96
Eilean Siar	13,751	21,794	15,088	805	3,784	1,017	0	176	924	1.17
Falkirk	63,570	108,898	59,364	27,706	10,363	916	0	8,970	1,580	1.51
Fife	160,432	252,262	145,769	23,523	19,559	18,494	2,110	36,883	5,923	1.29
Glasgow	290,381	362,608	227,099	20,000	80,836	0	12,148	15,875	6,650	0.91
Highland	102,546	149,559	88,956	15,339	36,143	0	47	8,155	919	1.10
Inverclyde	39,675	51,273	31,830	5,250	6,493	0	4,921	2,206	573	0.99
Midlothian	33,465	54,103	37,314	10,747	3,361	0	0	2,506	175	1.51
Moray	40,897	67,159	35,302	3,062	7,164	0	9,342	7,337	4,952	1.12
North Ayrshire	64,600	82,752	48,431	4,514	10,129	0	2,652	16,345	681	1.07
North Lanarkshire	137,663	195,337	114,387	25,189	26,382	0	5,038	22,139	2,202	1.17
Orkney Islands	9,508	13,050	7,093	1,763	1,917	0	0	2,255	22	1.17
Perth and Kinross	64,840	95,977	51,245	9,099	15,441	1,930	0	15,917	2,345	1.18
Renfrewshire	80,537	110,133	63,677	23,710	11,791	0	0	10,926	29	1.22
Scottish Borders	52,711	67,938	33,304	9,910	15,400	0	2,358	6,372	594	0.94
Shetland Islands	10,095	13,570	8,780	0	453	0	0	3,686	505	1.23
South Ayrshire	52,446	87,033	56,470	5,149	10,094	3,664	295	4,507	6,854	1.26
South Lanarkshire	134,611	178,373	120,409	12,124	5,665	0	8,976	30,499	700	1.21
Stirling	37,654	59,384	31,712	8,884	9,559	821	223	7,238	944	1.27
West Dunbartonshire	43,561	59,589	34,865	10,727	9,153	0	520	3,617	708	1.13
West Lothian	69,163	106,600	65,188	15,343	6,006	0	5,103	11,351	3,609	1.33
Total	2,364,156	3,317,051	2,015,578	359,875	452,428	29,987	62,473	330,396	66,284	1.14

* Provided by Audit Scotland

† Civic amenity sites waste includes both household and commercial waste

‡ Due to change in definition, road planings are no longer included in the industrial total

§ Includes incinerator residues

Waste Arisings

Composition of Household Waste

To develop an effective strategy for household waste, it is important to gather accurate information and to identify trends in the changes in the composition of household waste. This can change according to demographic, geographic and socio-economic factors in each local authority, and these changes can be both seasonal, and long-term.

SEPA has produced a draft national municipal waste analysis methodology in response to requests from a number of the Scottish local authorities for guidance in conducting the analysis of municipal waste. This methodology has been drawn up in conjunction with a study group with members from the Convention of Scottish Local Authorities (COSLA), the Scottish Executive, private industry and academia. Consultation on the methodology has taken place and the Scottish Executive will publish the guidance in summer 2005 as an appendix of the Strategic Waste Fund guidance.

The methodology has primarily been developed to give a robust and quantitative approach to the analysis of household kerbside waste. However, information to guide local authorities on the collection and analysis of waste from other parts of the municipal waste stream has also been included.

The LAWAS 2003/2004 asked local authorities if a compositional analysis of household waste had been carried out during 2003/2004. It also asked about the methods used to carry out this analysis. Local authorities were asked to report the results as percentage by weight according to the breakdown by material as shown in Table 3. Five of the 32 local authorities had carried out an analysis of household waste but only four actually reported their results because the fifth considered the outcome inconclusive. The results from the analyses reported by the four local authorities are shown in Table 3.

Table 3 – Household waste composition – LAWAS 2003/2004

Waste category	Range of analyses (%)	Average (%)
Paper and card	20.60–30.19	24.96
Plastic film	2.88–6.01	4.23
Dense plastic	5.20–8.32	6.26
Textiles	2.43–8.30	4.78
Other combustible	3.82–12.80	8.60
Other non-combustibles	0.20–4.31	2.32
Glass	5.20–9.81	7.24
Putrescibles	11.82–38.08	28.09
Ferrous metals	2.73–7.90	4.31
Non-ferrous metals	0.57–3.02	1.44
Electrical/electronic equipment	0.33–0.66	0.50
Potentially hazardous household waste	0.14–0.50	0.32
Fines	1.63–14.46	7.65

Waste Arisings

Non-Municipal Waste Arisings

Non-municipal waste covers a broad spectrum of waste types generated by individual producers, ranging from sole traders and small commercial businesses to large industrial complexes.

Gathering data on non-municipal waste arisings in Scotland is difficult. There is currently no requirement for organisations to report non-municipal waste arisings to SEPA. To address this data gap, SEPA commissioned a pilot national survey of commercial and industrial waste producers in 2004. The main objective of this survey is to establish both the amount of waste produced in Scotland in 2003 and how it was managed. To achieve this, approximately 12,500 organisations throughout Scotland were asked to complete and return a purpose-designed questionnaire. Questionnaires were sent to all organisations in Scotland employing 50 people or more and a selection of smaller organisations. It is not possible to give a figure for total commercial and industrial waste arisings for Scotland in 2003 in this Data Digest because the survey will not be completed until May 2005. However, the findings will be published in autumn 2005 and made available on SEPA's website.

The data gathered from the commercial and industrial waste producer survey for Scotland will complement data on specific waste streams and industry sector specific wastes gathered through SEPA's Priority Waste Stream Projects and National Best Practice Project programmes.

As part of the development of a framework to address non-municipal wastes, National Best Practice Projects for industry sectors are being set up. The aim of these projects is to obtain data on waste produced in specific industrial sectors and to help waste producers identify and develop the most sustainable option for wastes produced by their business. In partnership with other key stakeholders, including industry and the waste management sector, SEPA will carry out technical studies into the specific waste types using an industry sector approach. High, medium and low priority wastes have been identified based on, for example, the quantity of waste, hazardous material content, recovery value and legislative requirements. The scope of existing Priority Waste Stream Projects is being reviewed and, where appropriate, they will be incorporated within the extended National Best Practice Project framework. Information on National Best Practice Projects is available at www.sepa.org.uk/nws/data/index.htm

Data on specific waste streams for 2003 are presented in the following sections.

Packaging and packaging waste

As a result of the Producer Responsibility Obligations (Packaging Waste) Regulations 1997, SEPA handles considerable data relating to packaging and packaging waste.

In 2003, approximately 10.1 million tonnes of packaging waste were produced in the UK. Of this, it was estimated that approximately 1 million tonnes arose in Scotland. Table 4 provides a breakdown of packaging flowing into the UK waste stream in 2003.

Table 4 – Total tonnage of packaging flowing into the UK waste stream 2003

Material	Tonnes
Paper	3,725,652
Glass	2,300,000
Plastic	1,792,200
Steel	684,825
Wood	1,403,694
Aluminium	128,000
Other	25,000
Total	10,059,371

Waste Arisings

Hazardous and special wastes

The Hazardous Waste Directive (91/689/EC) provides the framework for the control of hazardous or 'special' waste. The Annexes to the Directive include descriptions of categories or generic types of hazardous waste according to their nature or the activity by which they are generated, and the properties that render them hazardous. Subsequently, European Commission Decision (94/904/EC) established the Hazardous Waste List. This was repealed from 1 January 2002 by Council Decision 2000/532/EC. This Decision established a single Community list which integrated the list of hazardous waste laid down in Decision 94/904/EC and the list of waste laid down in Decision 94/3/EC. It was subsequently amended by Commission Decisions 2001/118/EC, 2001/119/EC and Council Decision 2001/573/EC. Certain wastes on the list are classified as hazardous because they display one or more hazardous characteristics or properties such as being explosive, highly flammable, toxic or carcinogenic.

The Special Waste Regulations 1996 transposed the requirements of the Hazardous Waste Directive into UK law. However, they did not fully transpose all the Directive's requirements. Nor did they take into account possible amendments to, and expansions of, the European Waste Catalogue and the list of hazardous wastes. The Special Waste Amendment (Scotland) Regulations 2004 address these issues but make very few changes to the current UK regulatory regime. Regulations 2, 2A and 2B provide a full definition of special waste. Simply, 'special waste' is any waste which is hazardous waste as defined by Article 1(4) of the Hazardous Waste Directive. These Regulations came into force in July 2004.

SEPA, the Environment Agency and the Northern Ireland Environment and Heritage Service (NIEHS) have produced technical guidance on the interpretation of the definition and classification of hazardous waste in the UK¹.

In 2003, approximately 490,000 tonnes of special waste were consigned within Scotland and 76,400 tonnes were exported to England and Wales. The exported total may include wastes already consigned within Scotland. The total waste exported may be an underestimate as it is not possible to identify the quantity of waste collected as part of carriers' rounds. Some carriers' rounds originate in England or Wales and collect waste in Scotland; this waste will not be included in the total.

A breakdown of the waste by destination type is given in Table 5 and by European Waste Catalogue (EWC) short code in Table 6. The third and fourth chapters of this Digest contain more detailed information on special waste sent to treatment plants and landfills. Data on special waste are derived from SEPA's special waste consignment note database and the Environment Agency's Hazardous Waste Interrogator.

Table 5 – Special waste consigned within Scotland by destination type in 2003

Destination type	Tonnes
Landfill	164,417
Transfer station	92,545
Treatment plant	201,551
Incinerator	19,507
Transfer station/treatment plant*	10,437
Scrapyard	2,259
Unallocated	203
Total	490,919

* Certain sites are licensed as both transfer stations and treatment plants. In some instances, it was not possible to identify whether waste entering the site was going to the transfer station or the treatment plant

¹Technical Guidance WM2 *Hazardous waste: interpretation of the definition and classification of hazardous waste*, 2003 (see www.sepa.org.uk/guidance/waste/hazardous/)

Waste Arisings

Table 6 – Special waste consigned within Scotland and consigned to England and Wales by European Waste Catalogue code in 2003

EWC Code	Description	Consigned within Scotland	Consigned to England or Wales*†
		Tonnes	Tonnes
01	Mining and minerals	88,392	73
02	Agricultural and food production	482	446
03	Wood and paper production	1,557	46
04	Leather and textile production	59	93
05	Petrol, gas and coal refining/treatment	27,997	491
06	Inorganic chemical processes	7,079	5,993
07	Organic chemical processes	19,699	31,089
08	Paints, varnish, adhesive and inks	4,694	2,054
09	Photographic industry	1,975	784
10	Thermal process waste (inorganic)	1,315	729
11	Metal treatment and coating processes	5,860	813
12	Shaping/treatment of metals and plastics	3,306	20
13	Oil and oil/water mixtures	123,683	4,531
14	Solvents	3,322	5,100
15	Packaging, cloths, filter materials	6,379	642
16	Not otherwise specified	31,034	7,467
17	Construction and demolition waste and asbestos	144,983	2,925
18	Health care	1,563	564
19	Waste/water treatment and water industry	11,411	1,254
20	Municipal and similar commercial wastes	6,047	2,618
Uncoded	Unclassified	83	8,669
Total		490,919	76,400

* The exported total may include wastes already consigned within Scotland

† Waste collected from Scotland through carriers' rounds originating in England or Wales will not be included in the total



Waste Recovery

Local Authority Waste Recovery

- Local authority recycling
- Local authority recycling initiatives
- Local authority composting
- Local authority composting initiatives

Home Composting

Local Authority Quarterly Recycling/ Composting Return

Non-Municipal Waste Recovery

- Packaging and packaging waste
- Hazardous and special wastes
- Imports and exports of hazardous waste

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Waste Recovery

Local Authority Waste Recovery

Recovery is considered as the sum of recycling, composting and energy from waste.

There were two municipal waste incinerators recovering energy from waste operating in Scotland in 2003. These are, however, classified as disposal activities and details of them are included in the Waste Disposal chapter of this Digest.

The combined recycling and composting rate for Scotland for 2003/2004 was 12.1% of the total waste collected by, or on behalf of, Scottish local authorities. SEPA has worked with Audit Scotland to obtain consistency in the reporting of local authority recycling rates. For 2003/2004, there is good agreement between the rates published by the two organisations, i.e. 12.3% from Audit Scotland and 12.1% from SEPA. In calculating the recycling rate, end-of-life vehicles (ELVs) collected by local authorities have been omitted.

The recycling and composting rate for 2003/2004 is higher than that for 2002/2003 (8.0%). This reflects the work by local authorities to implement their recycling and composting plans in conjunction with the Strategic Waste Fund monies allocated by the Scottish Executive and the National Waste Plan 2003. The National Waste Plan 2003 provides Scotland with guidelines for meeting the target of recycling and composting 25% of municipal waste by 2006. Trends in the recycling and composting rate for local authorities are examined in the final chapter.

Table 7 gives a breakdown of the recycling and composting rates for each local authority.

Waste Recovery

Table 7 – Recycling and composting rates for Scottish local authorities 2003/2004

Local authority	Total local authority waste arisings (tonnes)*	Waste recycled (%)	Waste composted (%)	Waste composted or recycled (%)
Aberdeen	133,090	7.1	2.0	9.1
Aberdeenshire	143,983	7.1	5.6	12.7
Angus	75,841	20.1	6.7	26.8
Argyll and Bute	63,267	10.0	0.1	10.2
Clackmannanshire	36,849	7.7	0.2	7.9
Dumfries and Galloway	91,737	3.8	0.0	3.8
Dundee	95,015	17.9	3.2	21.1
East Ayrshire	80,458	5.1	0.7	5.8
East Dunbartonshire	68,522	12.9	3.0	15.9
East Lothian	63,197	9.1	4.4	13.6
East Renfrewshire	59,488	17.5	4.9	22.4
Edinburgh	261,615	9.3	2.3	11.6
Eilean Siar	20,964	6.2	0.0	6.2
Falkirk	108,483	8.4	2.9	11.3
Fife	252,002	13.5	3.4	16.9
Glasgow	361,964	3.5	2.5	6.0
Highland	149,079	4.0	1.8	5.8
Inverclyde	51,225	5.3	0.0	5.3
Midlothian	53,928	4.6	0.0	4.6
Moray	67,131	15.0	3.3	18.3
North Ayrshire	82,685	9.0	11.3	20.3
North Lanarkshire	194,163	7.4	4.5	11.9
Orkney Islands	13,050	8.5	6.2	14.7
Perth and Kinross	95,773	11.2	7.7	18.9
Renfrewshire	110,104	6.9	3.0	9.9
Scottish Borders	67,817	9.1	1.0	10.1
Shetland Islands	13,450	9.0	0.0	9.0
South Ayrshire	86,867	4.6	8.3	12.9
South Lanarkshire	177,673	12.1	5.1	17.2
Stirling	59,242	9.3	4.3	13.6
West Dunbartonshire	59,449	7.0	0.0	7.0
West Lothian	106,317	5.6	5.4	11.0
Total	3,304,428	8.7	3.4	12.1

* End-of-life vehicles (ELVs) are excluded from the calculation in accordance with Audit Scotland guidance

Waste Recovery

Local authority recycling

A total of 298,683 tonnes of waste collected by, or on behalf of, Scottish local authorities was recycled during 2003/2004. This total was made up of 282,765 tonnes of waste collected for recycling plus an additional 16,625 tonnes of waste originally collected for disposal but actually recycled. Of the waste collected for recycling, 707 tonnes had to be sent for disposal because either there was no market for the recycle or contamination had made the waste unfit for recycling.

A total of 120,600 tonnes of material was sent for recycling outside the local authority area within which it was collected and 178,079 tonnes were recycled within the authority.

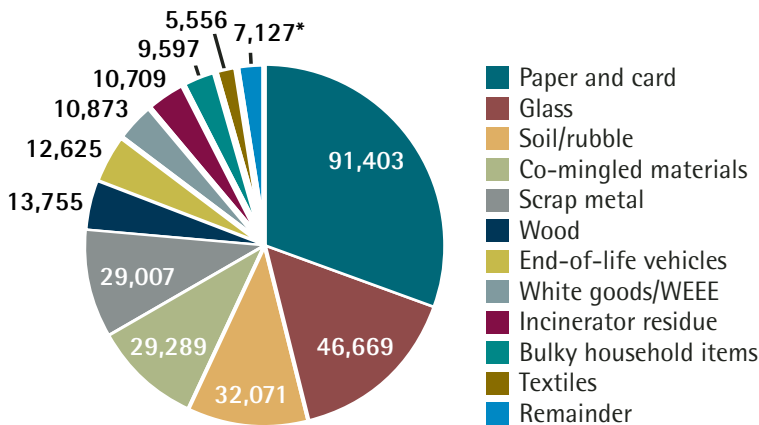
Recyclables were mainly collected through bring (drop-off) collection schemes (including the 166 civic amenity sites operating across Scotland) and kerbside schemes. A total of 147,717 tonnes was collected at bring sites and 98,767 tonnes by kerbside collections. In addition, 31,565 tonnes were recovered at material recycling facilities (MRFs) and 20,631 tonnes were recovered by other methods.

The recycling figures relate only to waste collected for recycling by, or on behalf of, Scottish local authorities. This covers waste collected by the local authority itself and organisations in the private and voluntary sector with a contract agreement with the local authority to collect recyclables.

Figures 2a and 2b show the breakdown of Scottish local authority recycling in 2003/2004 by material. For clarity, Figure 2a shows those materials where the weight recycled exceeded 5,000 tonnes and Figure 2b shows those where the weight was less than 5,000 tonnes. Table 8 gives the quantities of the materials recycled by, or on behalf of, Scottish local authorities and the councils' recycling rates expressed as a percentage of total waste collected. Table 9 shows the amount recycled by the local authorities by material source.

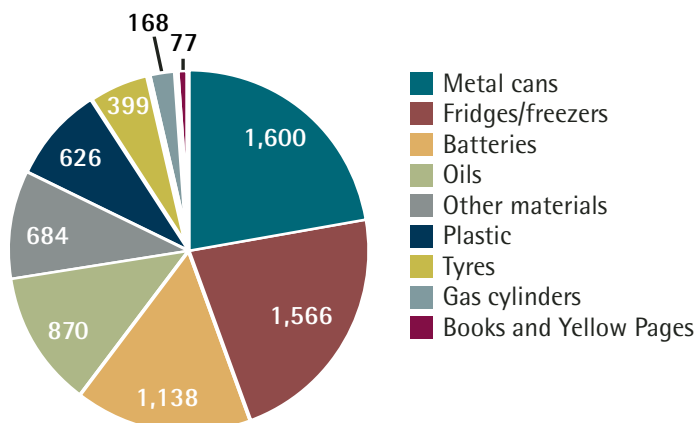
Figure 2 – Scottish local authority recycling 2003/2004

(a) Breakdown of materials (tonnes): total weight recycled >5,000 tonnes



* A breakdown is shown in Figure 2b
WEEE = waste electrical and electronic equipment

(b) Breakdown of materials (tonnes): total weight recycled <5,000 tonnes



Waste Recovery

Table 8 – Breakdown by material of waste recycled by, or on behalf of, Scottish local authorities 2003/2004

Local authority	Tonnes												
	Glass	Paper	Card	Mixed paper & card	Steel cans	Aluminium cans	Mixed cans	Plastic	Textiles	Oils	Scrap metal*	White goods/WEEE	Batteries
Aberdeen	2,414	0	406	5,682	0	0	9	20	11	15	642	186	68
Aberdeenshire	3,021	3,436	1,504	0	0	0	201	105	168	54	1,163	423	122
Angus	1,241	1,723	1,103	16	0	11	67	76	111	14	2,419	201	59
Argyll and Bute	1,593	2,550	449	0	44	16	0	41	0	22	1,184	178	35
Clackmannanshire	733	1,131	67	0	0	0	105	12	44	10	250	68	18
Dumfries and Galloway	1,178	10	0	664	0	0	7	6	29	22	1,143	329	47
Dundee	2,021	2,586	78	0	0	21	0	2	193	7	3,129	0	30
East Ayrshire	854	0	575	1,063	0	0	31	0	92	47	321	221	13
East Dunbartonshire	1,363	3,338	0	0	0	0	1	62	146	12	0	155	0
East Lothian	1,000	2,423	0	0	0	0	47	0	94	14	604	162	29
East Renfrewshire	837	2,420	260	0	3	2	99	8	110	5	754	0	25
Edinburgh	4,562	11,111	166	694	93	46	0	86	2,300	21	1,597	2,271	55
Eilean Siar	94	93	0	0	0	0	0	0	0	0	971	0	0
Falkirk	997	2,269	755	0	0	22	17	7	108	11	220	812	31
Fife	3,550	9,112	539	0	0	0	15	26	371	86	2,386	770	51
Glasgow	4,279	5,522	67	0	120	137	0	61	258	26	790	1,018	46
Highland	2,759	983	606	0	17	21	8	0	134	33	706	507	69
Inverclyde	666	1,192	0	118	0	3	13	18	87	9	322	0	6
Midlothian	746	742	0	0	0	0	6	0	63	14	720	153	26
Moray	878	0	1,260	1,155	0	0	53	0	94	18	1,598	365	49
North Ayrshire	670	1,049	0	0	0	1	0	0	174	15	137	675	0
North Lanarkshire	973	2,180	925	10	0	0	21	0	235	201	954	536	54
Orkney Islands	530	0	0	4	0	0	0	0	0	51	301	135	10
Perth and Kinross	1,950	3,602	1,093	0	0	14	0	16	105	16	2,119	29	52
Renfrewshire	1,063	186	628	0	0	0	0	0	41	15	852	365	34
Scottish Borders	1,754	0	0	3,605	0	0	28	0	47	17	484	173	34
Shetland Islands	315	0	0	0	0	3	0	0	0	2	654	33	112
South Ayrshire	828	804	559	385	0	0	19	2	0	44	520	0	4
South Lanarkshire	1,220	1,388	0	0	0	0	39	0	310	49	1,122	0	18
Stirling	1,507	2,371	364	25	0	0	77	21	111	8	485	447	22
West Dunbartonshire	522	2,046	251	0	3	10	4	21	44	0	255	310	0
West Lothian	551	1,749	74	240	130	19	0	37	78	12	205	351	21
Total	46,669	66,016	11,729	13,661	410	326	867	627	5,558	870	29,007	10,873	1,140

* Scrap metal includes ferrous and non-ferrous metal

Waste Recovery

Table 8 – Breakdown by material of waste recycled by, or on behalf of, Scottish local authorities 2003/2004 (continued)

Local authority	Tonnes											Recycled (%) [†]	ELVs (tonnes)
	Co-mingled materials [‡]	Wood	Residue from incineration	Soil/rubble [‡]	Bulky household items	Fridges/freezers	Tyres	Gas cylinders	Books/Yellow Pages	Others	Total		
Aberdeen	0	0	0	0	0	0	0	0	6	0	9,459	7.1	598
Aberdeenshire	0	0	0	0	0	0	0	0	29	0	10,226	7.1	220
Angus	0	735	2,703	4,701	44	0	0	10	0	38	15,272	20.1	191
Argyll and Bute	0	0	0	207	15	0	0	0	2	0	6,336	10.0	1,479
Clackmannanshire	0	281	0	100	0	0	8	6	0	0	2,833	7.7	168
Dumfries and Galloway	0	0	0	0	0	0	0	15	0	0	3,450	3.8	256
Dundee	0	0	7,650	947	0	301	0	0	0	0	16,965	17.9	1,094
East Ayrshire	0	128	0	743	0	0	0	6	2	0	4,096	5.1	620
East Dunbartonshire	418	0	0	3,328	0	0	0	0	0	0	8,823	12.9	196
East Lothian	0	103	0	1,263	0	0	0	9	7	0	5,755	9.1	779
East Renfrewshire	2,091	712	0	2,644	0	241	0	0	0	190	10,401	17.5	27
Edinburgh	0	884	0	345	0	0	101	0	10	0	24,342	9.3	970
Eilean Siar	83	0	0	0	0	47	11	0	0	0	1,299	6.2	830
Falkirk	0	1,611	0	2,122	0	0	0	0	1	77	9,060	8.4	415
Fife	0	4,766	0	12,225	0	0	20	47	0	0	33,964	13.5	261
Glasgow	0	176	0	0	316	0	0	0	2	0	12,818	3.5	644
Highland	0	7	0	0	0	0	64	0	0	0	5,914	4.0	480
Inverclyde	0	0	0	0	0	0	0	0	0	298	2,732	5.3	49
Midlothian	0	0	0	0	0	0	35	0	1	0	2,506	4.6	175
Moray	0	1,826	0	2,751	0	0	0	0	7	0	10,054	15.0	28
North Ayrshire	3,645	670	0	0	383	0	0	4	1	0	7,424	9.0	67
North Lanarkshire	3,438	0	0	0	4,839	0	0	0	0	0	14,366	7.4	1,174
Orkney Islands	0	0	75	0	0	0	0	0	0	0	1,106	8.5	0
Perth and Kinross	0	1,094	281	0	0	315	0	14	0	0	10,700	11.2	204
Renfrewshire	4,329	71	0	0	55	0	0	0	1	0	7,640	6.9	29
Scottish Borders	0	0	0	0	15	0	0	4	0	0	6,161	9.1	121
Shetland Islands	15	0	0	0	0	0	73	0	1	0	1,208	9.0	120
South Ayrshire	0	391	0	0	0	431	0	0	0	0	3,987	4.6	166
South Lanarkshire	13,889	0	0	0	3,358	0	87	0	6	0	21,486	12.1	700
Stirling	0	0	0	0	0	0	0	55	0	0	5,493	9.3	142
West Dunbartonshire	0	66	0	0	572	0	0	0	0	81	4,185	7.0	140
West Lothian	1,382	234	0	694	0	231	0	0	0	0	6,008	5.6	283
Total	29,290	13,755	10,709	32,070	9,597	1,566	399	170	76	684	286,069	8.7	12,626

† Where a breakdown of co-mingled material was provided, the total tonnage has been divided between the components and added to the relevant category (glass, card, etc.)

‡ Soil/rubble includes sand, gravel, inert, sweepings and aggregates

§ To ensure consistency with the recycling rate calculated by Audit Scotland, the tonnages for ELVs have been excluded from the calculation

Waste Recovery

Table 9 – Breakdown of the local authority recycling by material source

Local authority	Amount recycled by waste source (tonnes)					ELVs
	Household	Commercial	Industrial	Other non-household	Total	
Aberdeen	8,168	1,291	0	0	9,459	598
Aberdeenshire	8,310	1,916	0	0	10,226	220
Angus	12,096	3,126	49	0	15,271	191
Argyll and Bute	4,941	1,315	80	0	6,336	1,479
Clackmannanshire	2,707	125	0	0	2,832	168
Dumfries and Galloway	3,448	0	0	0	3,448	256
Dundee	12,149	4,816	0	0	16,965	1,094
East Ayrshire	3,434	662	0	0	4,096	620
East Dunbartonshire	7,938	885	0	0	8,823	196
East Lothian	5,414	339	0	0	5,753	779
East Renfrewshire	9,541	824	0	33	10,398	27
Edinburgh	21,248	3,094	0	0	24,342	970
Eilean Siar	967	282	51	0	1,300	830
Falkirk	6,835	2,206	20	0	9,061	415
Fife	30,003	3,962	0	0	33,965	261
Glasgow	10,883	1,935	0	0	12,818	644
Highland	5,456	456	0	0	5,912	480
Inverclyde	2,206	524	0	0	2,730	49
Midlothian	2,506	0	0	0	2,506	175
Moray	5,571	4,483	0	0	10,054	28
North Ayrshire	6,994	423	0	6	7,423	67
North Lanarkshire	13,338	1,028	0	0	14,366	1,174
Orkney Islands	1,082	24	0	0	1,106	0
Perth and Kinross	9,939	753	9	0	10,701	204
Renfrewshire	7,640	0	0	0	7,640	29
Scottish Borders	5,688	473	0	0	6,161	121
Shetland Islands	818	391	0	0	1,209	120
South Ayrshire	3,022	966	0	0	3,988	166
South Lanarkshire	21,485	0	0	0	21,485	700
Stirling	5,103	388	0	0	5,491	142
West Dunbartonshire	3,617	568	0	0	4,185	140
West Lothian	5,572	435	0	0	6,007	283
Total	248,119	37,690	209	39	286,057	12,626

Waste Recovery

Local authority recycling initiatives

In 2003/2004, all local authorities had a bring (drop-off) recycling collection scheme operating in their area. Twenty-eight of the 32 local authorities reported that they had a kerbside recycling collection scheme for household waste and 27 that they had a kerbside recycling collection scheme for commercial/industrial waste. A separate kerbside recycling collection was offered to 1.11 million households (equivalent to 47% of all households in Scotland). Table 10 gives a breakdown of this by local authority.

Table 10 – Scottish households offered a kerbside recycling collection 2003/2004

Local authority	Number of households offered kerbside recycling collections*	Percentage of total households	Total collected from households (tonnes)	Household waste recycled per household (kg)
Aberdeen	90,000	84	5,347	59
Aberdeenshire	31,000	31	912	29
Angus†	37,000	74	0	0
Argyll and Bute	15,000	33	1,345	90
Clackmannanshire	21,840	99	1,583	72
Dumfries and Galloway	4,750	7	324	68
Dundee	49,471	67	2,586	52
East Ayrshire	3,551	7	1,064	300
East Dunbartonshire	36,000	84	3,287	91
East Lothian	35,000	86	1,866	53
East Renfrewshire	21,000	56	2,614	124
Edinburgh	110,318	50	6,695	61
Eilean Siar	0	0	0	0
Falkirk	52,200	82	2,651	51
Fife	109,868	68	8,844	80
Glasgow	48,000	17	1,018	21
Highland	3,600	4	258	72
Inverclyde	13,225	33	860	65
Midlothian	0	0	0	0
Moray	0	0	0	0
North Ayrshire	64,600	100	730	11
North Lanarkshire	79,000	57	7,341	93
Orkney Islands	9,532	100	242	25
Perth and Kinross	37,599	58	2,819	75
Renfrewshire	20,500	25	186	9
Scottish Borders	31,200	59	3,348	107
Shetland Islands	0	0	0	0
South Ayrshire	13,392	26	252	19
South Lanarkshire	39,000	29	2,474	63
Stirling	37,000	98	3,083	83
West Dunbartonshire	32,000	73	2,465	77
West Lothian	69,163	42	1,321	19
Total	1,114,809	47	65,515	59

* For certain local authorities, the number of households includes those provided with an 'on demand' service

† Households within the Angus Council area were offered a kerbside collection as part of a trial scheme. The total amount of waste collected for recycling could not be identified

Waste Recovery

Only one local authority did not have a kerbside recycling collection scheme of any type. Fourteen local authorities reported that they had sent a total of 31,000 tonnes of waste to a material reclamation facility (MRF) for sorting and recycling. In addition, 13 local authorities reported that they had undertaken other recycling, which included extracting materials from the waste collected for disposal and the recycling of residues from incineration. Table 11 details the recycling initiatives available in each Scottish local authority in 2003/2004.

Table 11 – Local authority recycling initiatives in Scotland 2003/2004

Local authority	Kerbside recycling collection		Bring (drop-off) recycling	Materials sent to MRF	Other recycling
	Household waste	Commercial/ industrial waste			
Aberdeen	Yes	Yes	Yes	No	No
Aberdeenshire	Yes	Yes	Yes	No	No
Angus	Yes	Yes	Yes	Yes	Yes
Argyll and Bute	Yes	Yes	Yes	No	No
Clackmannanshire	Yes	No	Yes	No	No
Dumfries and Galloway	Yes	No	Yes	No	No
Dundee	Yes	Yes	Yes	Yes	Yes
East Ayrshire	Yes	Yes	Yes	Yes	Yes
East Dunbartonshire	Yes	Yes	Yes	No	Yes
East Lothian	Yes	Yes	Yes	No	No
East Renfrewshire	Yes	Yes	Yes	No	Yes
Edinburgh	Yes	Yes	Yes	No	No
Eilean Siar	No	Yes	Yes	No	Yes
Falkirk	Yes	Yes	Yes	Yes	Yes
Fife	Yes	Yes	Yes	No	No
Glasgow	Yes	Yes	Yes	Yes	No
Highland	Yes	Yes	Yes	Yes	Yes
Inverclyde	Yes	Yes	Yes	No	No
Midlothian	No	No	Yes	No	No
Moray	No	Yes	Yes	Yes	No
North Ayrshire	Yes	Yes	Yes	No	Yes
North Lanarkshire	Yes	Yes	Yes	Yes	No
Orkney Islands	Yes	Yes	Yes	No	Yes
Perth and Kinross	Yes	Yes	Yes	Yes	Yes
Renfrewshire	Yes	No	Yes	Yes	No
Scottish Borders	Yes	Yes	Yes	No	No
Shetland Islands	No	Yes	Yes	Yes	Yes
South Ayrshire	Yes	Yes	Yes	Yes	No
South Lanarkshire	Yes	No	Yes	Yes	No
Stirling	Yes	Yes	Yes	No	No
West Dunbartonshire	Yes	Yes	Yes	No	No
West Lothian	Yes	Yes	Yes	Yes	Yes
Total yes	28	27	32	14	13

Waste Recovery

Local authority composting

In 2003/2004, a total of 113,943 tonnes of waste collected by, or on behalf of, Scottish local authorities was composted. The majority of the waste sent for composting was green waste (89,773 tonnes), with the remainder being mixed organic waste and mixed municipal waste (24,170 tonnes). A total of 14,209 tonnes (12.5% of the total waste composted) was sent for composting outside the local authority in which it was collected. Most of the waste sent for composting originated from kerbside collections of green waste, civic amenity sites, and local authority parks and gardens.

Composting can involve a weight loss. The tonnages in this section refer to the weight of the waste that was composted rather than the weight of material resulting from the composting process. No waste collected for composting in 2003/2004 was disposed of, but certain local authorities used some of the material resulting from composting as daily cover for landfill. This is considered as disposal, and, for these local authorities, the weight of this material has been subtracted from the figure for waste sent for composting. Table 12 details the tonnages of the waste collected for composting by, or on behalf of, local authorities and the councils' composting rates expressed as a percentage of total municipal waste collected.

Table 12 – Waste collected for composting by, or on behalf of, Scottish local authorities 2003/2004

Local authority	Tonnes**†					Percentage of all MSW composted
	Household	Commercial	Industrial	Other non-household	Total	
Aberdeen	2,631	0	0	0	2,631	2.0
Aberdeenshire	8,072	0	0	0	8,072	5.6
Angus	3,803	1,268	0	0	5,071	6.7
Argyll and Bute	76	19	0	0	95	0.2
Clackmannanshire	69	10	0	0	79	0.2
Dumfries and Galloway	0	0	0	0	0	0.0
Dundee	2,872	206	0	0	3,078	3.2
East Ayrshire	551	0	0	0	551	0.7
East Dunbartonshire	2,057	0	0	0	2,057	3.0
East Lothian	2,580	235	0	0	2,815	4.4
East Renfrewshire	2,935	0	0	0	2,935	5.0
Edinburgh	4,342	1,631	0	0	5,973	2.3
Eilean Siar	0	0	0	0	0	0.0
Falkirk	3,196	0	0	0	3,196	2.9
Fife	6,880	1,700	0	0	8,580	3.4
Glasgow	4,992	4,071	0	0	9,063	2.5
Highland	2,749	0	0	0	2,749	1.8
Inverclyde	0	0	0	0	0	0.0
Midlothian	0	0	0	0	0	0.0
Moray	1,766	441	0	0	2,207	3.3
North Ayrshire	9,351	0	0	0	9,351	11.3
North Lanarkshire	8,801	0	0	0	8,801	4.5
Orkney Islands	803	11	0	0	814	6.2
Perth and Kinross	5,978	1,379	0	0	7,357	7.7
Renfrewshire	3,286	0	0	0	3,286	3.0
Scottish Borders	684	0	0	0	684	1.0
Shetland Islands	0	0	0	0	0	0.0
South Ayrshire	1,485	5,722	0	0	7,207	8.3
South Lanarkshire	9,014	0	0	0	9,014	5.1
Stirling	2,135	414	0	0	2,549	4.3
West Dunbartonshire	0	0	0	0	0	0.0
West Lothian	3,347	123	0	2,258	5,728	5.4
Total	94,455	17,230	0	2,258	113,943	3.4

* Does not include any material where the compost produced was used as daily cover at a landfill site

† Tonnages refer to the weight of the waste composted and not the weight of material resulting from the composting process

Waste Recovery

Local authority composting initiatives

In 2003/2004, 26 of the 32 Scottish local authorities used centralised composting schemes. Twenty-five of the local authorities had a bring (drop-off) collection scheme operating in their area and 20 had a kerbside collection scheme for waste for composting. Table 13 details the composting initiatives in each Scottish local authority in 2003/2004.

Table 13 – Local authority composting initiatives in Scotland 2003/2004

Local authority	Centralised composting	Home composting containers distributed to households	Kerbside collection of household waste for composting	Bring (drop-off) composting collection
Aberdeen	Yes	Yes	Yes	Yes
Aberdeenshire	Yes	Yes	No	Yes
Angus	Yes	No	No	Yes
Argyll and Bute	Yes	Yes	No	Yes
Clackmannanshire	No	Yes	Yes	Yes
Dumfries and Galloway	Yes	Yes	No	Yes
Dundee	Yes	No	Yes	Yes
East Ayrshire	Yes	Yes	No	Yes
East Dunbartonshire	Yes	Yes	No	Yes
East Lothian	Yes	Yes	Yes	Yes
East Renfrewshire	Yes	Yes	Yes	Yes
Edinburgh	Yes	Yes	Yes	Yes
Eilean Siar	No	No	No	No
Falkirk	Yes	Yes	Yes	Yes
Fife	Yes	No	Yes	Yes
Glasgow	Yes	No	Yes	Yes
Highland	Yes	Yes	Yes	Yes
Inverclyde	No	Yes	No	No
Midlothian	No	No	No	No
Moray	Yes	Yes	No	Yes
North Ayrshire	Yes	No	Yes	Yes
North Lanarkshire	Yes	No	Yes	Yes
Orkney Islands	Yes	Yes	Yes	Yes
Perth and Kinross	Yes	Yes	Yes	Yes
Renfrewshire	Yes	No	Yes	Yes
Scottish Borders	Yes	Yes	Yes	No
Shetland Islands	No	Yes	No	No
South Ayrshire	Yes	Yes	Yes	Yes
South Lanarkshire	Yes	No	Yes	No
Stirling	Yes	Yes	Yes	Yes
West Dunbartonshire	No	Yes	No	No
West Lothian	Yes	No	Yes	Yes
Total yes	26	21	20	25

Waste Recovery

Home Composting

Twenty-one local authorities reported that they had distributed containers for home composting to the public during 2003/2004. A total of 24,121 composters and 1,231 digesters were distributed. Most of these were provided either free of charge or on a subsidised basis. Local authorities have now distributed around 104,000 composters since council reorganisation in 1996.

Home composting is an important activity for waste prevention but it is difficult to quantify the tonnage of waste diverted from the waste stream. Local authorities were asked if they had carried out a survey to estimate the quantity of waste composted by residents at home. Four local authorities reported that they had. However, different survey methods were used to estimate the quantities composted, and therefore diverted, making the collation of results difficult.

Local Authority Quarterly Recycling/Composting Return

In April 2004, SEPA introduced a new quarterly survey, the Local Authority Quarterly Recycling/Composting Return, in order to collect data on the types and quantities of waste recycled and composted by Scottish local authorities. This new form is designed, amongst other things, to enable the monitoring of Scotland's progress towards reaching the targets for recycling and composting of municipal waste. The survey covers all waste and recyclate collected by, or on behalf of, local authorities apart from road maintenance waste, ELVs and waste from industrial sources. The results from the surveys are available on SEPA's website at www.sepa.org.uk/nws/data/index.htm

Non-Municipal Waste Recovery

Packaging and packaging waste

One of the key objectives of the EC Directive 94/62/EC on Packaging and Packaging Waste is to reduce the impact of packaging on the environment by requiring that specific proportions of packaging waste are to be recovered and recycled. The Directive was amended in 2002 and the following Common Position reached:

By 31 December 2008 all Member States should achieve:

- a minimum of 60% recovery;
- recycling of between 55% and 80%; and
- differentiated material specific recycling targets of paper 60%, glass 60%, metals 50%, plastic 22.5% and wood 15%.

The UK has implemented the recovery and recycling element of the Directive through the Producer Responsibility Obligations (Packaging Waste) Regulations 1997 (as amended). These Regulations place recovery and recycling obligations on most companies that have a turnover exceeding £2 million and that handle more than 50 tonnes of packaging and packaging materials per year. Businesses that meet both thresholds are required to:

- register annually with SEPA (or the appropriate agency) and submit data on packaging handled by the company in the previous year. Data should also include a statement of the company's recovery and recycling obligations as calculated using formulae given in the Regulations. An operational plan should be submitted if the company turnover is greater than £5 million;
- take reasonable steps to meet specific recovery and recycling obligations;
- submit a Certificate of Compliance and support this with evidence of compliance (i.e. evidence that the appropriate recovery and recycling has been carried out), and;
- meet certain 'consumer information obligations' if the main activity of the company is 'seller'.

Alternatively they may join, and supply their data to, a compliance scheme that will meet the company's obligations on their behalf.

Waste Recovery

The Regulations are enforced in Scotland by SEPA, in England and Wales by the Environment Agency and, in Northern Ireland, by the Environment and Heritage Service. In 1999 and 2000, Wastepack was the only compliance scheme registered with SEPA, though less than 10% of the scheme members were Scottish companies. In 2001, SEPA also registered the Ecopak, Integra, Recyclepak and Valpak Scotland compliance schemes. All five compliance schemes were still registered with SEPA in 2003. Table 14 gives a breakdown of organisations registered with SEPA.

Table 14 – Registrations with SEPA 2003

Organisation	Number of registrations
Companies registered with SEPA	105
Members of SEPA registered schemes	835
Total registrations	940

All data submitted by producers and schemes on packaging handled are aggregated to give total business recovery and recycling obligations for the UK. It is intended that the business recovery and recycling obligations are sufficient to enable the UK to meet the overall Directive target. The UK has to establish the amount of recovery that needs to take place to meet Directive targets and to ensure that the aggregate recovery and recycling obligation placed on producers and schemes is greater than or equal to that figure. Although the Directive targets did not take effect until June 2001, the relatively poor packaging recovery in the UK before the Regulations came into force resulted in the UK introducing interim targets during 1998, 1999 and 2000 to provide for a smooth build-up to the Directive targets.

Reprocessors or exporters of UK packaging waste carry out recovery and recycling of packaging waste. Most of these companies are accredited and monitored by SEPA or the Environment Agency. Accredited reprocessors and exporters may generate approved evidence of recovery and recycling in the form of Packaging Waste Recovery Notes (PRNs) or Packaging Waste Export Recovery Notes (PERNs). These are generated in respect of each tonne of packaging waste that is recovered or recycled. Obligated companies (producers) and compliance schemes can meet their recovery and recycling obligations by obtaining the correct amount and material type of Recovery Notes.

The data held by SEPA consists of:

- packaging handled by companies registered with SEPA together with their respective recovery and recycling obligations;
- packaging handled by members of SEPA registered compliance schemes together with their respective recovery and recycling obligations; and
- packaging waste reprocessed, PRNs/PERNs issued, and PRN/PERN revenue received by SEPA accredited reprocessors and exporters.

The nature of the regulatory regime means that it is not possible to report separately on Scottish data. Depending on the extent of a company's operations, packaging handled in Scotland, England and Wales is often the subject of a single data report that cannot be disaggregated into totals for the individual countries. Similarly, data on packaging waste reprocessed in Scotland may include packaging waste that has arisen in England and Wales. Much of the data given below relates to UK figures. Scottish figures are provided with respect to packaging waste reprocessed in Scotland.

Table 15 gives the UK's recovery and recycling targets for 2003, while Table 16 details the recovery and recycling actually achieved in the UK in 2003. Table 17 shows the amounts of packaging waste reprocessed by SEPA accredited companies in 2003. A list of accredited reprocessors and exporters of packaging waste in Scotland in 2003 is given on the SEPA website at www.sepa.org.uk.

Waste Recovery

Table 15 – UK recovery and recycling targets 2003

Material	Tonnes	
	Recovery	Recycling
Paper	1,916,781	617,268
Glass	1,103,818	355,467
Aluminium	74,643	24,037
Steel	357,915	115,261
Plastic	951,613	306,452
Wood*	472,055	
Other*	12,373	
Total	4,889,198	1,418,485

* There is no material specific recycling target for wood and other packaging materials. Hence these are not included in the total recycling target

Table 16 – UK recovery and recycling achieved 2003

Material	Tonnes
Paper*	2,428,593
Glass†	861,948
Aluminium	31,831
Steel	304,520
Plastic*	321,205
Wood	756,842
Total recycling	4,704,939
Energy from waste	599,380
Total recovery	5,304,319
Specific waste stream	10,059,371[§]
Recovery %	52.73
Recycling %	46.77

* Includes 659 tonnes of composting and 5,564 tonnes of alternative evidence

† Includes 42,314 tonnes alternative evidence glass recycled that fell outwith the PRN system

‡ Figure was revised in the light of the findings of a fact-finding mission

§ Includes 25,000 tonnes of 'other' packaging

Waste Recovery

Table 17 – Packaging waste reprocessed by SEPA accredited reprocessors and exporters in Scotland 2003

Material	Tonnes		Total PRN/ PERNs issued
	Accepted	Reprocessed/ exported	
Reprocessed			
Paper	231,264	231,261	225,917
Plastic	4,312	3,647	3,655
Glass	118,164	118,147	98,896
Energy from waste – MSW	18,068	18,068	8,756
Wood	87,735	87,735	85,928
Wood composting	439	439	106
Paper composting	147	147	125
Total reprocessed	460,129	459,444	423,383
Exported			
Paper	93,800	93,800	25,019
Plastic	63	63	0
Steel	12,347	12,347	6,376
Aluminium	161	161	161
Total exported	106,371	106,371	31,556
Total reprocessed/exported	566,500	565,815	454,939

Hazardous and special wastes

In 2003/2004, 35 waste management sites were licensed to treat special waste in Scotland. In addition, seven sites permitted under the IPC Regulations treated special waste. A total of 201,551 tonnes of special waste was consigned to treatment plants in Scotland in 2003 (this included 19,500 tonnes sent for incineration). A breakdown of the waste by EWC short code and waste strategy area (WSA) is given in Table 18.

Waste Recovery

Table 18 – Special waste consigned to treatment plants in Scotland 2003

Waste strategy area*	Waste type by EWC code† (Tonnes)										
	01	02	03	04	05	06	07	08	09	10	11
Orkney and Shetland	24,165	0	0	0	12	0	0	8	0	38	0
Western Isles	0	0	0	0	0	0	0	0	0	0	0
Highland	16	0	0	0	0	0	0	0	0	0	0
North East	45,712	54	11	0	784	1,006	23	299	61	7	8
Tayside	0	0	0	0	17	0	0	1	0	0	0
Forth Valley	0	0	0	0	0	0	0	0	0	0	0
Fife	0	0	0	0	0	0	0	0	0	0	0
Lothians and Borders	0	16	0	0	624	27	9,218	135	0	0	0
Ayrshire, Dumfries and Galloway	0	0	0	0	0	0	0	0	0	0	0
Glasgow and Clyde Valley	157	11	87	1	651	3,289	5,854	1,999	23	226	5,198
Argyll and Bute	0	0	0	0	0	0	0	0	0	0	0
Scotland	70,050	81	98	1	2,089	4,322	15,096	2,442	84	271	5,205

Waste strategy area*	Waste type by EWC code† (Tonnes)										
	12	13	14	15	16	17	18	19	20	Unknown	Total
Orkney and Shetland	0	1,995	0	30	162	119	0	1	3	0	26,534
Western Isles	0	0	0	0	0	0	0	0	0	0	0
Highland	0	1,256	0	0	0	0	0	0	0	0	1,272
North East	107	24,822	149	2,463	12,397	488	245	276	520	18	89,451
Tayside	0	6,602	0	0	0	0	62	0	0	0	6,683
Forth Valley	0	0	0	0	0	0	0	0	0	0	0
Fife	0	0	0	0	0	0	0	0	0	0	0
Lothians and Borders	0	0	126	9	19	30	0	0	63	0	10,268
Ayrshire, Dumfries and Galloway	0	0	0	0	0	0	0	0	0	0	0
Glasgow and Clyde Valley	927	43,233	902	72	2,901	127	357	478	850	0	67,344
Argyll and Bute	0	0	0	0	0	0	0	0	0	0	0
Scotland	1,034	77,908	1,177	2,575	15,478	764	665	755	1,437	18	201,552

* A map showing WSAs and their constituent local authorities is presented in Appendix V

† EWC codes (see Appendix III)

01 Mining and minerals

02 Agricultural and food production

03 Wood and paper production

04 Leather and textile production

05 Petrol, gas and coal refining/
treatment

06 Inorganic chemical processes

07 Organic chemical processes

08 Paints, varnish, adhesive and inks

09 Photographic industry

10 Thermal process waste (inorganic)

11 Metal treatment and coating processes

12 Shaping/treatment of metals and plastics

13 Oil and oil/water mixtures

14 Solvents

15 Packaging, cloths

16 Not otherwise specified

17 Construction and demolition
waste and asbestos

18 Health care

19 Waste/water treatment and water industry

20 Municipal and similar commercial
wastes

Waste Recovery

Imports and exports of hazardous waste

Council Regulation (EEC) No. 259/93, the Waste Shipments Regulation, governs the supervision and control of shipments of waste within the EU, imports to and exports from the EU, and transit shipments through the EU². SEPA is the competent authority for transfrontier shipments of waste into and out of Scotland.

Different requirements apply in relation to the destination of the waste shipment and whether the waste is destined for recovery or disposal. The degree of hazard associated with the waste is also significant with respect to shipments destined for recovery. In general, red and amber list wastes are considered hazardous and green list wastes are considered non-hazardous. Annexes III and IV of Council Regulation (EEC) No. 259/93 provide details of substances designated as either amber or red list wastes.

The data presented in this section relate to the transfrontier shipment of amber list wastes imported into and exported from Scotland for recovery. From transfrontier shipment movements notified to SEPA in 2003, 11,319 tonnes of amber list wastes were imported into Scotland for recovery and 841 tonnes was exported from Scotland for recovery. No red list waste transfrontier shipment movements were notified to SEPA during 2003.

Breakdowns of the total quantity of amber list wastes imported into Scotland in 2003 by waste type and recovery code are presented in Tables 19 and 20 respectively. The corresponding data for amber list wastes exported from Scotland in 2003 are presented in Tables 21 and 22.

Table 19 – Amber list wastes imported into Scotland for recovery 2003

Waste type	Tonnes	%
Non-halogenated solvents	11,297.1	99.8
Toluene/kerosene	21.9	0.2
Total	11,319.0	100.0

Table 20 – Recovery codes for amber list wastes imported into Scotland 2003

Recovery code*	Tonnes	%
R1 [†] , R2 [‡] , R13 [¶]	11,319.0	100.0
Total	11,319.0	100.0

* Recovery codes from Annex II.B to Council Directive 75/442/EEC

[†] R1 Use principally as a fuel or other means to generate energy

[‡] R2 = Solvent reclamation/regeneration

[¶] R13 = Accumulation of material intended for any operation numbered R1 to R12

²The provisions of Council Regulation (EEC) No. 259/93 requiring transposition into national legislation are implemented in the UK by the Transfrontier Shipment of Waste Regulations 1994 (SI No. 1137).

Waste Recovery

Table 21 – Amber list wastes exported from Scotland for recovery 2003

Waste type	Tonnes	%
Chlorofluorocarbon (CFC) equipment	780.5	92.9
Catalyst	60.0	7.1
Total	840.5	100.0

Table 22 – Recovery codes for amber list wastes exported from Scotland 2003

Recovery code*	Tonnes	%
R4 [†]	840.5	100.0
Total	840.5	100.0

* Recovery codes from Annex II.B to Council Directive 75/442/EEC

† R4 = Recycling/reclamation of metals and metal compounds

Waste Disposal

Local Authority Waste Disposal

Local Authority Disposal to Landfill

Local Authority Energy Recovery

Incineration and Thermal Treatment Plants

Waste Management Licence Facility Disposals



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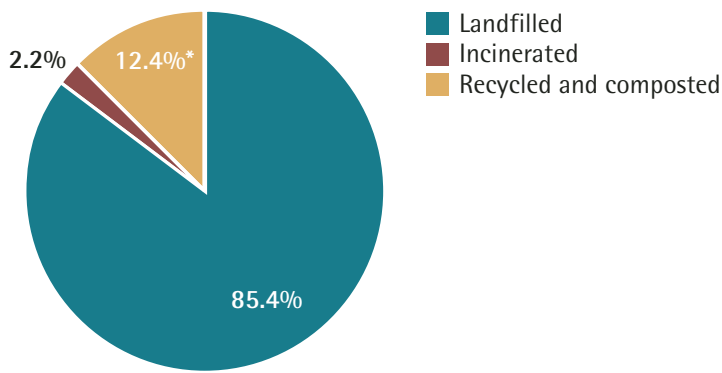
Waste Disposal

Local Authority Waste Disposal

In 2003/2004, a total of 3.32 million tonnes of waste was collected by, or on behalf, of local authorities of which 88% (2.90 million tonnes) were sent for disposal and 12% (0.42 million tonnes) were recycled or composted. In 2002/2003, 90% of waste collected was disposed of, 8% was recycled or composted, and 2% was treated by other methods.

Of the waste sent for disposal in 2003/2004, 2.83 million tonnes were disposed of to landfill and 0.07 million tonnes were sent for energy recovery. Figure 3 shows the relative proportions of waste handled by different waste management methods.

Figure 3 – Waste management methods used for waste collected by, or on behalf of, Scottish local authorities in 2003/2004 (percentage by weight)



* The recycling and composting rate of 12.4% differs from the rate of 12.1% given elsewhere in the Digest. This is because it includes ELVs, which are excluded in the other figure to ensure consistency with Audit Scotland

Table 23 shows the total amount of controlled waste disposed of by each local authority and the disposal methods used in 2003/2004.

Waste Disposal

Table 23 – Total controlled waste disposed of by, or on behalf of, Scottish local authorities 2003/2004

Local authority	Total Waste Disposed (tonnes)	Landfill with methane recovery (tonnes)		Landfill without methane recovery (tonnes)		Incineration with energy recovery (tonnes) [†]	
		Within	Outwith	Within	Outwith	Within	Outwith
Aberdeen	121,000	0	121,000	0	0	0	0
Aberdeenshire	125,685	0	2,915	122,770	0	0	0
Angus	55,499	39,936	0	0	0	0	15,563
Argyll and Bute	56,836	0	16,036	40,800	0	0	0
Clackmannanshire	33,938	0	0	33,938	0	0	0
Dumfries	88,289	0	0	88,289	0	0	0
Dundee	74,972	0	35,781	0	0	39,191	0
East Ayrshire	75,811	75,811	0	0	0	0	0
East Dunbartonshire	57,642	0	0	0	57,642	0	0
East Lothian*	54,628	54,626	0	0	0	0	0
East Renfrewshire	46,155	0	41,928	0	4,227	0	0
Edinburgh	231,300	0	0	0	231,300	0	0
Eilean Siar	19,664	0	0	19,664	0	0	0
Falkirk	96,226	89,807	0	6,419	0	0	0
Fife	209,455	209,455	0	0	0	0	0
Glasgow	340,083	0	0	0	340,083	0	0
Highland	140,418	0	0	57,193	83,225	0	0
Inverclyde	48,494	0	48,494	0	0	0	0
Midlothian	51,422	0	0	51,422	0	0	0
Moray	54,870	0	0	54,865	5	0	0
North Ayrshire	65,911	63,272	22	2,617	0	0	0
North Lanarkshire	170,996	170,996	0	0	0	0	0
Orkney Islands	11,130	0	1,453	2,026	0	0	7,651
Perth and Kinross	77,715	0	0	76,216	0	0	1,499
Renfrewshire	99,178	0	91,787	4,108	3,283	0	0
Scottish Borders	60,972	0	0	40,358	20,614	0	0
Shetland Islands*	12,241	0	0	2,810	196	9,233	0
South Ayrshire	75,672	0	28,307	47,365	0	0	0
South Lanarkshire	147,175	0	61,835	0	85,340	0	0
Stirling	51,202	0	0	51,202	0	0	0
West Dunbartonshire	55,264	55,264	0	0	0	0	0
West Lothian	94,582	471	94,111	0	0	0	0
Total	2,904,425	759,638	543,669	702,062	825,915	48,424	24,713

* East Lothian Council reported 2 tonnes of waste disposed using incineration without energy recovery outside the local authority area. Shetland Island Council reported 2 tonnes of waste receiving other treatment within the local authority area (oil burner)

† The quantity of waste incinerated does not include any residues recycled or landfilled

Waste Disposal

Local Authority Disposal to Landfill

In 2003/2004, a total of 2.83 million tonnes of waste collected by, or on behalf of, Scottish local authorities was disposed of to landfill. This was around 4% less than the 2.95 million tonnes of waste landfilled in 2002/2003.

Of the waste sent to landfill, 1.30 million tonnes were landfilled at sites having methane recovery and 1.53 million tonnes at sites with no methane recovery. Approximately half the waste landfilled by local authorities was landfilled within the area where it was produced; the rest was exported to other local authority areas for disposal.

The EC Landfill Directive (Council Directive 99/31/EC) aims to reduce as far as possible the negative effects of landfilling waste. The Directive sets targets and timescales for reducing the amount of biodegradable municipal waste (BMW) sent to landfill in the UK. Scotland also has a domestic target to reduce the landfilling of BMW collected by local authorities to 1.5 million tonnes by 2006. The trends in the disposal of BMW to landfills by local authorities are discussed in the final chapter.

Under the Landfill Allowance Scheme, each local authority will be allocated allowances which will convey the right to landfill a certain amount of BMW in a specified scheme year. SEPA will be the monitoring authority for the scheme and will maintain a register of landfill allowances used, banked, borrowed and traded by a local authority. A mass balance calculation will be used to determine the amount of BMW landfilled using a figure of 63% for the biodegradable content of municipal waste. The Landfill Allowance Scheme began in April 2005.

The amount of BMW sent to landfill in 2003/2004 has been calculated using the mass balance approach to give an indication of Scotland's current position with regard to the 2006 target. These data are shown in Table 24 by WSA.

Table 24 – Total amount of waste and BMW landfilled in 2003/2004 by WSA

Waste Strategy Area	Total waste landfilled (tonnes)	Total BMW landfilled* (tonnes)
Orkney and Shetland	6,485	3,397
Western Isles	19,664	13,114
Highland	140,418	89,509
North East	301,555	191,214
Tayside	151,933	95,214
Forth Valley	181,366	114,052
Fife	209,455	135,578
Lothians and Borders	492,902	309,692
Ayrshire, Dumfries and Galloway	305,683	190,643
Glasgow and Clyde Valley	964,987	612,154
Argyll and Bute	56,836	36,609
Total	2,831,285	1,791,175

* The method used to calculate BMW landfilled is set out in the Landfill Allowance Scheme (Scotland) Regulations 2005, Interim Guidance issued by the Scottish Executive in May 2005.

Waste Disposal

Local Authority Energy Recovery

There were two municipal waste incinerators recovering energy from waste operating in Scotland in 2003: one in Dundee and the other on the Shetland Islands. The Dundee facility was licensed to accept 150,000 tonnes of waste per year, including municipal waste, commercial and industrial waste, clinical waste and certain industrial combustible liquid waste. Clinical waste was limited to 15% of the total waste burned in any 12-month period and liquid wastes were limited to 5,000 tonnes in the same period. Energy in the form of electricity was produced by the plant and sold into the National Grid.

The Shetland facility was licensed to deal with a maximum of 26,000 tonnes of waste per year, including municipal waste, commercial and industrial waste (which, because of its nature or composition, is similar to domestic refuse), non-infectious clinical waste and certain types of sewage sludge. Clinical waste was limited to 200 tonnes per year. Waste heat from the facility was used in a district heating scheme.

Five local authorities reported that they had incinerated a total of 73,137 tonnes of waste at these facilities in 2003/2004. A breakdown of this figure is provided in Table 25.

Table 25 – Scottish local authority waste sent for incinerated with energy recovery 2003/2004

Local authority	Incinerated with energy recovery (tonnes)*	
	Within authority	Outside authority
Angus	0	15,563
Dundee	39,191	0
Orkney Islands	0	7,651
Perth and Kinross	0	1,499
Shetland Islands	9,233	0
Total	48,424	24,713

* The quantity of waste incinerated does not include any residues recycled or landfilled

Waste Disposal

Incineration and Thermal Treatment Plants

Many incinerators are not subject to the Waste Management Licensing Regulations 1994 (as amended) because they are regulated either under Integrated Pollution Control (under Part I of the Environmental Protection Act 1990) or the Pollution Prevention and Control (Scotland) Regulations 2000.

In addition to the two municipal waste incinerators, a number of other operational incinerators and thermal treatment plants dealt with commercial and industrial wastes in Scotland during 2003. Many handled only waste arising on-site and were designed to handle specific waste streams such as clinical waste, animal carcasses and other industrial wastes.

Waste Management Licence Facility Disposals

Licensed landfill sites are currently the primary route for the disposal of waste in Scotland.

The total amount of controlled waste sent to Scottish landfills in 2003 was 7.88 million tonnes. This is about 4% less than the 2002 total of 8.22 million tonnes. Waste disposal trends are considered in the final chapter. Of the waste disposed of to landfill in 2003, 51% was classified as mixed ordinary wastes and 42% as mineral wastes. A breakdown of the total amount of waste disposed of to landfill in 2003 for each WSA is given in Table 26.

Information on the types and quantities of special waste that were disposed of to landfill in 2003 is given in Table 27.

Landfill sites operate under a waste management licence issued by SEPA. By October 2007, however, all operational landfill sites in Scotland will be regulated under the Pollution Prevention and Control (PPC) regime controlled by the Landfill (Scotland) Regulations 2003. If sites are to continue operating after that date, they will have to obtain a PPC permit.

Under the Waste Management Licensing Regulations 1994 (as amended), holders of waste management licences are required to make returns to SEPA detailing the types and quantities of waste handled at their site. The data are reported to SEPA on a quarterly basis using the licensed/permitted site return form.

Until April 2004, licence holders were required to describe wastes on the site return form using the European Waste Catalogue – STAT (EWC-STAT) coding system. This system originates from Regulation (EC) No. 2150/2002 on Waste Statistics and is an aggregation of the European List of Wastes (commonly referred to in the UK as the European Waste Catalogue). The EWC-STAT system was designed for ease of reporting to the European Commission by grouping waste of a similar nature under generic headings. This is the system used to report the data in Table 26, which relates to 2003.

In April 2004, the use of the EWC-STAT coding system was replaced by a requirement for licence holders to use the six-digit EWC code to describe waste on licensed site returns to SEPA. This follows an amendment to the Environmental Protection (Duty of Care) Regulations 1991 by the Landfill (Scotland) Regulations 2003 which required the use of the six-digit EWC code to be used to describe waste on waste transfer notes from April 2003. Further information on the European Waste Catalogue is given in Appendices III and IV.

Waste recorded on special waste consignment notes is classified using EWC codes and special waste data in this section are therefore reported by EWC code.

Waste Disposal

Table 26 – Controlled waste disposed of to landfill in Scotland 2003

Waste strategy area*	Waste type by EWC-STAT code (tonnes)							
	1 Chemical compound wastes	2 Chemical preparation wastes	3 Other chemical wastes	4 Radio- active wastes	5 Health care and biological wastes	6 Metallic wastes	7 Non- metallic wastes	8 Discarded equipment
Orkney and Shetland	4	0	92	0	12	463	232	5
Western Isles	0	0	0	0	29	16	43	284
Highland	0	0	0	0	19	99	4,047	269
North East	1,082	0	20,662	0	0	0	15,028	0
Tayside	0	0	1,651	0	491	647	8,279	223
Forth Valley	131	278	12,283	0	518	10	9,852	5,526
Fife	0	0	9,646	0	0	0	4,573	0
Lothians and Borders	3	0	3,909	0	2,689	0	45,709	5,230
Ayrshire, Dumfries and Galloway	0	0	9,222	0	0	63	11,409	3,749
Glasgow and Clyde Valley	9	508	16,859	0	0	1,056	2,718	121
Argyll and Bute	0	0	0	0	0	2,156	1,809	391
Scotland	1,229	786	74,324	0	3,758	4,510	103,699	15,798

Waste strategy area*	Waste type by EWC-STAT code (tonnes)						
	9 Animal and vegetal wastes	10 Mixed ordinary wastes	11 Common sludges	12 Mineral wastes	13 Solidified stabilised or vitrified waste	Uncoded	Total
Orkney and Shetland	3,753	8,651	185	33,290	0	14,967	61,654
Western Isles	1,640	19,132	1,259	13,869	0	1,753	38,025
Highland	2,097	86,608	477	160,372	0	0	253,988
North East	13,417	410,958	0	182,760	52,701	81,064	777,672
Tayside	10,094	263,418	886	279,887	0	0	565,576
Forth Valley	4,516	426,000	3,618	99,876	2,258	0	564,866
Fife	3,956	254,932	1,867	507,272	0	0	782,246
Lothians and Borders	9,046	493,621	5,048	531,177	0	0	1,096,432
Ayrshire, Dumfries and Galloway	41,162	500,281	1,899	387,391	0	0	955,176
Glasgow and Clyde Valley	9,182	1,533,275	20,047	971,434	2,258	0	2,557,467
Argyll and Bute	2,567	52,228	1,215	166,569	0	0	226,935
Scotland	101,430	4,049,104	36,501	3,333,897	57,217	97,784	7,880,037

* A map showing WSAs and their constituent local authorities is presented in Appendix V

Waste Disposal

In 2003, a total of 164,417 tonnes of special waste was consigned to landfill sites in Scotland. This is an increase of nearly 60,000 tonnes over the figure for 2002, but is more than explained by a rise of nearly 77,000 tonnes in the amount of soil (including excavated soil from contaminated sites), stones and dredging spoil disposed of. Much of this waste is believed to originate from large construction projects. Table 27 gives a breakdown of the special waste landfilled by EWC short code for each WSA.

Table 27 – Special waste consigned to landfill in Scotland 2003

Waste strategy area*	Waste type by EWC code† (Tonnes)										
	01	02	03	04	05	06	07	08	09	10	11
Orkney and Shetland	1	0	0	0	0	0	0	0	0	0	0
Western Isles	2	0	0	0	0	0	0	0	0	0	0
Highland	0	0	0	0	0	3	0	0	0	0	0
North East	1,044	0	0	0	174	29	0	14	0	0	0
Tayside	323	0	7	0	0	0	0	16	0	14	0
Forth Valley	46	15	2	0	236	5	110	3	0	459	196
Fife	0	0	0	0	0	0	0	0	0	0	0
Lothians and Borders	0	0	0	0	0	0	14	0	0	0	0
Ayrshire, Dumfries and Galloway	0	0	0	0	0	37	87	53	0	0	0
Glasgow and Clyde Valley	647	0	47	0	399	677	128	203	0	54	1
Argyll and Bute	0	0	0	0	0	0	0	0	0	0	0
Scotland	2,063	15	56	0	808	750	339	290	0	528	197

Waste strategy area*	Waste type by EWC code† (Tonnes)									
	12	13	14	15	16	17	18	19	20	Total
Orkney and Shetland	0	7	0	0	33	54	0	0	0	95
Western Isles	0	70	0	0	0	113	0	0	0	186
Highland	0	0	0	0	17	283	0	0	1	302
North East	0	1,652	3	389	176	113	2	197	8	3,800
Tayside	4	231	0	407	2	7,872	0	117	4	8,997
Forth Valley	25	2,999	0	237	14	10,350	11	62	2	14,773
Fife	0	0	0	0	0	3,143	0	0	0	3,144
Lothians and Borders	0	7	0	0	37	16,622	1	0	0	16,680
Ayrshire, Dumfries and Galloway	21	329	5	49	0	2,006	4	21	4	2,616
Glasgow and Clyde Valley	214	1,523	18	385	98	102,289	8	6,838	277	113,805
Argyll and Bute	0	0	0	0	0	0	0	0	0	0
Scotland	264	6,818	26	1,468	377	142,845	25	7,234	295	164,398*

* A map showing WSAs and their constituent local authorities is presented in Appendix V

† EWC codes (See Appendix III)

01 Mining and minerals

02 Agricultural and food production

03 Wood and paper production

04 Leather and textile production

05 Petrol, gas and coal refining/
treatment

06 Inorganic chemical processes

07 Organic chemical processes

08 Paints, varnish adhesive and inks

09 Photographic industry

10 Thermal process waste (inorganic)

11 Metal treatment and coating processes

12 Shaping/treatment of metals and plastics

13 Oil and oil/water mixtures

14 Solvents

15 Packaging, cloths

16 Not otherwise specified

17 Construction and demolition
waste and asbestos

18 Health care

19 Waste/water treatment and water industry

20 Municipal and similar commercial
wastes

‡ Excludes 19 tonnes of waste that were not coded properly

Waste Related Operational Activities

Waste Management Authorisations

- Registered brokers and carriers
- Waste management licences by activity
- Waste management licences related to special waste
- Waste management licences related to recycling activity
- Waste management licences related to disposal activity
- Post-closure landfill sites
- Landfill site gas and leachate operational controls

Waste Management Regulation

- Inspections of licensed waste management facilities
- Enforcement
- Fly-tipping



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Waste Related Operational Activities

Waste Management Authorisations

Registered brokers and carriers

With a few exceptions, carriers and brokers of waste must register with SEPA or the Environment Agency. Once registered, carriers and brokers may operate throughout the UK. Registration must be renewed every three years.

During 2003/2004, the total number of waste carriers registered in Scotland/Northern Ireland was 6,610.

Waste management licences by activity

Under Part II of the Environmental Protection Act 1990, waste management licences are required for keeping, treating and disposing of wastes. In Scotland these are issued by SEPA. Once a waste management licence has been issued by SEPA, the licence holder is responsible for the licensed activity and aftercare of the site until such time as SEPA accepts the surrender of the licence. In the case of landfill licences, the period of aftercare could be many years.

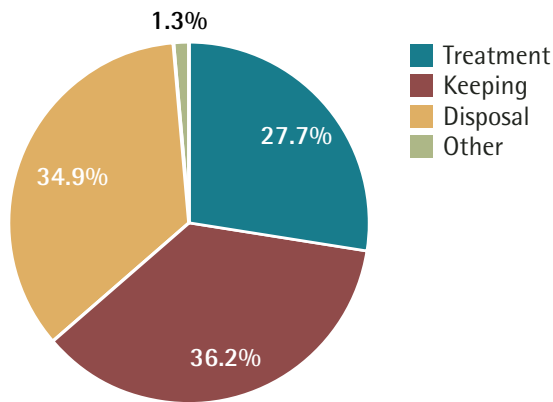
A total of 1,034 licences were in force during 2003/2004. A breakdown of these licences is given in Table 28 and Figure 4. This breakdown was obtained from the SEPA Waste Management Charging Scheme for the financial year 2003/2004. Details of the charging scheme can be found on SEPA's website at www.sepa.org.uk/charging/index.htm

Table 28 – Number of waste management licences by activity 2003/2004

Activity	Number of licences
Treatment	
Recycling	210
Other	76
Keeping	
At civic amenity sites	144
For recycling	48
Other	182
Disposal	
Disposal – operational	232
Post-closure sites	129
Other	
Incinerators	5
Mobile plants	8
Total	1,034

Waste Related Operational Activities

Figure 4 – Waste management licences by activity 2003/2004



Waste management licences related to special waste

There were 112 sites licensed to handle special waste in Scotland in 2003/2004. Table 29 provides a breakdown of this total by activity.

Table 29 – Number of waste management licences authorising the handling of special wastes 2003/2004

Activity	Number of licences
Treating	35
Keeping	53
Disposal – operational	18
Disposal – post-closure	6
Total	112

Waste management licences related to recycling activity

In 2003/2004, there were 210 sites licensed to carry out recycling activities (see Table 30). The licensed capacity is the amount of waste that the site is licensed to handle annually.

Table 30 – Number of licensed recycling operations by licensed capacity 2003/2004

Licensed capacity (tonnes)	Number of licences
75,000 and above	17
25,000 to < 75,000	26
5,000 to < 25,000	42
0 to < 5,000	125
Total	210

Waste management licences related to disposal activity

Landfill is by far the most common disposal route for municipal waste in Scotland, accounting for over 85% of the total waste disposed of in 2003/2004. The 232 landfill sites in operation during 2003/2004 form the principal network of disposal facilities and are shown on the map in Figure 5. A list of licensed sites in Scotland in 2003 is available on the SEPA website at www.sepa.org.uk.

Waste Related Operational Activities

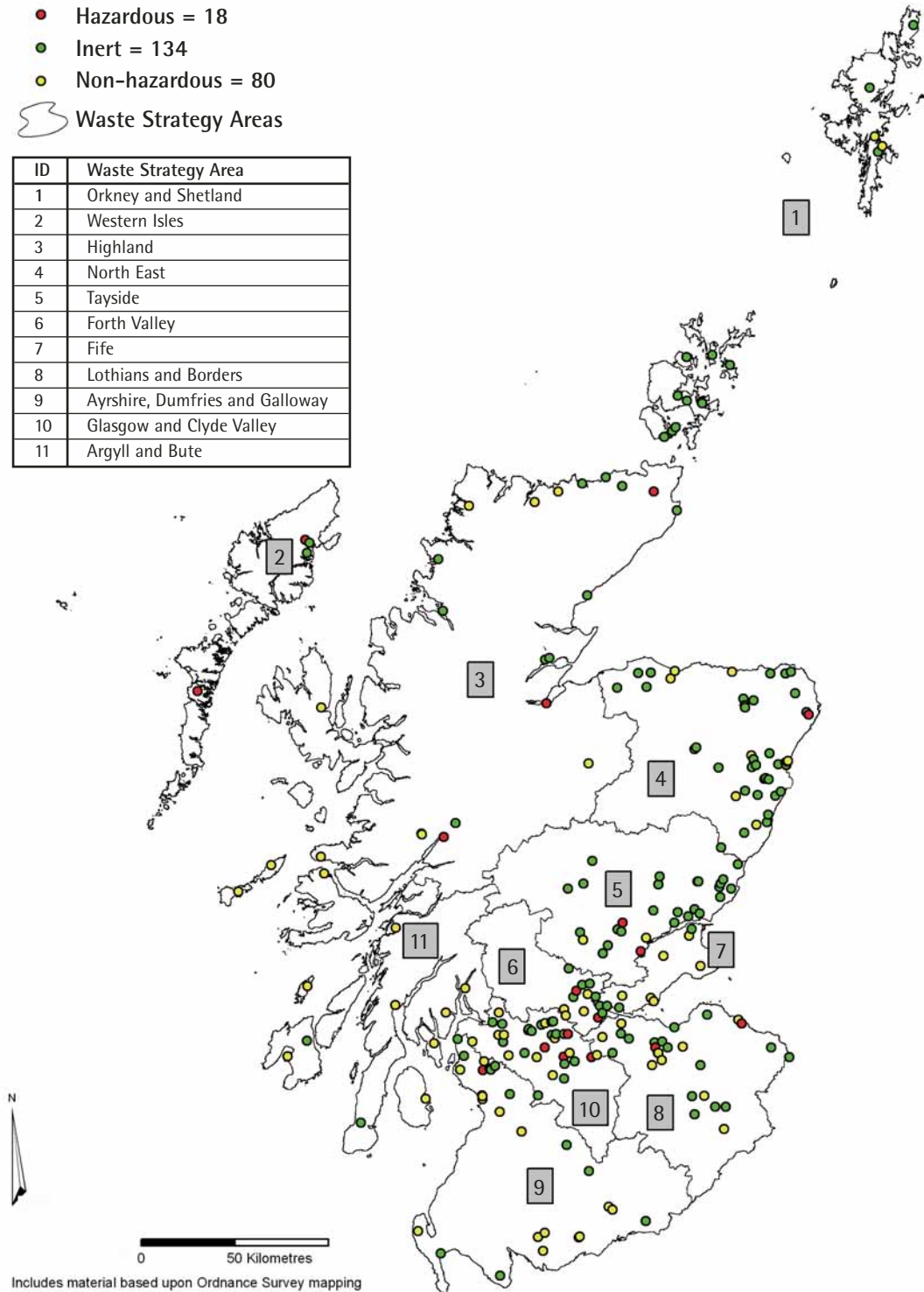
Figure 5 – Landfill sites in Scotland 2003/2004

Waste Classification Sites

- Hazardous = 18
- Inert = 134
- Non-hazardous = 80

 **Waste Strategy Areas**

ID	Waste Strategy Area
1	Orkney and Shetland
2	Western Isles
3	Highland
4	North East
5	Tayside
6	Forth Valley
7	Fife
8	Lothians and Borders
9	Ayrshire, Dumfries and Galloway
10	Glasgow and Clyde Valley
11	Argyll and Bute



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Waste Related Operational Activities

Table 31 – Waste management licences for operational landfills by licensed capacity 2003/2004

Licensed capacity (tonnes)	Number of licences
150,000 and above	12
75,000 to < 150,000	47
25,000 to < 75,000	31
0 to < 25,000	142
Total	232

Post-closure landfill sites

Table 32 shows that 129 licensed sites had ceased landfilling waste and, in 2003/2004, were in their period of aftercare. Post-closure landfill sites are categorised in SEPA's waste management licence charging scheme according to the total weight of waste deposited at the site during its lifetime.

Table 32 – Number of waste management licences for post-closure landfill sites by total waste deposited 2003/2004

Total waste deposited (million tonnes)	Number of licences
2.5 and above	0
1 to < 2.5	16
0.25 to < 1	14
0 to < 0.25	99
Total	129

Landfill site gas and leachate operational controls

Landfill gas and/or leachate management is carried out at some of the larger landfill sites. During 2003, 85 sites undertook some form of gas management; the most common method was venting. Flaring or energy production took place at 25 sites. Leachate management was carried out at 64 sites. Recirculation was the most common method of management but aerobic treatment, waste stabilisation and other methods were also used. Table 33 gives a breakdown of the operational controls in place.

Table 33 – Gas and leachate operational controls at landfill sites 2003

Operational controls*	Number of landfill sites
Gas operational controls	
Energy production	7
Flaring	18
Venting	60
Leachate operational controls	
Recirculation	23
Aerobic treatment	22
Waste stabilisation	3
Other	16

* Some sites employed more than one method of gas or leachate control

Waste Related Operational Activities

Waste Management Regulation

Inspections of licensed waste management facilities

SEPA is required to undertake periodic inspections of all licensed facilities. In the year 2003/2004, SEPA staff made 6,530 planned inspections of waste management facilities.

Enforcement

Enforcement tools are available under the various regulatory regimes operated by SEPA. These range from warning letters to referrals to the Procurator Fiscal. Table 34 records the formal enforcement proceedings with respect to waste instigated by SEPA during 2003/2004.

Table 34 – Waste related enforcement activities 2003/2004

Nature of enforcement	Number
Final warning letters	77
Enforcement notices issued	54
Referrals to procurator fiscal	18
Convictions secured	7
Total	156

Fly-tipping

During the year, the Dumb Dumpers campaign was launched. This initiative, run by the Scottish Fly Tipping Forum, offers a Stop Line (0845 2 30 40 90), which anyone can call to report illegal waste dumping. The Scottish Fly Tipping Forum, whose members include SEPA, local authority representation, Keep Scotland Beautiful, land owners, the Scottish Executive and other interested bodies, was established as a result of a litter and fly tipping review by the Scottish Executive to develop a strategy for reducing the amount of fly tipping across Scotland.

In addition, SEPA fly tipping action plans were implemented in a number of areas during 2003/2004. Known sites were targeted, and enforcement and licensing action taken where appropriate. As a result, fly tipping in certain areas has reduced and remedial action has been taken at a number of sites.

Local authorities were asked to provide separate tonnages (if known) for the clearance of fly-tipped material in the LAWAS 2003/2004. Eight of the 32 local authorities provided this information, which showed that 7,922 tonnes of fly-tipped material were cleared separately. However, most local authorities collect fly-tipped material as part of their mainstream collection rounds and were not able to provide separate tonnages. Therefore, it was not possible to obtain an accurate picture of the level of the fly-tipping problem in Scotland from these data.

Trends and Conclusions

Local Authority Waste Collection

Disposal of Waste to Landfill



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Trends and Conclusions

Local Authority Waste Collection

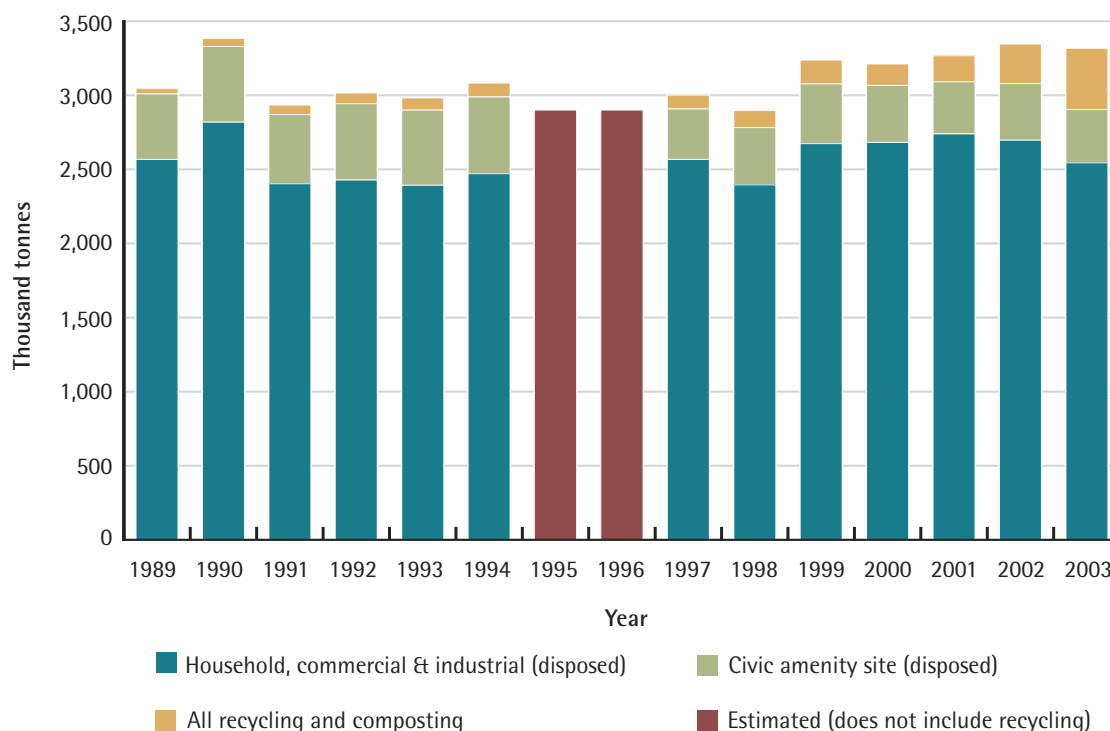
The total local authority waste arisings in 2003/2004 were 3.32 million tonnes. Since 1994 when 3.08 million tonnes was collected, there has been an increase of 7.8%, equating to an annual growth rate of about 0.85%. At this annual growth rate, total annual waste arisings in Scotland could increase to approximately 3.84 million tonnes by 2020.

In contrast, the amount of controlled waste disposed of by Scottish local authorities is starting to fall. Following a peak in 2001/2002 of 3.09 million tonnes, the quantity disposed of has fallen for two successive years and, in 2003/2004, was 2.90 million tonnes. It is too soon to be certain that this trend will continue but a continuing reduction looks possible.

The difference in trends can be explained by the increasing amount of waste being recycled and composted by Scottish local authorities. The total amount of waste recycled and composted rose from 93,400 tonnes in 1997 to 412,600 tonnes in 2003/2004, an increase of 342%. The recycling and composting rate of 3.1% in 1997 had increased to 12.1% by 2003/2004.

Figure 6 and Table 35 present the available data for controlled waste collected by, or on behalf of, Scottish local authorities for recycling, composting and disposal.

Figure 6 – Controlled waste collected by, or on behalf of, Scottish local authorities 1989–2003



Trends and Conclusions

Table 35 – Controlled waste collected by, or on behalf of, Scottish local authorities 1989–2003 (thousand tonnes)

Waste type	1989*	1990*	1991*	1992*	1993*
Waste collected for disposal, of which:					
Household, commercial and industrial	2,567.4	2,818.8	2,403.3	2,427.9	2,392.9
Civic amenity	441.7	510.6	466.5	515.2	507.1
Total waste collected for disposal	3,009.1	3,329.4	2,869.9	2,943.1	2,899.9
Total waste collected for recycling and composting	35.7	54.1	64.5	72.2	82.3
Total local authority waste arisings	3,044.8	3,383.5	2,934.4	3,015.2	2,982.3

Waste type	1994*	1995†	1996†	1997†	1998†
Waste collected for disposal, of which:					
Household, commercial and industrial	2,471.0	n/k	n/k	2,567.6	2,396.0
Civic amenity	518.1	n/k	n/k	340.0	385.7
Total waste collected for disposal	2,989.1	n/k	n/k	2,907.6	2,781.8
Total waste collected for recycling and composting	93.2	n/k	n/k	93.4	115.0
Total local authority waste arisings	3,082.3	n/k	n/k	3,001.0	2,896.8

Waste type	1999§	2000/01¶	2001/02¶	2002/03¶	2003/04¶
Waste collected for disposal, of which:					
Household, commercial and industrial	2,763.9	2,682.2	2,739.6	2,697.0	2,544.6
Civic amenity	402.1	384.6	351.6	381.7	359.9
Total waste collected for disposal	3,166.0	3,066.7	3,091.2	3,078.9	2,904.5
Total waste collected for recycling and composting	162.0	144.7	175.8	266.6	412.6
Total local authority waste arisings	3,328.0	3,211.4	3,267.0	3,345.5	3,317.1

* 1989–1994 figures extracted from Table A1.2 of Scottish Office Bulletin 1994 (refers to 1989–1994 inclusive)

† 1995–1996 figures are not known (n/k)

‡ 1997–1998 figures are taken from the Databridge study by Environmental Resource Management (ERM) for SEPA and the Scottish Executive

§ 1999 figures are based on the National Waste Strategy Strategic Waste Management Baseline Assessments although further work was carried out to complete the dataset

¶ 2000/2001 to 2003/2004 figures are from the respective LAWAS

Trends and Conclusions

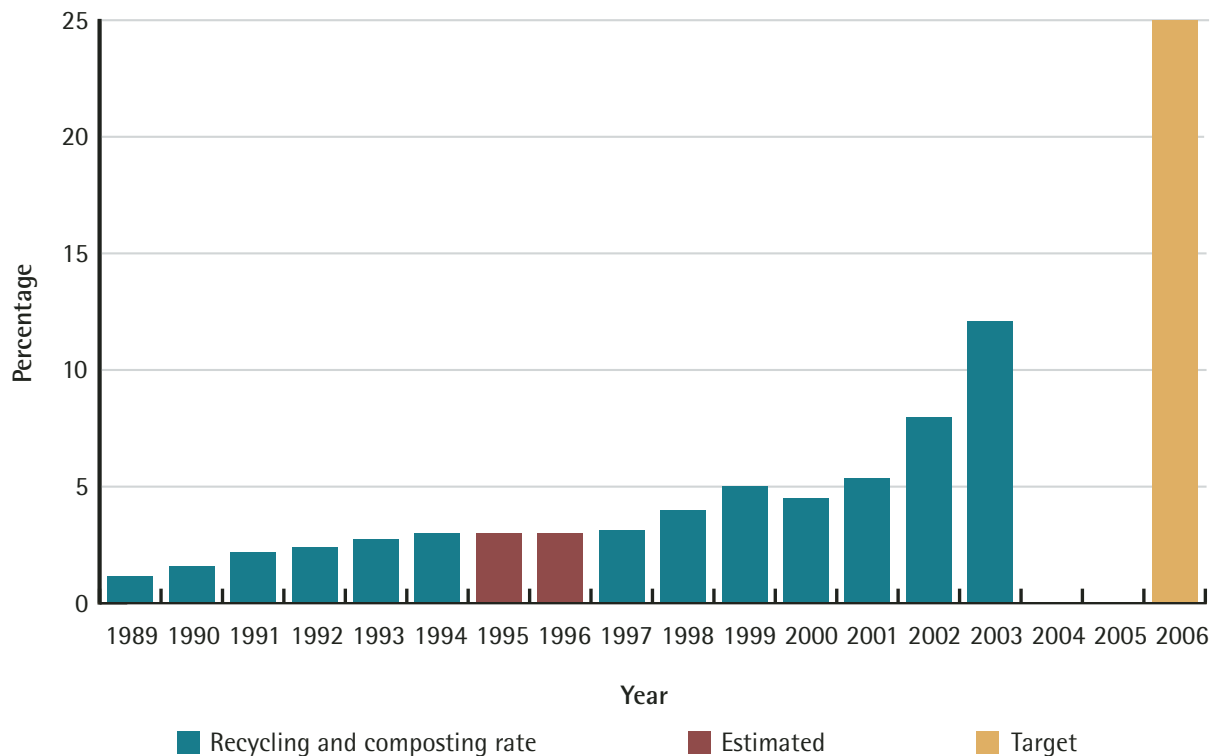
In *Building a Better Scotland* (2002), the Scottish Executive set an overall objective of ensuring progress towards sustainable management of Scotland's waste and achievement of European Union landfill reduction targets by 2010, 2013 and 2020. It also established two interim targets on municipal waste:

- to increase the amount of waste collected by local authorities that is recycled or composted to 25% by 2006; and
- to reduce landfilling of biodegradable waste collected by local authorities to 1.5 million tonnes per year by 2006.

The recycling and composting rate for Scottish local authorities was 12.1% in 2003/2004. This rate has risen significantly in the last two years (2002/2003 and 2003/2004) and preliminary data for the first three quarters of 2004/2005 indicate that this trend will continue. Despite this, 2003/2004 data suggest that local authorities need to double the quantity of waste they recycle and compost to meet the Scottish Executive's target.

Figure 7 shows the annual recycling and composting rate for the period 1989 to 2003/2004 compared with the Scottish Executive's target for 2006.

Figure 7 – Annual average recycling and composting rate for Scottish local authorities 1989–2003

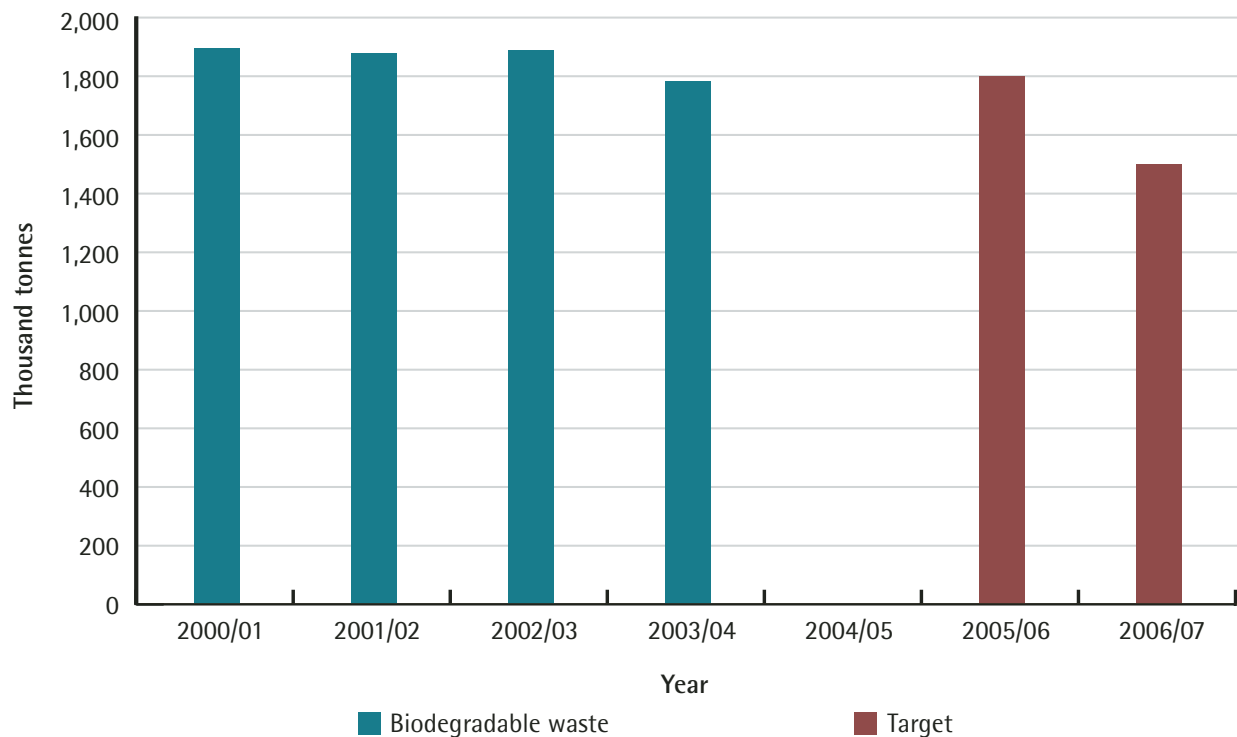


Trends and Conclusions

The quantity of BMW landfilled by local authorities has dropped slightly over the last four years from 1.90 million tonnes in 2000/2001 to 1.79 million tonnes in 2003/2004. It is presently below the target for 2005/2006 but exceeds the target for 2006/2007 by 284,000 tonnes. To calculate the BMW in the years before 2003/2004, it has been assumed that 63% of the waste landfilled was biodegradable. A more accurate mass balance calculation has been used to provide the data for 2003/2004.

Figure 8 shows the quantity of biodegradable waste landfilled by Scottish local authorities compared with the Scottish Executive's target for 2005/2006 and 2006/2007.

Figure 8 – Biodegradable waste landfilled by Scottish local authorities 2000/2001 to 2003/2004



Trends and Conclusions

Disposal of Waste to Landfill

The total amount of controlled waste sent to Scottish landfills in 2003 was 7.88 million tonnes. Since 1994 there has been a clear downward trend in the quantity of waste being disposed of to landfill; the disposal tonnage for 2003 is less than half that for 1994, when 15.88 million tonnes of controlled waste were disposed of.

Part of the fall appears to be due to less construction and demolition (C&D) waste being disposed of over this period. A decline in the amounts of C&D waste going to landfill could reflect a reduction in the amount of C&D waste generated, an increase in the percentage of waste re-used or recycled, or an increase in unauthorised landfilling or fly tipping. For example, the landfill tax of £2 per tonne for inactive waste, introduced in October 1996, has encouraged producers to look for alternative uses for C&D waste. In addition, the Aggregates Levy, which began in April 2002, seeks to incorporate a range of environmental costs into the price of virgin aggregate and to encourage the use of alternative materials. The Levy, which was set at a rate of £1.60 per tonne on virgin aggregate commercially exploited in the UK, encourages the recycling of C&D wastes.

The landfill tax for active materials currently stands at £18 per tonne and will rise by £3 per tonne on the landfill tax escalator until it reaches a medium to long term figure of £35 per tonne. This will encourage alternative routes to disposal for wastes.

The system for classifying the waste disposed changed in 2001 when operators were asked to use the EWC-STAT coding system. This is a more comprehensive system than the one used previously and gives a better breakdown of wastes deposited. However, the change means that it is not possible to make a direct comparison of individual categories of waste disposed of before and after 2001.

The Landfill (Scotland) Regulations 2003, which came into force in April 2003, enacted the requirements of the Landfill Directive (1999/31/EC) into Scottish law. Among its requirements are that:

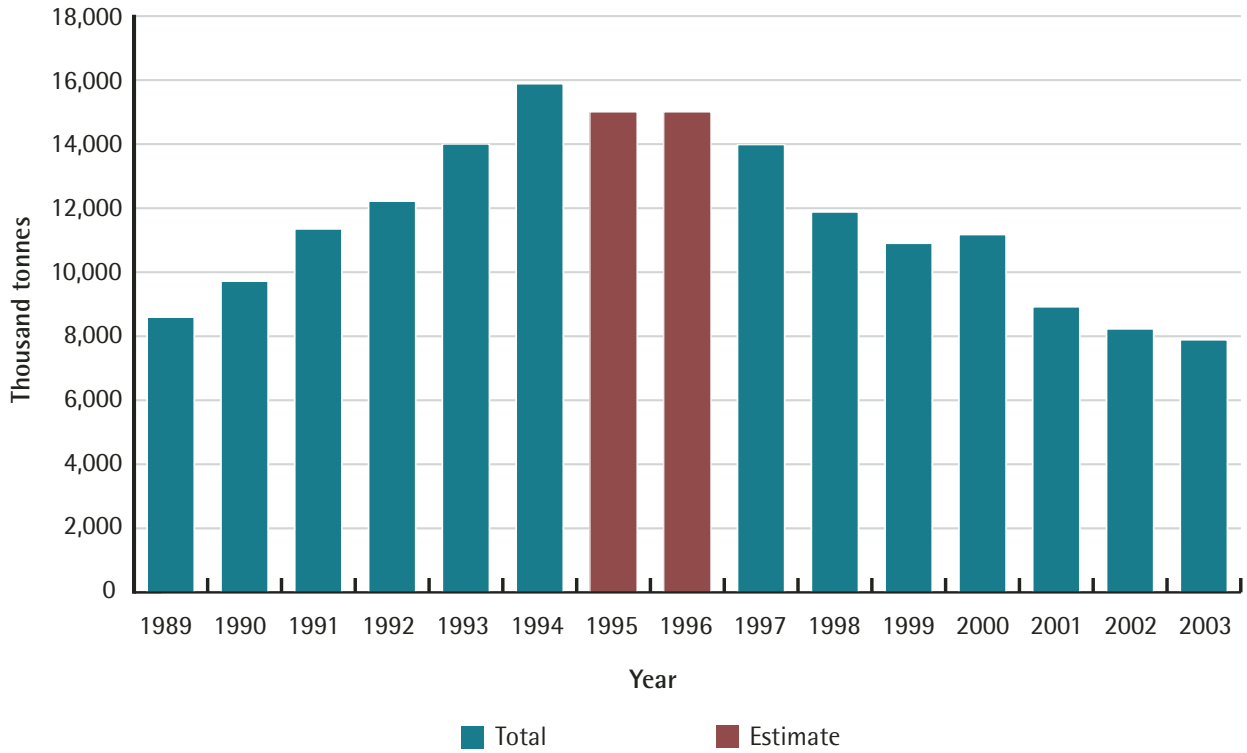
- landfills will only be able to take wastes that have been pre-treated;
- specific wastes are banned from landfill, namely:
 - liquid waste;
 - explosive, corrosive, oxidising, highly flammable or flammable waste;
 - infectious hospital and other clinical waste from medical or veterinary establishments;
 - chemicals from research and development or teaching activities which are not identified and/or are new and whose effects are not known;
 - whole used tyres by 2003 and shredded used tyres by 2006; and
 - any other type of waste, which does not fulfil the waste acceptance criteria.

Although the Regulations only operated for part of 2003, changes in the wastes being disposed of at landfill sites can already be seen. Compared with the 2002 returns, the quantity of health care and biological wastes has fallen by 50% and the quantity of chemical and physical process wastes by 48%.

The total amounts of controlled wastes landfilled in Scotland from 1989 to 2003 are presented in Figure 9 and Table 36.

Trends and Conclusions

Figure 9 – Controlled waste landfilled in Scotland 1989–2003



Trends and Conclusions

Table 36 – Controlled waste landfilled in Scotland 1989–2003 (thousand tonnes)

Waste type	1989*	1990*	1991*	1992*	1993*
Household	2,223.60	2,213.80	2,291.30	2,246.60	2,336.10
Commercial	1,948.90	1,437.00	1,667.50	1,733.80	1,790.60
Industrial (total)	4,412.90	6,058.80	7,384.50	8,229.40	9,862.10
Other	-	-	-	-	-
EWC-STAT	-	-	-	-	-
Total	8,585.40	9,709.60	11,343.30	12,209.80	13,998.80
Industrial (C&D)	n/k	3,709.00	5,217.90	4,847.30	6,714.60
Industrial (other)	n/k	2,349.70	2,166.60	3,382.10	3,147.50
Industrial (total)	4,412.90	6,058.80	7,384.50	8,229.40	9,862.10

Waste type	1995†	1996†	1997‡	1998‡	1999‡
Household	n/k§	n/k	2,698.00	2,990.90	2,888.90
Commercial	n/k	n/k	2,218.00	2,024.00	2,003.00
Industrial (total)	n/k	n/k	8,959.50	6,767.90	5,946.30
Other	n/k	n/k	103.1	90.7	57.9
EWC-STAT	n/k	n/k	-	-	-
Total	15,000.00	15,000.00	13,978.50	11,873.40	10,896.20
Industrial (C&D)	n/k	n/k	7,007.50	5,096.90	4,277.00
Industrial (other)	n/k	n/k	1,951.90	1,671.10	1,669.30
Industrial (total)	n/k	n/k	8,959.40	6,767.90	5,946.30

Waste type	2000¶	2001¶	2002¶	2003¶
Household	2,494.20	2,534.30	n/a**	n/a**
Commercial	1,574.00	691.1	n/a	n/a
Industrial (total)	7,006.60	2,757.30	n/a	n/a
Other	90.9	499.1	n/a	n/a
EWC-STAT	-	2,429.50	n/a	n/a
Total	11,165.70	8,911.20	8,219.80	7,880.00
Industrial (C&D)	3,952.60	2,175.90	n/a	n/a
Industrial (other)	3,054.00	581.4	n/a	n/a
Industrial (total)	7,006.60	2,757.30	n/a	n/a

* 1991–1994 figures extracted from Table A1.2 of Scottish Office Bulletin 1994 (refers to 1991–1994 inclusive)

† 1995–1996 values are estimates. No specific data were available for these years

‡ 1997–1998 figures are taken from the Databridge study by Environmental Resource Management (ERM) for SEPA and the Scottish Executive

§ Figures are not known (n/k)

¶ 1999–2003 SEPA waste management licensed site returns

**n/a - cannot be derived from new coding system



Appendices

- Appendix I - Glossary
- Appendix II - Acronyms and Abbreviations
- Appendix III - European Waste Catalogue List of Waste (EWC 2002)
- Appendix IV - European Waste Catalogue - STAT (EWC-STAT)
- Appendix V - Waste Strategy Area Map
- Appendix VI - Accredited Reprocessors and Exporters of Packaging Waste 2003
- Appendix VII - Licensed Sites in Scotland in 2003

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Appendix I

Glossary

Biodegradable waste	Waste that is capable of undergoing anaerobic or aerobic decomposition, such as food or garden waste and paper and cardboard, i.e. waste that rots
Civic amenity site	Facility provided under Section 1 of the Refuse Disposal (Amenity) Act 1978
Commercial waste	Waste arising from premises that are used wholly or mainly for trade, business, sport, recreation or entertainment, excluding household and industrial waste (as defined in Environmental Protection Act 1990, Section 75)
Composting	The controlled biological decomposition and stabilisation of biodegradable materials (such as organic garden and kitchen wastes) under predominantly aerobic (oxygen-rich) conditions to produce a humus rich, sanitised and stabilised product that can be beneficial to soil
Construction and demolition waste	Arising from the construction, repair, maintenance and demolition of buildings and structures. It mostly includes brick, concrete, hardcore, subsoil and topsoil, but it can also include quantities of timber, metal and plastics
Controlled waste	Household, industrial and commercial waste or any such wastes that require a waste management licence for treatment, transfer or disposal (as defined by Environmental Protection Act 1990, Section 75)
EC Directive	A European Community legal instruction which is binding on all Member States and must be implemented through the legislation of Member State governments within a prescribed timescale
Energy from waste (EfW)	The recovery of energy value from waste by burning the waste directly, or by burning a fuel produced from the waste
Gas controls	Methods to control the emission of methane from landfill sites
Green waste	'Green and wood waste' means vegetable waste from gardens and parks, tree cuttings, branches, grass, leaves (with the exception of street sweepings), sawdust, wood chips and other wood waste not treated with heavy metals or organic compounds
Home composting	Compost can be made at home using a traditional compost heap, a purpose designed container or a wormery
Household waste	Waste from domestic properties including waste from caravans, residential homes and premises forming part of an educational establishment or part of a hospital or nursing home
Incineration	The controlled burning of waste, either to reduce its volume, or its toxicity

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Industrial waste	Waste from a factory (within the meaning of the Factories Act 1961) or from any premises used for, or in connection with: <ul style="list-style-type: none"> → provision of public transport; → public supply of gas, water, electricity or sewerage services; → provision to the public of postal or communication services.
Integrated Pollution Control	Integrated Pollution Control (IPC) is a system established, under Part I of the Environmental Protection Act 1990 to control pollution from industry
Kerbside collection	Any regular collection of recyclable or compostable materials from premises. Excludes collection services delivered on demand
Landfill sites	Areas of land in or on which waste is deposited
Leachate controls	Methods to control the emission and quality of leachate from landfill sites
Material Reclamation Facility (MRF)	A facility to process wastes for the purpose of recovering useful materials using a variety of processes to separate out different materials, ranging from manual sorting to advanced mechanical separation techniques
Mixed organic waste	Waste for composting that includes both kitchen waste and garden waste
Municipal waste	Household waste and any other waste under the control of local authorities or their agents acting on their behalf
National Waste Strategy	Establishment of eleven Waste Strategy Groups across Scotland. The groups are charged with making the national strategy a reality at a local level, developing local solutions in response to local needs
Packaging waste	Comprises waste arising from 'all products made of any materials of any nature to be used to the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods, from the producer to the use or the consumer' as defined in Directive 94/62/EC on Packaging and Packaging Waste
Recovery	Generating value from wastes from a wide variety of activities such as recycling, composting and energy recovery
Recyclables	Materials that are capable of being recycled
Recycling	Using waste materials in manufacturing other products of an identical or similar nature, as defined by the Organisation for Economic Co-operation and Development in Strategic Waste Prevention(OECD, 2000)
Registered waste broker	Someone registered who makes arrangements on behalf of others to handle, transport, dispose or recover controlled waste, but does not handle, transport, dispose or recover the waste themselves
Registered waste carrier	Someone registered to transport controlled waste by road, rail, air, sea or inland waterways

Appendix I

Reprocessor	A company that recycles materials. Only 'accredited reprocessors' can issue PRNs
Strategic Waste Management Baseline Assessment	An assessment and description of the existing waste management in an area. Examines wastes arisings, waste management facilities and capacities, imports and exports of waste, existing contract arrangements and demographics such as population and household numbers
Thermal treatment	A broad generic term covering processes that involve the use of heat to treat waste. Incineration is the most common thermal treatment process. Pyrolysis and gasification are other high temperature processes but there are also low temperature processes used, for example, in technologies producing refuse-derived fuel (RDF)
Transfer station	A site to which waste is delivered for sorting or compacting prior to transfer to another place for recycling, treatment or disposal
Waste	Any substance or object in the categories set out in Annex 1 of the Waste Framework Directive (91/156/EEC), which the holder discards or intends or is required to discard
Waste arisings	The amount of waste generated in a given locality over a given period of time

Appendix II

Acronyms and Abbreviations

BMW	biodegradable municipal waste
C&D	construction and demolition waste
EC	European Commission
EEC	European Economic Community
ELVs	end-of-life vehicles
EU	European Union
EWC	European Waste Catalogue
IPC	Integrated Pollution Control
LAWAS	Local Authority Waste Arisings Survey
MRF	materials recycling facility or material reclamation facility
MSW	municipal solid waste
PERN	Packaging Waste Export Recovery Note
PRN	Packaging Waste Recovery Note
PPC	Pollution Prevention and Control
SEPA	Scottish Environment Protection Agency
UK	United Kingdom
WEEE	waste electrical and electronic equipment
WML	Waste Management Licence
WSA	Waste Strategy Area

Appendix III

European Waste Catalogue List of Waste (EWC 2002)

The EWC List of Waste is a harmonised, non-exhaustive list of waste types, established by European Commission Decision 2000/532/EC, and will be periodically reviewed. It categorises wastes based on a combination of what they are and the process or activity that produces them.

It 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. Each subchapter is represented by a four-digit code, the first two digits relate to the chapter, whilst the final two digits relate to the sub-chapter. 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 (*). Hazardous waste entries can also have a non-hazardous 'mirror entry', which will appear consecutively but one will be marked with an asterisk (*), normally with reference to 'containing dangerous substances', for example:

- 17 05 03* Soil and stones containing dangerous substances
- 17 05 04 Soil and stones other than those mentioned in 17 05 03

Chapters of the list

- 01 Wastes resulting from exploration, mining, quarrying, physical and chemical treatment of minerals
- 02 Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing
- 03 Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
- 04 Wastes from the leather, fur and textile industries
- 05 Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal
- 06 Wastes from inorganic chemical processes
- 07 Wastes from organic chemical processes
- 08 Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks
- 09 Wastes from the photographic industry
- 10 Wastes from thermal processes
- 11 Wastes from chemical surface treatment and coating of metals and other materials; non-ferrous hydro-metallurgy
- 12 Wastes from shaping and physical and mechanical surface treatment of metals and plastics
- 13 Oil wastes and wastes of liquid fuels (except edible oils, 05 and 12)
- 14 Waste organic solvents, refrigerants and propellants (except 07 and 08)
- 15 Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
- 16 Wastes not otherwise specified in the list
- 17 Construction and demolition wastes (including excavated soil from contaminated sites)
- 18 Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)
- 19 Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
- 20 Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions

The full list can be found at: http://europa.eu.int/eur-lex/en/consleg/pdf/2000/en_2000D0532_do_001.pdf

Appendix IV

European Waste Catalogue – STAT (EWC-STAT)

Regulation (EC) No. 2150/2002 of the European Parliament and of the Council of 25 November 2002 on Waste Statistics lays down the details of the type of information on waste that member states should transmit to the Commission as well as a number of definitions and classifications that must be observed. One of these classifications is EWC-STAT, a (mainly) substance oriented statistical classification of waste. EWC-STAT is an aggregation of the European List of Waste (LOW) for statistical purposes.

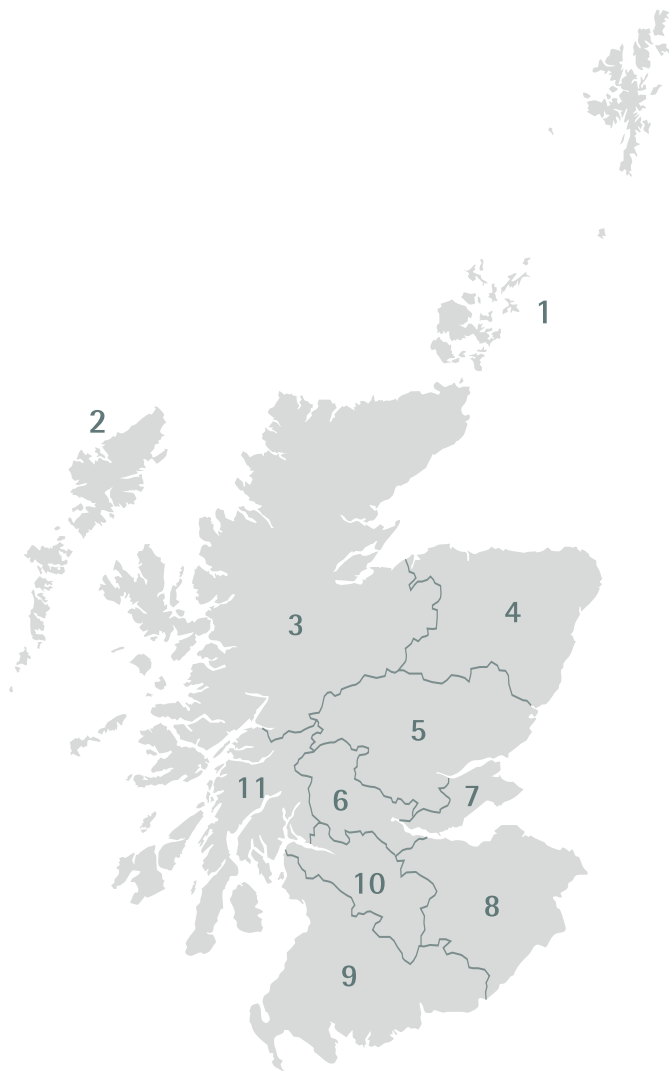
Commission Regulation (EC) No. 574/2004 of 23 February 2004 establishes a table of equivalence between the EWC-STAT and the list of waste established by Commission Decision 2000/532/EC. Full information can be found at: http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/l_090/l_09020040327en00150047.pdf

The main categories from the table of equivalence are as follows:

- 01 Chemical compound wastes
- 02 Chemical preparation wastes
- 03 Other chemical wastes
- 04 Radioactive wastes
- 05 Health care and biological wastes
- 06 Metallic wastes
- 07 Non-metallic wastes
- 08 Discarded equipment
- 09 Animal and vegetal wastes
- 10 Mixed ordinary wastes
- 11 Common sludges
- 12 Mineral wastes
- 13 Solidified, stabilised or vitrified waste

Appendix V

Waste Strategy Area Map



Waste Strategy Areas and their Constituent Local Authorities

- 1 **Orkney & Shetland**
- 2 **Western Isles**
- 3 **Highland**
- 4 **North East**
Moray, City of Aberdeen and Aberdeenshire
- 5 **Tayside**
City of Dundee, Angus and Perth & Kinross
- 6 **Forth Valley**
City of Stirling, Clackmannanshire and Falkirk
- 7 **Fife**
- 8 **Lothian & Borders**
City of Edinburgh, West Lothian, Midlothian, East Lothian and The Scottish Borders
- 9 **Ayrshire, Dumfries & Galloway**
North Ayrshire, East Ayrshire, South Ayrshire and Dumfries and Galloway
- 10 **Glasgow & Clyde Valley**
Inverclyde, Renfrewshire, East Renfrewshire, City of Glasgow, South Lanarkshire, North Lanarkshire, East Dunbartonshire and West Dunbartonshire
- 11 **Argyll & Bute**

Appendix VI

Accredited Reprocessors and Exporters of Packaging Waste 2003

Reprocessors accredited in 2003

Name of company	Site	Registration number	Principal operation
A W Jenkinson Woodwaste Ltd	Carriden Industrial Estate, Bo'ness	SR2001327	Wood
Adam Robertson & Co Ltd	Newcalder Paper Mill, West Lothian	SR199832	Paper
Allglass Reprocessors Ltd	49 Burnbrae Road, Linwood	SR2002387	Glass
Armstrong Waste Management Ltd	Newton Road Industrial Estate, Dumfries	SR1998109	Paper Composting
Armstrong Waste Management Ltd	Newton Road Industrial Estate, Dumfries	SR1998277	Wood Composting
BPB Paperboard	Davidson Mill, Aberdeen	SR199831	Paper
bpi.recycled products – Dumfries	College Road, Dumfries	SR199896	Plastic
bpi.recycled products – Greenock	96 Port Glasgow Road, Greenock	SR1998111	Plastic
bpi.recycled products – Heanor	Heanor Gate, Derbyshire	SX199936	Plastic Export
C K Polymers	Charlesfield Industrial Estate, St Boswells	SR2002357	Plastic
Caledonian, Ferguson, Timpson	5 Atholl Avenue, Glasgow	SR1998297	Plastic
Christie & Son (Metal Merchants)	Lobnitz Dock, Renfrew	SX199926	Steel Export
Comhairle Nan Eilean Siar	Bennadrove Landfill Site, Isle of Lewis	SR2001339	Glass
Comhairle Nan Eilean Siar	Rueval Landfill Site, Benbecula	SR2003403	Glass
Dobbies Garden Centres plc	Melville Nurseries, Lasswade	SR2002379	Energy from waste
Dundee Energy Recycling Ltd	Forties Road, Dundee	SR1998235	Energy from waste
Egger (Barony) Ltd	Former Barony Colliery, Auchinleck	SR2002380	Wood
FBI Glasgow	PO Box 8, Troon	SX199933	Paper Export
Independent Waste Paper Producers Ltd	Daventry, Northants	SX200118	Paper Export
John Lawrie (Aberdeen) Limited	Forties Road, Montrose	SX199934	Steel Export
John R Adam & Sons Limited	Riverside Berth, Glasgow	SX199927	Steel Export
John R Adam & Sons Limited	Riverside Berth, Renfrew Road, Glasgow	SX199940	Aluminium Export
John W Hannay & Co Ltd	Linwood Avenue, East Kilbride	SR199821	Paper
M McKenzie	Old Pentland Sawmill, Midlothian	SR1998283	Wood
Mac-Glass Recycling	Dalhousie Business Park, Bonnyrigg	SR1998112	Glass
Nexfor Limited	Station Road, Stirling	SR1998238	Wood
North East Pallet Services Ltd	East Tullos Industrial Estate, Aberdeen	SR2002390	Wood
Plastic Polymer Processors Ltd	12 Inchyra Road, Grangemouth	SR2001338	Plastic
Plastic Technology Services Limited	Garroch Business Park, Dumfries	SR1998284	Plastic
R M Supplies (Inverkeithing) Ltd	The Bay, Inverkeithing, Fife	SX199941	Steel Export
Robert Cullen & Sons Limited	10 Dawsholm Avenue, Glasgow	SR1998219	Paper
Rockware Glass Ltd	Portland Plant, Ayrshire	SR1998126	Glass
Shetland Amenity Trust	Cunningham Industrial Estate, Shetland	SR2003407	Glass
Shetlands Islands Council	Greenhead, Lerwick, Shetland	SR1998261	Energy from waste
Smith, Anderson & Company Ltd	Fettykil Mills, Leslie, Fife	SR1998113	Paper
Snowie Limited	Lambhill Farm, Blairingone	SR2000300	Paper Composting
Snowie Limited	Lambhill Farm, Blairingone	SR2000302	Wood Composting

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Exporters accredited in 2003

Name of company	Site	Registration number	Principal operation
Solway Recycling Ltd	Rigghead Farm, Dumfries	SR2003406	Plastic
Solway Recycling Ltd	Rigghead Farm, Dumfries	SX200113	Plastic Export
Tracey Timber Recycling Limited	Burnbrae Road, Linwood	SR1998244	Wood
United Glass Ltd	Glasshouse Loan, Alloa	SR1998114	Glass
Vencel Resil Ltd	160 East Wellington Street, Glasgow	SR199894	Plastic
Viridor EnviroScot Limited	Langmuir Way, Glasgow	SR2002400	Wood
Wastepack UK Limited	Pishiobury House, Hertfordshire	SX199929	Plastic Export

Appendix VII

Licensed Sites in Scotland in 2003

Licence Holder	Site	WML number	National grid reference
Landfill Sites *Licensed to accept special waste			
*Alcan	Alcan, Lochaber Works	WML/N/50084	NN125753
*Binn Landfill (Glenfarg) Ltd	Binn Farm, Glenfarg	WML/E/00298	NO178142
*British Steel plc	Secure Containment Facility	WML/W/00024	NS768578
*Comhairle nan Eilean Siar	Bennadrove, Stornoway, Isle of Lewis	WML/N/50028(a)	NB386345
*Comhairle nan Eilean Siar	Rueval, Isle of Benbecula	WML/N/50029(a)	NF811535
*Highland Council	Longman, Inverness	WML/N/50036	NH675469
*Highland Council	Seater Landfill Site, Bower, By Wick	WML/N/50055	ND248603
*I & H Brown (Plant) Ltd	Battleby, Redgorton, Perth	WML/E/20131	NO082295
*Levenseat Ltd	Muldron Quarry, near Fauldhouse	WML/E/00047	NS915575
*Patersons of Greenoakhill Ltd	Greenoakhill, Glasgow	WML/W/00036	NS666627
*Shanks Avondale Ltd	Avondale Quarry, Polmont	WML/E/20170	NS951787
*Shanks Ltd	Greengairs, Airdrie	WML/W/00001	NS789698
*Shanks Ltd	Wester Hatton Landfill, Balmedie, Aberdeenshire	WML/N/20210	NJ954152
*Stirling Council	Lower Polmaise Landfill, By Fallin, Stirling	WML/E/20076	NS834931
*Stoneyhill Waste Management Ltd	Stoneyhill Quarry, Peterhead	WML/N/20183	NK076409
*Viridor Ltd	South Quarry, Oxwellmains, Dunbar	WML/E/00079	NT720755
*Waste Recycling Group Ltd	Oastslie (No 7) Sandpit, Roslin, Midlothian	WML/E/00097	NT258626
*William Tracey Limited	Barkip Landfill	WML/W/00005	NS335505
A & M Smith	Bankhead, Portlethen	WML/N/20143	NO928996
Aberdeenshire Council	Brandon Howe Landfill, Inverboyndie, Banff	WML/N/20020	NJ667638
Aberdeenshire Council	Crows Nest Landfill, Raemoir Road, Banchory	WML/N/20019	NO688973
Aberdeenshire Council	Pitdrichie Landfill, Drumlithie	WML/N/20021	NO798819
Aberdeenshire Council	Burnside Quarry, Leylodge, Kintore	WML/N/20065	NJ774127
Aberdeenshire Council	Govals Quarry, Lumsden	WML/N/20091	NJ477232
Aberdeenshire Council	Millmoss Landfill, Turriff	WML/N/20036	NJ728493
Aggregate Industries Plc	Upper Townhead Farm, Kintore	WML/N/20060	NJ782170
Aggregate Industries UK Ltd	Fledmyre, Montrose Road, Forfar (Site 2)	WML/E/00214	NO487516
Alcan Chemicals Europe	Whinneyhall Landfill, Burntisland	WML/E/00261	NT248874
Alexander Sandison & Sons Ltd	Hagdale Quarry, Baltasound, Shetland	WML/N/05001	HP638101
Andrew Cook (Containers) Ltd	Belliston Quarry, Arncroach	WML/E/00291	NO498063
Angus Council	Restenneth Landfill Site, Montrose Road, Forfar	WML/E/20140	NO483515
Argyll and Bute Council	Glengorm Landfill Site, Tobermory, Isle of Mull	WML/W/20045(a)	NM488558
Argyll and Bute Council	Bonaveh Landfill Site, Isle of Colonsay	WML/W/20048	NR398955
Argyll and Bute Council	Cliad Landfill Site, Isle of Coll	WML/W/20046	NM204602
Argyll and Bute Council	Garetbreck Landfill Site, Bowmore, Isle of Islay	WML/W/20049	NR291579
Argyll and Bute Council	Gott Bay Landfill Site, Isle of Tiree	WML/W/20047	NM028462
Argyll and Bute Council	Ballygrant Quarry, Ballygrant	WML/W/0022027	

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Licence Holder	Site	WML number	National grid reference
Armstrong Waste Management Ltd	Auchenlosh Quarry, Dalbeattie (Phase II)	WML/W/00272	NX853614
Banchory Contractions Ltd	South Hirn, Crathes, Banchory	WML/N/20179	NJ737002
Bardon Aggregates	West Quarry, Charlestown	WML/E/00247	NT065840
Barr Ltd	Garlaff Quarry, Cumnock	WML/W/00238	NS542176
Barr Ltd	Site 5, Mid Auchencarroch Farm, Jamestown	WML/W/00021	NS420813
Barr Ltd	Clayshant, Sandhead	WML/W/00251	NX110525
Blue Circle Industries plc	North Quarry, Dunbar	WML/E/00073	NT700775
Booth Plant & Equipment Ltd	Tarbolton Moss Landfill Site, Tarbolton	WML/W/20006	NS426283
Borderland Reclamation Ltd	Meigle Potts, Clovenfords, By Galashiels	WML/E/20153	NT453365
British Petroleum	Caldback Ness, Sullom Voe	WML/N/50100	HU403765
Bruce Plant Hire	Arnhall Quarry, Edzell	WML/E/00225	NO608697
Bruce Plant Hire	Lochburn Quarry, Stonehaven	WML/N/20146	NO854832
Bruce Plant Hire	Ury Quarry, Stonehaven	WML/N/20148	NO860874
Bruce Plant Hire	Bedentoy Landfill,Portlethen, Aberdeen	WML/N/20190	
Burnthills Demolition	Summerston Farm, Balmore Road, Glasgow	WML/W/00029	NS581725
C & S Smith	Drumsleed, Fordoun	WML/E/00226	NO733777
C A Duguid & Sons	Knapps of Thernie, Turriff	WML/N/20126	NJ738446
Chap Quarries (Aberdeen) Ltd	Park Quarry, Durris	WML/N/20044	NO804979
Clackmannanshire Council	Black Devon Landfill Site, Bowhouse Road, Alloa	WML/E/20023	NS895913
D Geddes (Contractors) Ltd	Ardownie Quarry, Monifieth	WML/E/00231	NO493345
D Geddes (Contractors) Ltd	Border Quarry, Leysmill, Froikheim	WML/E/00216	NO600485
D Geddes (Contractors) Ltd	Kinnell, Friockheim	WML/E/00218	NO607503
D Geddes (Contractors) Ltd	Lochaber, Arbroath	WML/E/00223	NO604433
D Geddes (Contractors) Ltd	Prettycur, Hillside, Montrose	WML/E/00217	NO698608
Dumfries & Galloway Council	Galdenoch, Leswalt, Stranraer	WML/W/20022(a)	NW988644
Dumfries & Galloway Council	Locharmoss Waste Disposal Site, Dumfries	WML/W/20013	NY007774
Dumfries & Galloway Council	Blacks Plantation Landfill Site, Whithorn	WML/W/20024	NX428406
Dumfries & Galloway Council	Gatelawbridge Waste Disposal Site, Thornhill	WML/W/20018	NX902965
Dumfries & Galloway Council	St Mary's Street Disposal Site, Sanquhar	WML/W/20016	NS782104
Dumfries & Galloway Council	Corsehill Waste Disposal Site, Annan	WML/W/20008	NY206697
Dumfries & Galloway Council	Aucheninnes Landfill Site, Dalbeattie	WML/W/20020	NX848609
Dundee City Council	Longhaugh Landfill, Pitkerro Road, Dundee	WML/E/20081	NO433329
Dundee City Council	Riverside Landfill, Wright Avenue, Dundee	WML/E/20079(b)	NO360295
E W G Dickey & Co	Kingsdale, Firth, Orkney	WML/N/50070	HY378115
E Bowman	Duisky-2, Kinlochiel	WML/N/50072	NN009767
East Ayrshire Council	Milton Landfill Site, Crookedholm, Kilmarnock	WML/W/20144	NS480376
East Coast Skips	Hope Quarry, Near Pathhead	WML/E/00092	NT403630
East of Scotland Water Authority	Upperside Quarry, Near Temple	WML/E/00085	NT291559
East of Scotland Water Authority	Broadside Reservoir, Denny	WML/E/00025	NS769831
East of Scotland Water Authority	Craggans Hill, Glenturret	WML/E/00299	NN856243
Easter Hatton Environmental (Waste Away) Ltd	Easter Hatton Farm, Balmedie	WML/N/20007	NJ965157

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Licence Holder	Site	WML number	National grid reference
Easter Hatton Environmental (Waste Away) Ltd	Site 3, Easter Hatton Farm, Balmedie	WML/N/20195	NJ967161
Edgar Allan Ltd	Balbarnie Works, Whitburn Road, Bathgate	WML/E/00026	NS974682
Falkirk Council	Kinneil Kerse Landfill Site, Bo'ness	WML/E/20012	NS975810
Fife Council	Lochhead Landfill Site, By Wellwood, Fife	WML/E/20087	NT080903
Fife Council	Lower Melville Wood, By Ladybank, Fife	WML/E/20063	NO300117
G & F Milne	Bodychell Landfill, Memsie, Fraserburgh	WML/N/20118	NJ954629
G S Brown Construction Ltd	North Ballo Quarry	WML/E/00309	NO247359
Glasgow City Council	Kilgarth, Gartgill Road, Coatbridge	WML/W/00071	NS719675
Glasgow City Council	South Cathkin Landfill, East Kilbride	WML/W/20147	NS624574
Glasgow City Council	Summerston Landfill, Balmore Road, Glasgow	WML/W/20035	NS579718
GR Service Company	West Carron, Carron, Falkirk	WML/E/00015	NS875820
Henry Gilles Haulage Contractor	Drumshoreland Bing, Pumpherston	WML/E/00049	NT074700
Highland Council	Bettyhill Landfill, Bettyhill, Sutherland	WML/N/50059	NC737603
Highland Council	Granish Landfill, Aviemore	WML/N/20098	NH900148
Highland Council	Kilchoan Landfill Site, Kilchoan, Argyll	WML/N/50026	NM469649
Highland Council	Portree	WML/N/50051(b)	NG471447
Highland Council	Rhiconich Landfill Site, Rhiconich, Sutherland	WML/N/50057	NC262526
Highland Council	Stoneyfield, Invergordon	WML/N/50003	NH690713
Highland Council	Tongue Landfill Site, Tongue, Sutherland	WML/N/50058	NC612547
Highland Council	Ardachu Landfill Site, Ardachu, Brora	WML/N/50044	NC893047
Highland Council	Brackletter	WML/N/50027(b)	NN190828
Highland Council	Melvich Landfill Site, Melvich, Sutherland	WML/N/50060	NC866645
Highland Council	South Head, Wick Harbour, Wick	WML/N/50107	ND372501
Highland Council	Torbreck, Lochinver, Sutherland	WML/N/50047	NC097241
Highland Council	Ullapool Waste Transfer Station, Strathain, Ullapool	WML/N/50050(b)	NH122964
Holt Drainage	Achscrabster Quarry, Thurso	WML/N/50086	ND080633
Howegarden Ltd	Hospital Wood, Auchterless, Turriff	BBDC/WML/31	NJ735458
International Paper (UK) Ltd	Inverurie Paper Mills, Broomend, Inverurie	WML/N/20063	NJ770190
J & A Plant Services in liquidation	Beithglass Quarry, Skelmorlie	WML/W/00073	NS200672
J & S Mackie	South House, Tankerness, Orkney	WML/N/50069	HY507076
J H Connon Ltd	Greendams, Newmachar, Aberdeenshire	WML/N/20068	NJ868202
J Haig Hamilton and Sons	West Fortune Landfill, North Berwick	WML/E/20152	NT534801
J M Kennie (Demolitions) Ltd	Auldcaithie, Winchburgh	WML/E/00051	NT075755
J M Murdoch & Sons Ltd	East Capellie Farm Landfill, Neilston	WML/W/00126	NS472583
J D H Gordon, Esq	Railway Cutting, Whitehill Farm, St Boswells	WML/E/00010	NT578310
James Fairbairn	Lamberton Landfill, Berwick upon Tweed	WML/E/20197	NT973575
James Rae	Auchenstarry Farm, Kilsyth	WML/W/00068	NS712765
John Marshall & Son	Dalreoch Farm, Dunning	WML/E/00301	NO003173
Joss (Aberdeen) Ltd	Loch-hills Quarry, Parkhill, Dyce	WML/N/20062	NJ914144
King Contractors (Perth) Ltd	Huntingtower Quarry, Perth	WML/E/00304	NO076247
Kirkmyres Sand & Gravel	Balquhindachy Farm, Turriff	WML/N/20089	NJ761486

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Licence Holder	Site	WML number	National grid reference
Kirkmyres Sand & Gravel	Pitnacalder Quarry, New Aberdour	WML/N/20117	NJ873628
Kirkton Barns Reclamation Account	Kirktonbarns Landfill, Tayport	WML/E/00295	NO452261
L H Spence & Sons	Brackmont Mill, St Michaels, Leuchars	WML/E/00286	NO437224
Laing House	Gallowflats, Errol	WML/E/00303	NO209213
Leiths Surfacing Ltd	Home Farm, Kingswells, Aberdeen	WML/N/20045	NJ863063
Les Taylor Contractors Ltd	Boghead Farm, Kintore	WML/N/20185	NJ795139
Les Taylor Contractors Ltd	Newton of Savoch, Longside, Peterhead	WML/N/20196	NK066423
Levenseat Ltd	Torphin Quarry, Harburn, West Calder	WML/E/00058	NT028597
Levenseat Ltd	Levenseat 11 Landfill Site	WML/E/20189	
Lothian Recycling 1996 Ltd	Pentland Mains Landfill, Damhead, Midlothian	WML/E/20145	NT254654
Luddon Construction Ltd	Birdston Tip, Kirkintilloch	WML/W/00048	NS649748
Luddon Construction Ltd	East Mavis Valley, Bishopbriggs	WML/W/00065	NS597714
Luddon Construction Ltd	Dalreoch Quarry, Renton Road, Dumbarton	WML/W/00015	NS388761
M & J Ballantyne	Broomhouse Quarry, Maxton	WML/E/00001	NT633309
M K Leslie Ltd	West Stoney Hill, Lerwick	WML/N/50101	HU448422
M Ridgeway, Esq	Railway Cutting, Nether Howden Farm, Oxton	WML/E/00007	NT499532
Mardon Plant Hire Ltd	Hillhouse Farm	WML/E/00053	NT117674
Marshall Farms	Muirpark Farm, Tullibody, Clackmannanshire	WML/E/20171	NS867961
McIntosh Plant Hire (Aberdeen) Ltd	Cairdhillock Landfill Site, Kingswells, Aberdeen	WML/N/20003	NJ847068
McIntosh Plant Hire (Aberdeen) Ltd	Leys Quarry, Mintlaw, Peterhead	WML/N/20206	NK004524
McIntosh Plant Hire (Aberdeen) Ltd	Cairdhillock East, Kingswells, Aberdeen	WML/N/20201	NJ840064
McTaggart Construction Ltd	Giffenmill Railway Cutting, Barrmill, by Beith	WML/W/20093	NS372514
Messrs D Menzies & Partners	Mains of Taymouth, Kenmore	WML/E/00307	NN789477
Messrs J & R Mitchell	Pairney Quarry, Auchterarder	WML/E/00310	NN977130
Messrs McFadyens Contractors, Campbeltown Ltd	Dhurrie Farm, Campbeltown, Argyll	WML/W/00220	NR684223
Michael Bowman	Duiskey - 5, Fort William	WML/N/50124	NN007772
Midlothian Council	Drummond Moor Landfill Site, Roslin, Penicuik	WML/E/20047	NT273597
Moray Council	Kirkhill Landfill, Calcots Road, Elgin	WML/N/20095	NJ234634
Moray Council	Nether Dallachy Landfill, Spey Bay, Moray	WML/N/20094	NJ361643
Moray Council	Newtyle Landfill, Rafford, Forres	WML/N/50038	NJ054552
Morris Young (Perth) Ltd	Loanleven Farm, Perth	WML/E/0020139	NO055258
Mr A P Anderson	Kinbuck Quarry	WML/E/00323	NN795050
Mr Angus Macleod	Marybank Quarry, Stornoway	WML/N/50078	NB408328
Mr Gavin Craig	Avonside, Drumclog	WML/W/00156	NS630370
Mr George Adam	Muirton Park Cottage, Bannockburn	WML/E/00326	NS818896
Mr J Muir	Inverqueich Farm, Alyth	WML/E/00335	NO274499
Mr James Rae Halliday	Campbelton Farm, Twynholm, Whiteliggate	WML/W/00265	NX657538
Mr Robert Drummond	Straid Farm, Lendalfoot	WML/W/00245	NS213507
Murray & Burrell Ltd	Hartwoodburn Farm, Selkirk	WML/E/00012	NT467269
N C Law Construction & Demolition	Burnside Phase 2, By Tillicoultry	WML/E/00322	NS907968
Norman Jamieson	No 7 Holdings, Gagie Quarries, near Monikie	WML/E/00233	NO468367

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Licence Holder	Site	WML number	National grid reference
North Ayrshire Council	Shewalton Landfill, Shewalton, Irvine	WML/W/20059	NS333365
North Ayrshire Council	Brodick Landfill Site	WML/W/20057	NS029353
North Lanarkshire Council	Auchinlea Landfill, Bellside, Cleland	WML/W/20070	NS280658
North of Scotland Water Authority	Killiecrankie Water Treatment Works, Perthshire	WML/E/00306	NN921626
North of Scotland Water Authority	Lumsden, Rhynie	WML/N/20061	NJ468224
North of Scotland Water Authority	Elf Hill Quarry, Elgin	WML/N/20097	NJ211557
North of Scotland Water Authority	Lochcraigs Wood, Lintrathen	WML/E/00236	NO280543
Orkney Islands Councils	Bossack Quarry, Tankerness, Orkney	WML/N/50019(b)	HY504084
Orkney Islands Councils	Blossom Quarry, Rousay, Orkney	WML/N/50008(a)	HY424324
Orkney Islands Councils	Chinglebraes Quarry, St Ola, Orkney	WML/N/50020	HY427090
Orkney Islands Councils	Gallowtuag Quarry, South Walls, Hoy, Orkney	WML/N/50009	ND304896
Orkney Islands Councils	Mitchell's Quarry, Stronsay, Orkney	WML/N/50006(a)	HY657281
Orkney Islands Councils	Peat Road Landfill, West Hill, Flotta	WML/N/50005	ND347926
Orkney Islands Councils	Westside Road Quarry, Eday, Orkney	WML/N/50007(a)	HY562334
Pat Munro (Alness) Ltd	Caplich Quarry, Alness	WML/N/50108	NH668704
Pennant Plant Ltd	Prestonholm, Dalhousie	WML/E/00086	NT324627
Perth & Kinross Council	North Forr Landfill, By Crieff	WML/E/20059	NN871202
R Garrick	The Old Lime Quarry, Girlsta	WML/N/50099	HU430504
R W & P Millican	Heughhead, Reston	WML/E/00132	NT877626
Railtrack plc	Shewalton Moss Tip, Irvine	38-003	NS333350
Reclaim (Helensburgh) Ltd	Finnart Landfill Site, Garelochhead	WML/W/00017	NS241944
Reigart Contracts Ltd	Drumcavel Quarry	WML/W/0020133	
Renfrewshire Council	Linwood Moss, Linwood	WML/W/20088(a)	NS443656
Robertson Contracting	Newton Toll, Elgin	19-035	NJ166632
Robinson & Davidson Ltd	Townhead Farm, Collin	WML/W/00211	NY028757
Russell Coal Limited	Gartshore 9/11 Soils Tip, Twechar	WML/W/00064	NS702763
S McAlister	West Thomaston Farm, Banknock	WML/E/00018	NS778798
Scottish Borders Council	Dunion Hill Landfill Site, Jedburgh	WML/E/20100	NT625189
Scottish Borders Council	Far Knowes Landfill Site, Galashiels	WML/E/20099	NT518367
Scottish Power	Foreshore, West Pans, Musselburgh	WML/E/00072	NT360735
Scottish Power	Longannet	WML/E/00250	NS960850
Scottish Power	Valleyfield (Torry Bay)	WML/E/00251	NT000850
Shanks Ltd	Tarbothill, Murcar, Aberdeen	WML/N/20151	NJ957138
Shanks Argyll & Bute Ltd	Dalinlongart Landfill Site, near Dunoon	WML/W/20039	NS138814
Shanks Argyll & Bute Ltd	Lingerton Landfill Site, Lochgilphead	WML/W/20040	NR867853
Shanks Argyll & Bute Ltd	Larkhall/Westland Road, Rothesay	WML/W/20041(a)	NS075648
Shanks Argyll & Bute Ltd	Moleigh Landfill Site, Ariogan, By Oban	WML/W/20043(a)	NM869268
Shanks Waste Services Ltd	Hartloup Hill, Wattston, Airdrie	WML/W/00164	NS770699
Shetland Islands Council	Rova Head, Lerwick, Shetland	WML/N/50052	HU471452
Smith Skip Ltd	Knowes Farm, Beith	WML/W/00074	NS342553
Stewart Milne Homes Ltd	Lynturk Tough, Alford	WML/N/20067	NJ595124
T Muir (Haulage) Ltd	Balbie Farm, Kirkcaldy	WML/E/00260	NT232892

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Licence Holder	Site	WML number	National grid reference
Talisman Energy UK Ltd	Golta Tip, Flotta	WML/N/50071	ND365948
Tarmac Northern Ltd	Haverall Wood Quarry, Lasswade, Midlothian	WML/E/00098	NT293659
Tarmac Northern Ltd	Coltness Factory, Newmains, Wishaw	WML/W/00170	NS825553
Tayside Contracts	Bolshan Quarry, Kinnell, Frioekheim	WML/E/00211	NO621527
Tayside Contracts	Cultullich, Aberfeldy	WML/E/00300	NN873504
Tillicoultry Quarries Ltd	Tulliallan Quarry	WML/E/00252	NS939898
Toffolo Jackson	Burnfield Road, Glasgow	WML/W/00102	NS557598
Torith Ltd	Baldragon Farm, Bridgefoot, Dundee	WML/E/00229	NO378352
Uist Builders (Construction) Ltd	Grimshader Quarry, Grimshader, Isle of Lewis	WML/N/50083	NB394275
UKAEA	Dounreay near Thurso	WML/N/50085	NC992679
W Forrest & Son	Omoa Works, Newarthill, Motherwell	WML/W/00191	NS798598
W H Malcolm Ltd	Inchbelly Landfill, Kilsyth Road, Kirkintilloch	WML/W/00050	NS668756
W H Malcolm Ltd	Reilly Quarry, Bishopton, Renfrewshire	WML/W/00077	NS418695
W H Malcolm Ltd	Southbar Landfill, Bishopton, Renfrewshire	WML/W/00078	NS447693
W H Malcolm Ltd	Giffen Quarry, Greenhills, By Beith	WML/W/00221	NS379507
W H Malcolm Ltd	Medrox Quarry, Glenboig	WML/W/00159	NS726699
W H Malcolm Ltd	Shewalton Road Sand Quarry, Irvine	WML/W/00186	NS330371
W J & R Morgan	Anniston, Inverkeilor, Arbroath	WML/E/00221	NO663478
Waste Recycling Group (Scotland) Ltd	Easter Deans Landfill Site, Nr Leadburn	WML/E/00134	NT239532
Waste Recycling Group Ltd	Drummond Moor, No 2 Landfill	WML/E/20192	NT272597
Watermill Aggregates Ltd	Broomhead Farm Quarry	WML/N/20209	NJ982637
West of Scotland Water	Glassford Water Treatment Works	WML/W/00135	NS708478
West of Scotland Water	Loch Whinyeon, Gatehouse of Fleet	WML/W/00262	NX630612
West of Scotland Water	Laurieston Forest	10-005	NX665635
West of Scotland Water	Carbarns STW, Netherton, Wishaw	WML/W/20120	NS771538
West of Scotland Water	Gorbals Works, Corslett Road, Glasgow	WML/W/20146	NS235582
William Hamilton & Sons (Contractors) Ltd	Dovesdale Farm, Stonehouse	WML/W/00155	NS770460
Wm Baxter & Son	Baxter's Food Factory, Fochabers	WML/N/20096	NJ339601
Wm Thompson & Son (Dumbarton) Ltd	Riggangower Quarry, Milton	WML/W/00020	NS438752
William Tracey Limited	Middleton Quarry, Lugton, Beith	WML/W/20185	NS400528

Mobile Plants

Bio-logic Remediation Ltd	Not applicable as mobile plant	WML/W/20154
Bio-logic Remediation Ltd	Not applicable as mobile plant	WML/W/20131
Environmental Reclamation Services Ltd	Not applicable as mobile plant	WML/W/20134
Environmental Reclamation Services Ltd	Not applicable as mobile plant	WML/W/20152
Land & Water Services (Scotland) Ltd	Not applicable as mobile plant	WML/E/20201
Shanks	Not applicable as mobile plant	WML/W/20143
Shanks	Not applicable as mobile plant	WML/W/20113
Shanks	Not applicable as mobile plant	WML/W/20125

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Licence Holder	Site	WML number	National grid reference
Treatment Plants			
60 North Recycling Ltd	Layfields/Rova Head, Lerwick	WML/N/50076	HU470449
A Christie & Sons	11-13 Glendale Street, Glasgow	WML/W/20189	NS616649
Aberdeenshire Council	Civic Amenity Site, Souterford Road, Inverurie	WML/N/20027	NJ778219
Aberdeenshire Council	Kirkton Road Depot, Stonehaven	WML/N/0220003	NO861860
All Urban Waste Disposal	3 Albert Road, Edinburgh	WML/E/0020203	
Armstrong Waste Management Ltd	Newton Road Ind Est, Dumfries	WML/W/00199	NX955783
ASAP Contracts Ltd	Rear of Cairnhill Cottage, Sykeside Road, Airdrie	WML/W/20140	NS754637
Caledonian Industrial Ltd, Caleco Waste	Caleco Waste Transfer Station	WML/E/20179	NT284666
Champion Technologies Inc	Minto Avenue, Altens, Aberdeen	WML/N/20008	NJ955030
CRM Recycling	Yard 2 Mayfield	WML/E/0120038	NT343639
D & W Stewart (Ladybank) Ltd	Lower Melville Wood, Ladybank	WML/E/00283	NO297116
East Coast Skips	Macmerry Industrial Estate, Macmerry, East Lothian	WML/E/200075	NT443726
East Dunbartonshire Council	Broomhill Dewatering Facility, Broomhill Industrial Estate, Kirkintilloch	WML/W/20148	NS662748
East Lothian Council	Barbachlaw Refuse Baling and Transfer Station, Wallyford	WML/E/20083	NT361719
East Lothian Council	Macmerry Industrial Estate, Macmerry, East Lothian	WML/E/0120039	NT445284
East of Scotland Water Authority	Dalderse WWTW, Davids Loan, Falkirk	WML/E/20163	NS902820
East of Scotland Water Authority	Carron Valley Treatment Works, Denny	WML/E/20212	NS766836
Eden Waste Recycling	8 Westerton Road, Broxburn	WML/E/20002	NT095723
Enviroco Limited	Dam Head Industrial Estate, Peterhead	WML/N/20125	NK011044
Enviroco Limited	Hillview Industrial Estate, Hillview Road, East Tullos, Aberdeen	WML/N/20187	NJ950037
Enviroscot Limited	Langmuir Way, Bargeddie	WML/W/20118	NS705641
Enviroscot Ltd	600 Gilmerton Road, Edinburgh	WML/E/20187	NT298681
Euro Environmental Contracts Ltd	2 Whitestone Place, Whitehill Industrial Estate, Bathgate	WML/E/20195	NS982663
Hamilton Waste & Recycling Ltd	Wallyford Industrial Estate, Mussleburgh	WML/E/00075	NT369718
Highland Council	Torbreck Waste Transfer Station, Torbreck, Lochinver, Sutherland	WML/N/50118	NC087242
J A Kerins, Kwik Skips	Yard No 5, The Clippens Yard, Station Road, Loanhead	WML/E/20169	NT269662
J Burnett	Dalkeith Demolition, Mayfield Industrial Estate, Dalkeith	WML/E/00094	NT343643
J Haig Hamilton and Sons	West Fortune Farm, Drem, North Berwick	WML/E/0120001	NT532810
J M Cunningham	Yard No 6, The Clippens Yard, Station Road, Loanhead	WML/E/20168	NT269662
James Easdale	40 Upper Cartsburn Street, Greenock	WML/W/20098	NS284752
Lanstar (Scotland) Ltd	Transfer Station (Solvent Processing), 60 Murray St, Paisley	WML/W/00008	NS476647
Leigh Environmental Ltd	Abbots Road, Bankside Ind Estate, Falkirk	WML/E/00019	NS897815

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Licence Holder	Site	WML number	National grid reference
M McKenzie	Old Pentland, Loanhead, Edinburgh	30-037	NT265662
McIntosh Plant Hire (Aberdeen) Ltd	Birchmoss Plant & Storage Depot, Echt, Westhill	WML/N/20173	NJ747502
Ministry of Defence (N)	Ministry of Defence, Clyde Submarine Base, Faslane	WML/W/00023	NS242901
Morris Young (Perth) Ltd	Loanleven Farm, Perth	WML/E/0020139	
Mr George Kerr	Drumshoreland Road, Pumpherston	WML/E/20007	NT074695
Network Rail Infrastructure	Millerhill Marshalling Yard	WML/E/0120023	NT323712
North Ayrshire Council	46 Metcalf Place, Oldhall Industrial Estate, Shewalton, Irvine	WML/W/20056	NS333365
North of Scotland Water Authority	Halkirk Wastewater Treatment Plant, Halkirk	WML/N/50243	ND141597
Orkney Islands Councils	Workwell Quarry, Orphir, Orkney	WML/N/50010	HY307054
Patersons Waste Management	101 Kenmuir Road, Mount Vernon, Glasgow	WML/W/0022011	NS661626
Perth & Kinross Council	Ladywell Leachate Irrigation System, Dunkeld	WML/E/20050	
Scottish Water	Carbarans WWTP, Carbarns Road, Netherton, Wishaw	WML/W/22003	NS772539
Scottish Water	Granton on Spey, Waste Water Treatment Plant, Granton on Spey	WML/N/0220009	NJ030269
Scottish Water	Aviemore Waste Water Treatment Plant, Aviemore	WML/N/0220008	NH904130
Scottish Water	Bogton Road, Forres	WML/N/0220014	NJ039596
Scottish Water	Corntown, Conon Bridge	WML/N/0220012	NJ550562
Scottish Water	Broadford WWTP, Broadford Industrial Estate, Broadford, Skye	WML/N/0220015	NG638241
Shanks	Greenbank Crescent, East Tullos, Aberdeen	WML/N/20170	NJ952037
Shanks	Greenbank Road, East Tullos, Aberdeen	WML/N/20158	NJ950038
SITA, Block 7	Sclettie Civic Amenity Site, Bucksburn, Aberdeen	WML/N/20010 WML/N/20207	NJ893100
SITA, Block 7	Civic Amenity Site, Pitmedden Road, Dyce	WML/N/20012	NJ884131
SITA, Block 7	Refuse Treatment Plant, Greenbank Crescent, East Tullos, Aberdeen	WML/N/20014	NJ953039
Shanks & McEwan (Cont) Ltd	Cultins Road, Sighthill Industrial Estate	WML/E/00110	NT185712
Shaun Skinner	Veitch's Yard, Edgefield Rd, Loanhead, Midlothian	WML/E/20191	NT284668
Stirling Water Seafield Limited	Sewage Treatment Works, 4 Marine Esplanade	WML/E/00144	NT288760
Summerside Skips Ltd	Freightliner Yard, Sir Harry Lauder Road, Portobello	WML/E/20206	NT305735
Sureclean	10 River Drive, Teaninich Industrial Estate, Alness, Ross-Shire	WML/N/50054	NH652692
Swire Oilfield Services	Souterhead Rd, Altens, Aberdeen	WML/N/20165	NJ950020
T B Williamson & Son Ltd	Unit 39, Newbattle Ind Est, Mayfield, Dalkeith	WML/E/20150	NT344644
Taylors Industrial Services Ltd	Hareness Circle, Altens, Aberdeen	WML/N/0220002	NJ945027
Taylors Industrial Services Ltd	Hareness Circle, Altens, Aberdeen	WML/N/20001	NJ945027

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Licence Holder	Site	WML number	National grid reference
Tayside Contracts	Loanleven Treatment Facility	WML/E/20200	N0047253
Tayside Contracts	Forfar Depot, Kirriemuir Rd	WML/E/20207	N0447516
Total Waste Management Alliance Plc	Unit 12, Dales Industrial Estate, Peterhead, Aberdeen	WML/N/20202	NK110447
Town & Country Skips Ltd	Macmerry Industrial Estate, Macmerry, East Lothian	WML/E/0120012	
UK Waste Management Ltd	Kilsyth Treatment Centre, Twechar	WML/W/00009	NS701762
UK Waste Management Ltd	Greenbank Road, Aberdeen	WML/N/20018	NJ948038
Waste Advisory Services (Scotland) Ltd	72 Durham Street, Kinning Parkway Industrial Estate, Glasgow	WML/W/22007	NS567641
Watson Skip Hire Ltd	Compound No 5, Easthouses Ind Est, Dalkeith	WML/E/20205	NT346656
West of Scotland Water	Daldowie Sludge Treatment Centre, Daldowie STW, Broomhouse, Uddingston	WML/W/00275	NS672621
West of Scotland Water	Sheildhill Slude Treatment Centre, 38 Renfrew Road, Glasgow	WML/W/20121	NS537661
William Tracey Ltd	Dunniflats Depot, Lugton	WML/W/00187	NS418531
William Tracey Ltd	Burnbrae Road, Linwood	WML/W/20110	NS432643
William Tracey Ltd	15 Carlibar Road, Barrhead	WML/W/00011	NS500592

Post closure landfill sites

A B Hendry	Beam Quarry, Bonnybridge	WML/E/00017	NS836771
Aberdeen City Council	Hill of Tramaud, Aberdeen	WML/N/20015	NJ948133
Aberdeen City Council	Ness Farm, Tullos Hill, Aberdeen	WML/N/20016	NJ967037
Aberhill Metals Ltd	Old Leven Colliery Bing, Methil	WML/E/00264	N0369005
Alcan	Kinlochleven Disposal Site	WML/N/50061(a)	NN180619
Ambion Homes Ltd	Peel Glen Road, Bearsden	WML/W/00012	NS519727
Andrew Cook (Containers) Ltd	Devon Quarry, Kennoway	WML/E/00285	N0337048
Angle Park Sand & Gravel Co Ltd	Ramornie Sand Pit, Ladybank	WML/E/00289	N0312101
Angus Council	Arrats Mill Landfill Site, Arrats Mill, Montrose Road, Brechin	WML/E/20025	N0646587
Argyll and Bute Council	Achadaphail Quarry, Bunessan, Isle of Mull	WML/W/20044	NM400224
Arjo Wiggins Fine Papers Ltd	Little Clinterty Quarry, Bucksburn, Aberdeen	WML/N/20070	NJ836123
Armstrong Waste Management Ltd	Auchenlosh Quarry, Dalbeattie (Phase I)	10-004	NX851612
Balfour Beatty Construction Ltd Civil Engineering Division	Creaggan Bridge, Balcardine, Argyll	WML/W/20123	NM977441
Barr Ltd	Hollybush Farm, Mauchline, Ayr	WML/W/00240	NS489297
Braidbar Nurseries	Star & Garter Farm, Newton Mearns	WML/W/00100	NS526533
British Petroleum	Sullom Voe/Esso Bernicia, Sullom Voe	WML/N/50094	HU401768
British Waterways	Almond Aquaduct	WML/E/00050	NT104706
Bruce Plant Ltd	Charlestown, Cove, Aberdeen	1990/07	NJ944010
Castelli & Girola UK Ltd	Boyd's Farm, Eagelsfield	WML/W/00200	NY231735
Castelli & Girola UK Ltd	Bonshawsides 1 + 2, Lockerbie, M74	WML/W/00201	NY225723
Castelli & Girola UK Ltd	Woodhouse Mains, Kirtlebridge	WML/W/00202	NY268711
City of Glasgow Council	Cathkin Quarry, Cathkin Road, Glasgow	WML/W/00101	NS622583

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Licence Holder	Site	WML number	National grid reference
Comhairle nan Eilean Siar	Raoinavat, South Shawbost, Isle of Lewis	WML/N/50032	NB243459
CORUS	Clydebridge Works, Ballochmill Road, Glasgow	WML/W/00107	NS632625
Culdaff Construction Ltd	Calderside Farm, by Auchentibber, Hamilton	WML/W/00133	NS665549
D J Laing (Contracts) Ltd	Petterden Land Reclamation, Dundee	WML/E/00228	NO424398
D Cochrane	Catmoss Quarry, Greenlaw	WML/E/00136	NT713451
D J Laing (Contractors) Ltd	Lauriston Quarry, Quarryfield Farm, St Cyrus	WML/N/20145	NO759667
Dan Ramsay Et Son Ltd	Meadowbank Farm, Torrance	WML/W/00061	NS628739
Daniel Campbell Et Sons (Contractors Ltd)	Millwell Farm, Drumboy Road, Auldhouse, East Kilbride	WML/W/00108	NS653497
Deryck Forbes	Crossley Quarry, Maryculter	WML/N/20144	NO865964
Dr Et Mrs H Riffkin	Teuchats Farm, By Leven, Fife	WML/E/00293	NO403075
Dykebar Waste Ltd	Harelaw Farm	49-030	NS499607
East Dumbartonshire Council	Roads Department, Broomhill Industrial Estate, Kirkintilloch	WML/W/00063	NS664748
East Lothian Council	Carberry Landfill Site, Near Whitecraig, East Lothian	WML/E/20086	NT364701
Ennstone Thistle Limited	Ethiebeaton Quarry, Monifieth, By Dundee	WML/E/20005	NO485338
Farrans Construction	Auchenfoyle Farm, Kilmacolm	44-012	NS311671
Fife Council (Cleansing Et Waste Management)	Lochty Park, Glenrothes	WML/E/00265	NT289984
G Et A Munn Et Son Landfill Ltd	Site 6, Mid Auchencarroch Farm, Jamestown	WML/W/00022	NS419813
G Et B Building Et Civil Eng Contractors Ltd	Greenhead Farm, Rescobie, Forfar	WML/E/00220	NO515514
G Et D Cunningham Ltd	Haugh Road, Mauchline, Ayrshire	WML/W/00242	NS502263
Gavin Lawrie Ltd	Monkton Sand Quarry, Near Monkton	WML/W/00244	NS344277
George Beattie Et Sons (Contractors) Ltd	Colzium Quarry, Kilsyth	WML/W/00054	NS725788
George Munn Et Others	Site 3, Mid Auchencarroch Farm, Jamestown	WML/W/00019	NS414824
Glasgow City Council	Wilderness Quarry, Bishopbriggs	WML/W/00049	NS598725
Grant Construction Services (Fife) Ltd	Dodhead Links, Kirkcaldy Road, Burntisland	WML/E/20015	NT247869
Highland Council	Croftaugh, Brora, Sutherland	WML/N/50048	NC896042
Highland Council	Raasay Waste Disposal Site, Creachan, Raasay	WML/N/50024	NG554379
J Et A Crozier	Lochdrum Farm, Bonnybridge	WML/E/00022	NS818782
J Et J Currie	Down's Moss, Catherinefield Road, Dumfries	WML/W/00207	NY013778
J C Campbell Et Co	Southbank Road, Kirkintilloch	WML/W/00059	NS649732
J H Connon Ltd	Cairnhall, Kintore	WML/N/20064	NJ787178
J Haig Hamilton	West Fortune Farm, Drem	WML/E/00077	NT534801
J J Spence	East Hatton Farm, Balmedie	WDL/13	NJ965157
J Wilson Et Son (Coulton) Ltd	Old Toll Garage, Littlemill Road, Drongan, Ayrshire	WML/W/00241	NS446187
James Barr	Catherine Field Road, Heathhall, Dumfries	WML/W/00209	NY006786
John Gibbons (Contractors) Ltd	Site No 2, Middle Essie, St Fergus, Peterhead	WML/N/20122	NK076546
John H Connon Ltd	Woodlands Quarry, Tulloford, Oldmeldrum	WML/N/20000	NJ797327
Joss (Aberdeen) Ltd	Newtonhill, Whitecairns	WML/N/20005	NJ928153

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Licence Holder	Site	WML number	National grid reference
KMS (Fife) Ltd	Tolliehill Landfill	WML/E/00245	NT165930
Les Taylor Contractors Ltd	South Auchinclech, Westhill, Skene	WML/N/20066	NJ803119
Les Taylor Contractors Ltd	Wogle Farm, Kinellar	WML/N/20069	NJ825084
Les Taylor Contractors Ltd	Savoch Quarry, Longside, Peterhead	WML/N/20124	NK066425
Lewis Land Seviles Ltd	Druim Shader, Isle of Lewis	WML/N/50077	NB528343
McIntosh Plant Hire (Aberdeen) Ltd	Kingsford, Kingswells, Aberdeen	1990/03	NJ845064
McIntosh Plant Hire (Aberdeen) Ltd	Backhill, Kingswells, Aberdeen	1991/16	NJ843064
McIntosh Plant Hire Ltd	Sluie Quarry, Potarch	WDL/14	NO613968
Messrs George Raeburn	Earnockmuir Farm, Hamilton	WML/W/00139	NS687525
Les Taylor Contractors Ltd	Auchentibber, Newhousemill Road, East Kilbride	WML/W/00132	NS667527
Mr Angus Macleod	Loch Raoinavat, Shawbost, Isle of Lewis	WML/N/50081	NB235458
Mr B Paterson	Barclosh Moss, Dalbeattie	WML/W/00250	NX851612
Mr David Morton	Hayston Farm, Kirkintilloch	WML/W/00067	NS642740
Mr G A More – Nisbett	East Gilmerton, Drum Estate	WML/E/00115	NT297687
Mr G Kerr	Pumpherstons Works	WML/E/00057	NT074695
Mr G Watters, Law Mining Ltd	Rigmuir Farm, Chapelton	WML/W/00143	NS673524
Mr Ian Ross	Cousland, By Dalkeith	WML/E/00090	NT375688
Mr J Adams - ARC Northern	A R C, Annanbank Farm, Johnstone Bridge	08-027	NY105935
Mr M Russell, M & D Russell (Haulage) Ltd	Clapperton Bing, Pumpherstons	WML/E/00048	NT078697
Mr Neil Knox	Scoughall Farm, North Berwick	WML/E/00076	NT618833
Mr Peter Beattie, George Beattie & Sons Ltd	Gartshore No 1 Colliery, Twechar	WML/W/00060	NS270673
Mrs Jane Simpson Hill	Torbush, Morningside, Newmains	48-026	NS826555
Mrs Sarah Coyle	Waterbank Farm, Carmunnock	WML/W/00103	NS598562
N J Macdonald	The Old Burgh Tip, Marybank, Isle of Lewis	WML/N/50105	NB403332
North Ayrshire Council	Nethermains Landfill Site, Sandy Road, Irvine	WML/W/20058	NS309415
North Lanarkshire Council	Hope Park, Croy	WML/W/00066	NS729760
North Lanarkshire Council	Dalmacoulter Quarry, Stirling Road, Airdrie	WML/W/20069	NS765679
North of Scotland Water Authority	Ruthven, Huntly, Aberdeenshire	WDL2	NJ517467
Norwest Holst Construction Ltd	Badenheath Park Farm, 80 Cumbernauld Road, Annathill	WML/W/00174	NS720719
Parker Brothers Ltd	Hayston Garage, 38 Glasgow Road, Kirkintilloch	WML/W/00051	NS645739
Paterson of Greenoakhill Ltd	Greenhead Moss, Waterloo	WML/W/00172	NS813547
Peter Moretti	Cardowan Cottage, Stepps	WML/W/00281	NS669685
Pure Malt Products Ltd	Pure Malt Products, Victoria Bridge, Haddington	WML/E/00074	NT518744
R M Supplies (Inverkeithing) Ltd	Ferrytoll Quarry Landfill, Ferryhills Road, nr Inverkeithing	WML/E/00249	NT127815
Robert Russell	Wester Seamores Farm, Dennyloanhead	WML/E/00014	NS805794
S Oosterhof	Lower Tyacksnook, Lonmay, Fraserburgh	BBDC/WML/4	NK032597
Scottish Borders Council	SBC Roads DLO, Caddonlee Farm, Clovenfords	WML/E/00011	NT466353

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Licence Holder	Site	WML number	National grid reference
Scottish Borders Council	SBC Roads DLO. Caddonlee Farm, Clovenfords	WML/E/00139	NT447357
Scottish Borders Council	Corsbie Dean	WML/E/00141	NT623455
Scottish Borders Council	Cleugh Landfill Site, Preston	WML/E/20101	NT792592
Shanks	Wester Hatton Farm, Balmedie	WML/N/20149	NJ948153
Smith Anderson	Cabbagehall Tip, Leslie	WML/E/00263	NO245013
South Lanarkshire Council	Curlingmyre, Kelvin South, East Kilbride	WML/W/00105	NS637158
South Lanarkshire Council	Newlandsmuir Road, Gardenhall, East Kilbride	WML/W/00106	NS611530
South Lanarkshire Council	Markethill Road, Law Place, Nerston, East Kilbride	WML/W/00109	NS632557
South Lanarkshire Council	Earnock Quarry, Parkneuk Road, Blantyre	43-004	NS677539
South Lanarkshire Council	Cadzow Dam Landfill, Off Muttonhole Rd, Hamilton	WML/W/00249	
South Lanarkshire Council	Blue Waters Quarry, Limekilnburn Road, Quarter	43-012	NS717514
Stair Estates	The Pot, Castle Kennedy, Stranraer	WML/W/00259	NX100600
Tarmac Northern Ltd	Craignaught Landfill, Dunlop, Ayrshire	WML/W/00222	NS444516
Tarmac Northern Ltd	Melville No 2, Lasswade	WML/E/00084	NT298667
Tarmac Northern Ltd	Melville No 1, Lasswade, Midlothian	WML/E/00084	NT298667
The Buccleuch Estates Ltd	Harelaw Hill, Langholm	08-044	NY427786
Highland Council	Gairloch Site C, Poolewe Road, Gairloch	WML/N/50037(a)	NG819778
Tullis Russell & Co Ltd	East Forthar Farm, Ladybank	WML/E/00284	NO296059
Tulloch Capital Quarries	Harelaw , Port Glasgow	WML/W/00076	NS309727
UK Waste Management	Wellbank Quarry, Dundee	WML/E/20114	NO473378
Vesuvius Premier	Haining Wood, Manual Works, Whitecross	WML/E/00023	NS955774
W H Malcolm Ltd	Overgree Farm, Burnhouse	WML/W/00223	NS385510
W H Malcolm Ltd	Mavis Valley, Balmuilty Road, Bishopbriggs	WML/W/00052	NS593714
W H Malcolm Ltd	Avenuehead Farm	WML/W/00277	NS702698
W M Tracey Ltd	Griffenmill Quarry, Greenhills, Barmill, By Beith	WML/W/20002	NS373510
W Russell & Sons	Wilkieston Farm, Peat Inn	WML/E/00288	NO452119
W Waugh & Son (Builders) Ltd	W Waugh, Auldgirth	WML/W/00215	NX915842
Waste Recycling Group Ltd	Kaimes Quarry, Kirknewton	WML/E/00109	NT130665
West of Scotland Water	Dryfield Sewage Treatment Works, Glasgow Road, Kirkintilloch	WML/W/20114	NS673263
West of Scotland Water	Jellyhill Sewage Treatment Works, Hilton Terrace, Bishopbriggs	WML/W/20115	NS671260
West of Scotland Water	Sludge Lagoons, Locharmoss, Dumfries	WML/W/00216	NY010783
West of Scotland Water	Dechmont Old Service Reservoir	WML/W/00104	NS664576
William Tracey	Knowes Farm, Beith, Phase 3	WML/W/00075	NS345557

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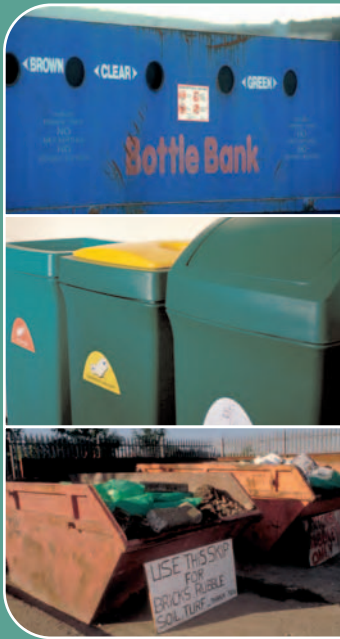
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