

Waste Data Digest 3



WDD3

2001 and 2001/2002 data



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Introduction



CHP01



Introduction

The Scottish Environment Protection Agency (SEPA) is committed to promoting sustainable waste management practices throughout Scotland. As part of this commitment, the Waste Data Strategy was launched in April 2000 to provide the waste management data SEPA requires to fulfil its obligations and achieve its outcomes. Accurate, up-to-date waste management data are required to implement the National Waste Strategy, to aid policy development and monitor policy change, to monitor regulatory activity, and to meet internal and external reporting requirements.

This, the third in a series of Waste Data Digests published by SEPA, provides data collected by, or on behalf of, SEPA on controlled waste in Scotland. Data are reported, as far as possible, for the 2001 calendar year. However, in some instances, only financial year information is available and this is reported for 2001/2002. The data are presented in five distinct sections dealing with arisings, recovery, disposal, waste related operational activities and conclusions.

SEPA's main means of gathering data on municipal waste is the Local Authority Waste Arisings Survey (LAWAS). The LAWAS is a voluntary, annual survey completed by the 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. Where appropriate, the LAWAS data are presented by local authority area.

SEPA is presently working to improve data collection systems for wastes handled in Scotland by organisations other than local authorities. Steps taken by SEPA to improve the collection of data on non-municipal waste include:

- ➔ The introduction in April 2001 of a standardised waste management licence site return form and use of European Waste Catalogue – Substance Aggregated (EWC-SA) codes for recording details of wastes handled at waste management licence sites. Operators are required to make quarterly returns;
- ➔ The development of a waste data strategy database to record the data from waste management licence site returns. Population of the database with 2003 data has already commenced and a programme to enter the 2001 and 2002 data has also started;
- ➔ The introduction of a special waste data collection system in January 2002 to record key information detailed on special waste consignment notes. Special waste data for 2002 are now available and will be reported in the next Waste Data Digest.

Further information on how SEPA is working toward improving non-municipal data collection systems can be found in the National Waste Plan 2003¹.

The data collection stages of SEPA's priority waste stream programme continue to tackle the specific needs identified in the National Waste Strategy: Scotland 1999. At the time of publication, four priority waste stream data collection studies are underway, of which only that for waste electrical and electronic equipment (WEEE) will report on 2001/2002 data. The data collection projects on household hazardous wastes, waste oils and waste batteries will report on 2002 or 2002/2003 data and will be included in the next Data Digest.

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

The next digest, Waste Data Digest 4, reporting on 2002 and 2002/2003 waste data, will be published in April 2004.

¹Copies of the National Waste Plan 2003 can be obtained by calling the Waste Action Line on: 0800 389 5270 or by emailing: wasteaction@sepa.org.uk



Waste Arisings

Local Authority Waste Arisings

Composition of Household Waste

Non-Local Authority Waste Arisings

Packaging and packaging waste

Hazardous and special wastes

Waste electrical and electronic equipment

CHP02



Waste Arisings

Local Authority Waste Arisings

The data presented in this section are based on the returns provided by the local authorities in Scotland for SEPA's second Local Authority Waste Arisings Survey (LAWAS) 2001/2002. There was a 100% response rate to this survey from the 32 Scottish local authorities.

In 2001/2002, a total of 3.27 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. A breakdown of this total by individual local authority is shown in Figure 1 and detailed in Table 2.

Table 1 – Total controlled waste collected by, or on behalf of, Scottish local authorities 2001/2002

Waste type	Tonnes	%
Waste collected for disposal		
Household*	2,120,791	64.92
Civic amenity sites	351,632	10.76
Commercial sources	472,012	14.45
Industrial sources	77,116	2.36
Other non-household sources†	69,663	2.13
Total	3,091,214	94.62
Waste collected for recycling and composting		
Household	148,788	4.55
Non-household	26,695	0.82
Total	175,483	5.37
Total arisings‡	3,266,697	100

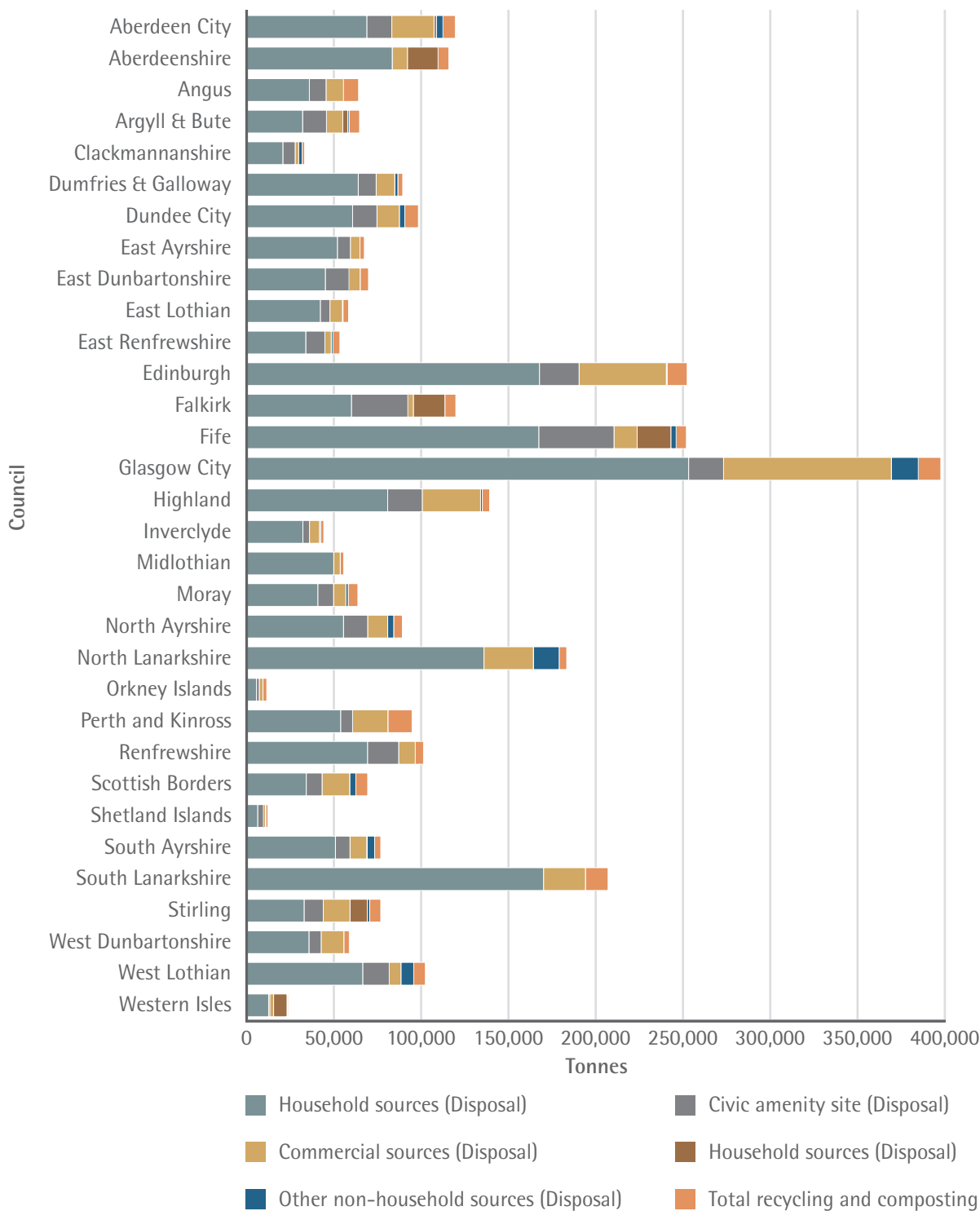
* For many local authorities, the mainstream household waste collection service is a mixed collection which includes household, commercial and industrial wastes. For the purpose of the LAWAS, local authorities provided the data for household, commercial and industrial waste from this collection round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

† Other non-household waste includes: local authority parks and garden waste (not for composting); beach cleaning waste; clearance of fly-tipped waste; abandoned vehicles and waste not otherwise specified

‡ Waste arisings do not include home composting tonnages

Waste Arisings

Figure 1 - Controlled waste collected by, or on behalf of, individual Scottish local authorities 2001/2002



Waste Arisings

Table 2 – Controlled waste collected by, or on behalf of, individual Scottish local authorities 2001/2002

Local authority	Number of households*	Total local authority waste arisings (tonnes)	Waste collected for disposal (tonnes)					Waste collected for recycling and composting (tonnes)	
			Household	Civic amenity site	Commercial	Industrial	Other non-household	Household	Non-household
Aberdeen	105,448	119,548	68,867	14,317	24,191	1,350	3,765	5,751	1,307
Aberdeenshire	97,873	115,837	83,413	0	8,730	17,549	0	4,941	1,204
Angus	48,915	64,137	35,967	9,536	9,988	0	0	7,588	1,058
Argyll & Bute	44,556	64,726	32,083	13,678	9,353	2,801	820	4,651	1,340
Clackman-nanshire	21,799	33,230	20,779	7,015	2,041	0	2,007	1,133	255
Dumfries & Galloway	67,982	89,438	63,962	10,258	10,634	0	1,796	2,397	391
Dundee	74,351	98,419	60,735	13,945	12,800	0	3,156	4,540	3,243
East Ayrshire	53,222	67,443	52,013	7,446	5,485	0	0	1,471	1,028
East Dunbartonshire	42,879	69,824	45,095	13,592	6,343	0	0	4,746	48
East Lothian	40,118	58,416	42,235	5,502	7,155	298	0	3,226	0
East Renfrewshire	37,106	53,434	33,889	10,950	3,611	0	996	3,822	166
Edinburgh	216,826	252,381	167,770	22,701	49,975	0	553	11,382	0
Falkirk	66,501	119,876	60,055	32,308	3,161	18,059	0	4,878	1,415
Fife	158,684	251,915	167,375	43,105	13,265	19,295	3,039	4,182	1,654
Glasgow	290,000	397,684	253,223	20,000	96,138	0	15,417	10,234	2,672
Highland	100,953	139,228	80,829	19,784	33,405	0	1,016	2,880	1,314
Inverclyde	39,108	43,914	32,260	3,772	5,707	0	632	1,476	67
Midlothian	33,186	55,638	49,926	0	3,704	0	0	2,008	0
Moray	39,364	63,751	40,787	9,037	7,042	0	1,326	2,293	3,266
North Ayrshire	62,010	89,224	55,503	13,857	11,478	0	3,442	4,888	56
North Lanarkshire	137,663	183,410	135,968	0	28,328	0	14,750	4,364	0
Orkney Islands	9,338	11,580	5,659	1,568	2,106	0	66	2,060	121
Perth & Kinross	63,068	94,791	53,867	6,842	20,204	0	0	12,109	1,769
Renfrewshire	81,361	101,356	69,259	17,857	9,500	0	0	4,740	0
Scottish Borders	51,564	69,368	34,169	9,071	15,801	0	3,545	6,326	456
Shetland Islands	9,924	12,207	6,334	3,327	1,101	0	196	1,138	111
South Ayrshire	51,277	76,870	50,895	8,342	9,580	191	4,342	2,925	595
South Lanarkshire	131,765	207,059	170,091	0	24,000	0	0	12,968	0
Stirling	39,624	76,857	32,933	11,008	15,308	9,895	1,332	4,920	1,461
West Dunbartonshire	45,746	58,823	35,715	6,986	12,980	0	0	2,574	568
West Lothian	66,823	102,388	66,521	15,190	6,685	0	7,340	5,674	978
Western Isles	11,423	23,925	12,614	638	2,213	7,678	127	503	152
Total	2,340,457	3,266,697	2,120,791	351,632	472,012	77,116	69,663	148,788	26,695

*Provided by Audit Scotland

Waste Arisings

Composition of Household Waste

The composition of household waste changes both seasonally and over time according to the demographic, geographic and socio-economic factors in each local authority. Knowing the composition of household waste and identifying trends in changes are important factors in developing a strategy for household waste. Work is ongoing to establish a standard methodology for compositional analysis.

The LAWAS 2001/2002 asked local authorities if they had conducted a compositional analysis of household waste during 2001/2002 and enquired about methods used to carry out this analysis. Two of the 32 local authorities reported that they had carried out an analysis of household waste and provided their results. In view of the limited information available no compositional data is reported in this Data Digest.

The Environment Agency is to undertake the third National Household Waste Analysis Programme (NHWAP) that will sample and analyse household waste in local authorities throughout the UK. The programme is expected to commence in Autumn 2003.

Non-Local Authority Waste Arisings

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

Non-local authority waste arisings cannot be measured directly until producers of commercial and industrial wastes are required to keep detailed records of their waste arisings. Details of commercial and industrial wastes collected by, or on behalf of, Scottish local authorities can be found in the section on Local Authority Waste Arisings. In the National Waste Plan 2003 SEPA acknowledges that non-municipal waste data is one of the key areas in which significant progress needs to be made over the next few years in order to achieve more sustainable management of non-municipal wastes. Further information on the proposed future development work on non-municipal waste management can be found in Section Five of the National Waste Plan 2003.

Although it is not possible to report a total commercial and industrial waste arisings figure for Scotland for 2001, waste arisings for the reporting year are available for packaging and packaging waste, hazardous and special wastes, and waste electrical and electronic equipment (WEEE).

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 2001, it was estimated that approximately 9.3 million tonnes of packaging waste were produced in the UK. The estimated amount of waste that arose in Scotland was just under one million tonnes. Table 3 provides a breakdown of packaging flowing into the UK waste stream in 2001.

Table 3 – Total tonnage of packaging flowing into the UK waste stream 2001

Material	Tonnes
Paper	3,855,000
Glass	2,200,000
Plastic	1,678,900
Steel	750,000
Wood	670,000
Aluminium	120,000
Other	40,000
Total	9,313,900

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 to the Directive, a European Commission Decision (94/904/EC) established the Hazardous Waste List. Wastes are listed because they display one or more hazardous characteristics or properties, such as being explosive, highly flammable, toxic or carcinogenic.

The aim of the Hazardous Waste Directive is to provide a Europe wide hazardous waste definition and to ensure the correct management and regulation of such waste. The Special Waste Regulations 1996 (as amended), implement the Hazardous Waste Directive.

SEPA, the Environment Agency and the Northern Ireland Environment and Heritage Service have produced a new technical guidance document for interpreting the definition and classification of hazardous waste in the UK². It is intended that it will be a reference document for all legislation concerning hazardous waste and its management, and will provide guidance in the assessment of waste for all involved in the production, management and control of hazardous substances.

SEPA estimates that approximately 256,000 tonnes of special waste arose in Scotland during 2001 and that the most common category was oily wastes. During 2001/2002, SEPA issued a total of 89,289 special waste consignment notes. A breakdown of this total by special waste consignment code prefix is detailed in Table 4. A new database for recording information from special waste consignment notes was introduced in January 2002. Special waste data for 2002 is now available from SEPA and will be published in the next Data Digest.

Table 4 – Number and type of special waste consignment notes issued by SEPA 2001/2002

Total number	SA prefix*		SB prefix†		SC prefix‡	
	Number	%	Number	%	Number	%
89,289	46,026	51.5	948	1.1	42,315	47.3

* SA prefix applies to special waste not consigned using SB and SC prefixed codes

† SB prefixed codes are used solely for consignments of special waste comprising entirely of lead-acid motor vehicles batteries

‡ SC prefixed codes are restricted to the second or subsequent removal of waste within a succession of small volume/extended carrier's collection rounds, the return of out-of-specification materials which are wastes to the original manufacturer and the removal of wastes from a ship to a conveyance or reception facility

Waste electrical and electronic equipment (WEEE)

At the time of completing this Data Digest, TRL Ltd, a firm of consultants working on behalf of SEPA, was finalising the data collection report for Phase One of the priority waste stream project on waste electrical and electronic equipment (WEEE) which will report on 2001/2002 data.

One of the main objectives of this study was to determine total WEEE arisings in Scotland in 2001/2002 and to provide a breakdown of this total by local authority area and by WEEE category. Pre-project planning identified the need for carefully targeted industry surveys to capture a robust WEEE data set. However, low response rates to the surveys made it necessary to fill data gaps by calculated estimates in order to determine WEEE arising figures for Scotland. TRL Ltd's preliminary findings from the as yet unpublished report indicate that approximately 103,000 tonnes of WEEE arose in Scotland in 2001/2002. A full explanation of the methodology used to derive this figure and breakdowns of this total by local authority area and by WEEE category will be detailed in TRL Ltd's final report that is expected to be completed in Autumn 2003.

²Technical Guidance WM2 Hazardous waste: Interpretation of the definition and classification of hazardous waste 2003



Waste Recovery

Local Authority Waste Recovery

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

Home Composting

Non-Local Authority Waste Recovery

- Packaging and packaging waste
- Hazardous and special wastes
- Imports and exports of hazardous waste
- Waste electrical and electronic equipment

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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 2001. These are, however, classified as disposal activities and details of them are included in the Waste Disposal section of the Data Digest.

SEPA, the Scottish Executive and other organisations are currently working on the standardisation of the indicators for monitoring the implementation of the National Waste Plan 2003 and on guidance on how to calculate a recovery rate. For this Data Digest a combined recycling and composting rate for Scotland has been calculated based on the data reported in the LAWAS 2001/2002.

The combined recycling and composting rate for 2001/2002 was 5.37% of the total waste collected by, or on behalf of, Scottish local authorities. This rate is different from that obtained by the Accounts Commission and detailed in their publication³. This is being investigated.

There was an increase of approximately 20% between the combined recycling and composting figure for 2000/2001 (144,683 tonnes) and that for 2001/2002 (174,399 tonnes).

Local authority recycling

During 2001/2002, a total of 132,356 tonnes of waste collected by, or on behalf of, Scottish local authorities was collected for recycling. Of this total, 131,273 tonnes were actually recycled. A very small amount of waste collected for recycling (0.8%) was disposed of rather than recycled for reasons such as market forces and contamination.

For the first time, the LAWAS 2001/2002 asked the local authorities to report if any of the waste collected for recycling was sent out with their area for recycling. A total of 91,326 tonnes of material was sent for recycling outside the local authority and 41,030 tonnes were recycled within the authority area.

The collection of recyclables was mainly carried out through bring (drop-off) collection schemes; this includes the 171 civic amenity sites which local authorities have reported to be operating, across Scotland.

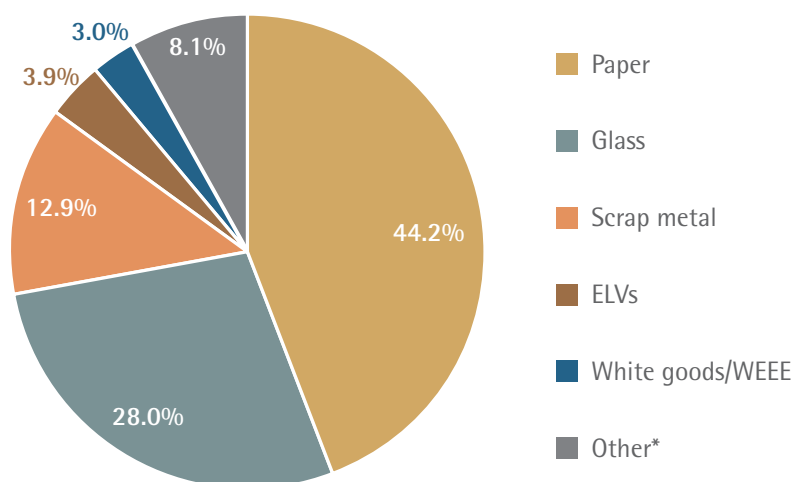
The recycling figures only relate to waste collected for recycling by, or on behalf of, Scottish local authorities. This covers waste collected by the council and all organisations that have a contract or agreement with them to collect material for recycling. These organisations can include private sector companies and voluntary organisations.

Figure 2 shows the percentage breakdown of Scottish local authority recycling by material in 2001/2002. A breakdown of the quantities of all materials recycled by, or on behalf of, Scottish local authorities is detailed in Table 5.

³Performance Indicators 2001/2002 Environmental and regulatory services, February 2003

Waste Recovery

Figure 2 - Scottish local authority recycling, by material 2001/2002



* Other includes (in decreasing tonnage): textiles, batteries, oils, mixed cans, steel cans, aluminium cans, mixed plastic, books, dense plastic, tyres, plastic film and aluminium foil

Paper and card were the main materials recycled in Scotland in 2001/2002, accounting for almost half of the total tonnage (58,172 tonnes). The second largest tonnage was glass (36,782 tonnes), followed by scrap metals (16,917 tonnes), end of life vehicles (5,068 tonnes) and white goods/WEEE (3,963 tonnes). Compared with 2000/2001, of the material that was recycled, the percentage of paper and card has remained the same, however, that for glass has slightly decreased.

Waste Recovery

Table 5 – Breakdown by material of waste recycled by, or on behalf of, Scottish local authorities 2001/2002

Local authority	Tonnes												
	Glass	Paper and card	Steel cans	Aluminium cans	Mixed cans	Plastic	Textiles	Oils	ELVs	Scrap Metal	White goods/WEEE	Batteries	Other Materials*
Aberdeen	1,991	4,363	0	0	0	20	70	14	0	126	100	40	0
Aberdeenshire	2,121	1,964	0	0	201	0	110	62	264	766	449	78	120
Angus	1,039	2,292	18	10	0	30	76	15	42	1,573	0	0	272
Argyll & Bute	1,369	2,367	9	12	0	10	156	20	530	700	750	41	26
Clackmannanshire	401	610	0	1	22	0	13	10	0	144	0	11	76
Dumfries & Galloway	871	701	0	0	8	0	47	29	0	916	52	58	0
Dundee	2,112	2,511	0	5	0	1	103	3	0	0	0	34	0
East Ayrshire	815	829	0	0	24	0	65	21	0	200	88	15	417
East Dunbartonshire	688	2,595	0	0	10	16	74	4	0	0	120	2	387
East Lothian	663	1,073	0	0	25	0	52	8	0	595	9	6	0
East Renfrewshire	431	2,166	4	4	1	0	59	3	0	408	0	14	462
Edinburgh	3,368	5,616	0	0	90	0	269	20	823	526	1	36	88
Falkirk	959	2,639	0	10	0	0	35	11	0	0	359	1	513
Fife	3,788	563	0	9	0	15	120	39	0	1,258	0	28	17
Glasgow	3,300	4,837	107	135	0	18	157	33	660	666	0	31	11
Highland	1,850	322	5	2	0	0	63	27	1,167	263	40	27	28
Inverclyde	222	778	0	0	8	9	46	6	67	372	0	35	0
Midlothian	537	553	0	0	44	0	48	18	75	660	28	36	9
Moray	1,555	1,324	0	0	107	0	38	11	0	401	0	16	223
North Ayrshire	556	766	243	3	0	0	90	9	70	0	53	5	300
North Lanarkshire	551	859	1	<1	0	0	1	17	0	800	0	20	266
Orkney Islands	297	36	6	0	0	0	0	55	0	542	105	7	73
Perth & Kinross	1,100	2,025	0	16	0	6	77	4	231	640	73	48	769
Renfrewshire	636	517	0	0	0	0	0	9	0	938	0	24	844
Scottish Borders	1,374	3,810	0	0	33	0	86	10	0	523	0	22	7
Shetland Islands	275	3	0	2	0	1	0	2	0	937	0	12	15
South Ayrshire	670	1,391	0	0	9	0	4	42	0	672	0	3	0
South Lanarkshire	890	1,205	0	0	0	0	199	29	426	2,054	1,250	13	18
Stirling	1,459	3,072	0	0	45	0	31	68	0	237	132	33	37
West Dunbartonshire	475	2,186	9	5	0	13	19	0	181	0	254	0	0
West Lothian	396	4,165	0	0	45	68	38	26	11	0	97	1	353
Western Isles	23	34	0	0	2	1	0	52	522	0	3	2	16
Total	36,782	58,172	403	214	674	208	2,146	679	5,068	16,917	3,963	699	5,347
													131,273

* Other materials include: books, tyres, gas containers, wood, cooking oils, shoes, rubble, paint and co-mingled materials

† Tonnages only refer to amounts of materials actually recycled. Tonnages of materials collected for recycling but which were disposed of, are included in the disposal figures

Waste Recovery

Local authority recycling initiatives

Since the establishment of the National Waste Strategy for Scotland in 1999, local authorities have increased the number of activities related to recycling. In 2001/2002 all local authorities had a bring (drop-off) recycling collection scheme operating in their area. Twenty-four local authorities (75%) reported that they had a kerbside recycling collection scheme for household waste, and 22 (69%) that they had a kerbside recycling collection scheme for commercial/industrial waste. SEPA expects to be able to report the number of households served by separate kerbside recycling collections in the next Data Digest. Only two local authorities did not have a kerbside recycling collection scheme of any type. Thirteen (41%) reported that they sent some materials to a material reclamation facility (MRF) for sorting and recycling.

The success of a recycling scheme is often dependent on the resources available and on the response of the public to its promotion. Some local authorities have an arrangement with voluntary organisations for the collection of recyclable materials or have a contract with a private organisation for the collection and sometimes processing of the materials. Issues such as transport costs and market demand can influence local authority choices on recycling, making it difficult to compare the activities carried out by the local authorities. For the purpose of this Data Digest, only a list of activities available in each local authority is reported without consideration of the factors influencing the choice of one method over another. Table 6 details the recycling initiatives available in each Scottish local authority in 2001/2002.

Table 6 – Local authority recycling initiatives in Scotland 2001/2002

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	No	Yes	Yes	No	No
Angus	Yes	No	Yes	No	Yes
Argyll & Bute	Yes	Yes	Yes	No	No
Clackmannanshire	No	Yes	Yes	No	No
Dumfries & Galloway	Yes	Yes	Yes	No	No
Dundee	Yes	Yes	Yes	Yes	No
East Ayrshire	Yes	Yes	Yes	Yes	No
East Dunbartonshire	Yes	Yes	Yes	Yes	No
East Lothian	Yes	No	Yes	No	No
East Renfrewshire	Yes	Yes	Yes	No	No
Edinburgh	Yes	No	Yes	No	No
Falkirk	Yes	Yes	Yes	No	No
Fife	No	Yes	Yes	No	No
Glasgow	Yes	Yes	Yes	Yes	No
Highland	Yes	Yes	Yes	No	No
Inverclyde	Yes	No	Yes	No	No
Midlothian	No	No	Yes	No	No
Moray	No	Yes	Yes	No	No
North Ayrshire	Yes	No	Yes	No	Yes
North Lanarkshire	Yes	No	Yes	Yes	No

Waste Recovery

Local authority	Kerbside recycling collection		Bring (drop-off) recycling	Materials sent to MRF	Other recycling
	Household waste	Commercial/ industrial waste			
Orkney Islands	Yes	Yes	Yes	No	No
Perth & Kinross	Yes	Yes	Yes	No	No
Renfrewshire	Yes	No	Yes	Yes	No
Scottish Borders	Yes	No	Yes	Yes	No
Shetland Islands	No	Yes	Yes	Yes	Yes
South Ayrshire	Yes	Yes	Yes	Yes	No
South Lanarkshire	No	No	Yes	Yes	No
Stirling	Yes	Yes	Yes	Yes	No
West Dunbartonshire	Yes	Yes	Yes	Yes	No
West Lothian	Yes	Yes	Yes	Yes	No
Western Isles	No	Yes	Yes	No	No
Total yes	24	22	32	13	3

Local authority composting

In 2001/2002, a total of 43,126 tonnes of waste collected by, or on behalf of, Scottish local authorities was composted. The great majority of the waste sent for composting was green waste (43,032 tonnes) and the remainder was mixed organic waste (94 tonnes). Most of the waste sent for composting originated from local authority parks and gardens, civic amenity sites and commercial premises. Table 7 details the tonnages of the waste collected for composting by, or on behalf of, local authorities according to its source. Some local authorities sent waste for composting outside their area.

Composting can involve a weight loss. The tonnages in this section refer to the weight of the waste that was composted as opposed to the weight of material resulting from the composting process. Any waste that was disposed of instead of composted has been deducted from the figures.

Waste Recovery

Table 7 – Waste collected for composting by, or on behalf of, Scottish local authorities 2001/2002

Local authority	Tonnes		
	Household	Commercial	Total
Aberdeen	42	0	42
Aberdeenshire*	0	0	0
Angus	2,348	930	3,277
Argyll & Bute	1	0	1
Clackmannanshire	0	100	100
Dumfries & Galloway	0	0	0
Dundee	1,902	1,113	3,015
East Ayrshire	0	25	25
East Dunbartonshire	898	0	898
East Lothian	795	0	795
East Renfrewshire	436	0	436
Edinburgh	545	0	545
Falkirk	1,236	530	1,766
Fife	0	0	0
Glasgow	2,950	0	2,950
Highland	400	0	400
Inverclyde	0	0	0
Midlothian	0	0	0
Moray	791	1,093	1,884
North Ayrshire	2,848	0	2,848
North Lanarkshire	1,849	0	1,849
Orkney Islands	728	0	728
Perth & Kinross	7,279	1,337	8,616
Renfrewshire	1,771	0	1,771
Scottish Borders	916	0	916
Shetland Islands	1	0	1
South Ayrshire	729	0	729
South Lanarkshire	6,884	0	6,884
Stirling	950	317	1,267
West Dunbartonshire	0	0	0
West Lothian	1,383	0	1,383
Western Isles	0	0	0
Total	37,682	5,445	43,126

* Aberdeenshire Council composted 13,803 tonnes of waste that was used for landfill restoration. This is not covered in the LAWAS

Waste Recovery

Local authority composting initiatives

In 2001/2002, there were 16 local authorities (50% of the total) operating centralised composting schemes. Twenty-four (75%) of the local authorities had a bring (drop-off) recycling collection scheme operating in their area and nine (28%) reported that they had a kerbside collection scheme for waste for composting.

Table 8 details the composting initiatives in each Scottish local authority in 2001/2002.

Table 8 – Local authority composting initiatives in Scotland 2001/2002

Local authority	Centralised composting operated	Home composting containers distributed to households	Kerbside collection* of household waste for composting	Bring (drop-off) composting collection
Aberdeen	No	Yes	No	Yes
Aberdeenshire	Yes	Yes	No	No
Angus	Yes	Yes	Yes	Yes
Argyll & Bute	No	Yes	No	Yes [†]
Clackmannanshire	No	Yes	No	Yes
Dumfries & Galloway	No	Yes	No	No
Dundee	Yes	No	Yes	Yes
East Ayrshire	No	Yes	No	Yes
East Dunbartonshire	No	Yes	No	Yes
East Lothian	Yes	Yes	No	Yes
East Renfrewshire	No	Yes	No	Yes
Edinburgh	No	Yes	No	Yes
Falkirk	Yes	Yes	No	Yes
Fife	No	Yes	No	No
Glasgow	Yes	No	Yes	Yes
Highland	No	Yes	No	Yes
Inverclyde	No	Yes	No	No
Midlothian	No	No	No	No
Moray	Yes	No	No	Yes
North Ayrshire	Yes	No	Yes	Yes
North Lanarkshire	Yes	Yes	No	No
Orkney Islands	Yes	No	Yes	Yes
Perth & Kinross	Yes	Yes	Yes	Yes
Renfrewshire	Yes	Yes	Yes	Yes
Scottish Borders	Yes	No	No	Yes
Shetland Islands	Yes	Yes	Yes	Yes
South Ayrshire	No	Yes	No	Yes
South Lanarkshire	Yes	No	No	Yes
Stirling	Yes	Yes	No	Yes
West Dunbartonshire	No	Yes	No	No
West Lothian	No	No	Yes	Yes
Western Isles	No	No	No	No
Total yes	16	22	9	24

* No kerbside collections of commercial waste for composting were operated by local authorities

† Operated by a voluntary sector organisation

Waste Recovery

Home Composting

Twenty-two local authorities (69%) reported that they had distributed containers for home composting to the public during 2001/2002. A total of 32,723 composters, 17 wormeries and 13 digesters were distributed. Most of these were provided either free of charge or on a subsidised basis. Although this information is useful in understanding the level of success in the promotion of new home composting activities, it is not fully indicative of the success of home composting. Local authorities that did not distribute many home composting containers during 2001/2002 may already have distributed them in previous years.

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. Seven authorities reported data. However, different survey methods were used to estimate the quantities composted, and therefore diverted, making the collation of results difficult. SEPA is developing a standard methodology for calculating home composting as part of the monitoring for the National Waste Plan 2003.

Non-Local Authority Waste Recovery

Packaging and packaging waste

The Producer Responsibility Obligations (Packaging Waste) Regulations ('the Regulations') were introduced in 1997 as part of the UK implementation of EC Directive 94/62/EC on Packaging and Packaging Waste. One of the key objectives of the Directive 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 requires that from June 2001, Member States must recover 50% of packaging waste (within which further recycling targets must be met).

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 annum. 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. A compliance 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);
- Meet certain 'consumer information obligations' if the main activity of the company is as a 'seller'.

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

The Regulations are enforced in Scotland by SEPA, in England and Wales by the Environment Agency (EA) and in Northern Ireland by the Environment and Heritage Service (NIEHS). In 1999 and 2000 Wastepack was the only compliance scheme registered with SEPA, although it should be noted that less than 10% of the scheme members were Scottish companies. In 2001 SEPA also registered the Ecopak, Integra, Recyclepak, and Valpak Scotland compliance schemes. Table 9 shows the number of businesses registered with the three Agencies in 2001.

Waste Recovery

Table 9 – Registrations with SEPA, the Environment Agency (EA) and the Northern Ireland Environment and Heritage Service (NIEHS) 2001

Organisation	Number of registrations
Businesses registered with SEPA	116
Business members of SEPA registered schemes	634
Businesses registered with the EA	728
Business members of EA registered schemes	4,274
Total businesses registered with NIEHS	308
Total registrations	6,060

All data on packaging handled that is submitted by producers and schemes is 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, i.e. the UK must establish the amount of recovery that needs to take place to meet Directive targets (50% of packaging waste arising) and ensure that the aggregate recovery and recycling obligations 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 that has taken place in the UK prior to the Regulations coming into force resulted in the UK introducing interim targets during 1998, 1999 and 2000 to provide for a smooth build up to 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. A list of companies accredited in 2001 is given in Appendix III. Accredited reprocessors and exporters generate approved evidence of recovery and recycling in the form of Packaging Waste Recovery Notes or Packaging Waste Export Recovery Notes (PRNs or PERNs). These are generated for each tonne of packaging waste that is recovered or recycled. Obligated companies (producers) and compliance schemes can meet their recovery and recycling obligations by buying or obtaining the correct amount and material type of recovery notes.

The data that is held by SEPA consists of:

- ➔ Packaging handled by companies registered with SEPA together with respective recovery and recycling obligations;
- ➔ Packaging handled by SEPA registered compliance scheme together with respective recovery and recycling obligations;
- ➔ 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 each nation. 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 also provided with respect to packaging waste reprocessed in Scotland.

Table 10 gives the UK's recovery and recycling targets for 2001. Table 11 details the recovery and recycling actually achieved in the UK in 2001.

Waste Recovery

Table 10 – UK recovery and recycling targets 2001

Material	Tonnes	
	Recovery	Recycling
Paper	1,755,061	564,127
Glass	950,700	305,582
Aluminium	67,331	21,642
Steel	355,253	114,189
Plastic	841,202	270,386
Wood*	473,062	152,056
Other*	11,527	3,705
Total	4,454,135	1,275,926

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

Table 11 – UK recovery and recycling achieved 2001

Material	Tonnes
Paper	2,030,944
Glass*	766,335
Aluminium	29,030
Steel	278,079
Plastic	269,962
Wood	573,951
Total recycling	3,917,560
Energy from waste	513,939
Total recovery	4,462,240
Specific waste stream	9,313,900
Recovery %	47.90%
Recycling %	42.00%

* Includes 30,741 tonnes alternative evidence–glass recycled that fell out with the PRN system

The recovery achieved per material may appear to be less than the target for that material as shown in Table 10. This is because recovery targets are general and may be achieved through recovery of any other packaging waste material. Recycling targets are material specific and can, therefore, only be achieved through recycling of that specific material.

Table 12 shows the amount of packaging waste reprocessed by SEPA accredited companies in 2001.

Waste Recovery

Table 12 – Packaging waste reprocessed by SEPA accredited reprocessors and exporters 2001

Material	Tonnes		Total PRN/PERNs issued
	Accepted	Reprocessed /exported	
Reprocessed			
Paper	227,033	227,030	227,025
Plastic	3,367	3,362	3,300
Glass	106,172	106,181	94,865
Energy from waste - MSW	14,379	14,375	13,584
Wood	67,473	67,473	67,469
Wood composting	234	234	0
Paper composting	420	420	380
Total reprocessed	419,078	419,075	406,623
Exported			
Paper	33,504	33,504	33,336
Plastic	9,529	9,529	9,529
Steel	10,234	10,234	9,825
Aluminium	320	320	319
Total exported	53,587	53,587	53,009
Total reprocessed/exported	472,665	472,662	459,632

Hazardous and special wastes

In 2001/2002, 123 sites were licensed to handle special waste in Scotland. A breakdown of these sites by activity is detailed in Table 21.

Implementation of a revised special waste data collection system in January 2002 means that SEPA has a data gap for special waste for 2001. However, SEPA has estimated from data for previous years and for 2002 that between 90,000 and 105,000 tonnes of special waste were likely to have been sent to Scottish landfills in 2001; this accounts for approximately 1.2% of all wastes landfilled in Scotland during 2001. Landfill sites licensed to accept special waste during 2001 are listed in Appendix IV.

The Environment Agency's special waste database indicates that approximately 76,500 tonnes of special waste were exported from Scotland to England and Wales for treatment and recovery in 2001. This accounts for approximately 30% of the estimated special waste arisings in Scotland during 2001.

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 EU. The provisions of Council Regulation (EEC) No. 259/93 requiring transposition into national legislation are implemented by the Transfrontier Shipment of Waste Regulations 1994 (S.I. No. 1137) in the UK. SEPA is the competent authority for transfrontier shipments of waste coming into and going 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 terms, 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 relates to the transfrontier shipment of amber list wastes imported into and exported from Scotland for recovery. No red list waste transfrontier shipment movements were notified to SEPA during 2001. From transfrontier shipment movements notified to SEPA in 2001, 11,135 tonnes of amber list wastes were imported into Scotland for recovery and 314 tonnes were exported from Scotland for recovery.

Breakdowns of the total quantity of amber list wastes imported into Scotland in 2001 by waste type and recovery code are presented in Table 13 and Table 14 respectively. A breakdown of the total amount amber list wastes exported from Scotland in 2001 by waste type and recovery code is detailed in Table 15.

Table 13 – Amber list wastes imported into Scotland for recovery 2001

Waste type	Tonnes	%
Halogenated solvents	139	1.3
Non-halogenated solvents	9,878	88.7
Hydrocarbon blend	1,028	9.2
Toluene/Kerosene	45	0.4
Toluene	46	0.4
Total	11,135	100.0

Table 14 – Recovery codes for amber list wastes imported into Scotland 2001

Recovery code*	Tonnes	%
R2 [†]	5,763	51.8
R9 [‡]	1,028	9.2
R13 [§]	4,344	39.0
Total	11,135	100.0

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

† R2 = Solvent reclamation/regeneration

‡ R9 = Used oil-refining or other uses of previously used oil

§ R13 = Accumulation of material intended for any operation numbered R1 to R12

Waste Recovery

Table 15 – Amber list wastes exported from Scotland for recovery 2001

Waste type	Recovery code*	Tonnes	%
Hydrocarbon sludge	R3†	6	1.9
Spent catalyst	R4‡	212	67.5
Vented cathode ray tubes	R5§/R12¶	96	30.6
Total		314	100.0

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

† R3 = Recycling/reclamation of organic substances which are not used as solvents

‡ R4 = Recycling/reclamation of metals and metal compounds

§ R5 = Recycling/reclamation of other inorganic materials

¶ R12 = Exchange of wastes for submission to any the operations numbered R1 to R11

Waste electrical and electronic equipment (WEEE)

At the time of completing this Data Digest, TRL Ltd., a firm of consultants working on behalf of SEPA, was finalising the data collection report for phase one of the priority waste stream project on waste electrical and electronic equipment (WEEE), which will report on 2001/2002 data.

One of the main aims of this study was to determine amounts of WEEE recovered in Scotland during 2001/2002 for household, commercial and industrial sources. Pre-project planning identified the need for carefully targeted industry surveys to capture a robust WEEE data set. The recovery data collected by the surveys will be discussed in the final report. Preliminary findings are not reported in this Data Digest because the low response meant that insufficient data were collected for statistically sound extrapolation to derive WEEE recovery figures for Scotland. Examination of the recovery data collated from the surveys and consideration of WEEE reprocessing capacity in Scotland will be detailed in TRL Ltd's final report, which is expected in Autumn 2003.

Waste Disposal

Local Authority Waste Disposals

Local Authority Energy Recovery

Incineration and Thermal Treatment Plants

Waste Management Licence Facility Disposal



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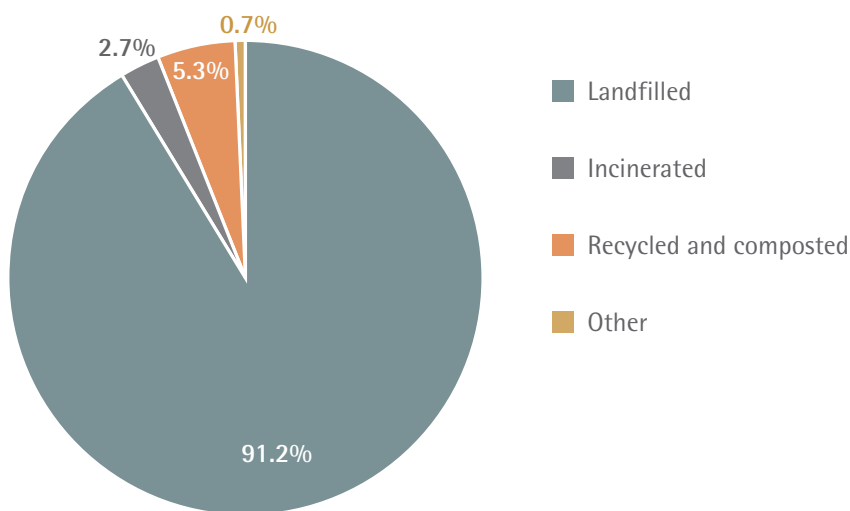


Waste Disposal

Local Authority Waste Disposals

In 2001/2002, 2.98 million tonnes (91%) of all waste collected by, or on behalf of, Scottish local authorities were disposed of to landfill. Based on SEPA's estimate that 60% of landfilled municipal waste is biodegradable, this equates to 1.79 million tonnes of biodegradable waste. The interim target established by the Scottish Executive in the National Waste Plan 2003 is that the quantity of biodegradable municipal waste disposed of to landfill in 2006 should reduce below 1.5 million tonnes. Figure 3 shows the fate of waste collected by Scottish local authorities in 2001/2002. Consideration of the trends in waste disposal is contained in the conclusions section of the Data Digest.

Figure 3 – Recovery and disposal of waste collected by, or on behalf of, Scottish local authorities 2001/2002



In the LAWAS 2001/2002, local authorities were asked to identify the disposal methods used for waste collected, whether the waste was disposed of within or outside their boundaries and the quantities disposed. A total of 3.09 million tonnes of waste was disposed of by local authorities. Almost one-third (956,272 tonnes) of the waste landfilled was disposed of outside the local authority in which it was collected.

Table 16 gives a breakdown of disposal methods and quantities for each local authority.

Waste Disposal

Table 16 – Total controlled waste disposed of by, or on behalf of, Scottish local authorities 2001/2002

Local authority	Landfill (with methane recovery)		Landfill (without methane recovery)		Incineration with energy recovery		Other treatment methods		Total Waste Disposed
	Within	Outwith	Within	Outwith	Within	Outwith	Within	Outwith	
Aberdeen	0	0	112,782	0	0	0	0	0	112,782
Aberdeenshire	0	0	109,702	0	0	0	0	0	109,702
Angus	0	0	35,545	0	0	19,330	0	0	54,875
Argyll & Bute	0	0	46,346	12,388	0	0	0	0	58,734
Clackman- nanshire	0	0	31,842	0	0	0	0	0	31,842
Dumfries & Galloway	0	0	86,757	0	0	0	0	0	86,757
Dundee	0	0	0	39,943	50,692	0	0	0	90,635
East Ayrshire	64,945	0	0	0	0	0	0	0	64,945
East Dunbartonshire	0	0	0	65,030	0	0	0	0	65,030
East Lothian	55,097	93	0	0	0	0	0	0	55,190
East Renfrewshire	0	44,453	0	4,973	0	0	0	20	49,446
Edinburgh	0	0	0	241,001	0	0	0	0	241,001
Falkirk	95,523	0	18,059	0	0	0	0	0	113,582
Fife	0	0	246,078	0	0	0	0	0	246,078
Glasgow	259,202	0	0	125,576	0	0	0	0	384,778
Highland	0	0	135,035	0	0	0	0	0	135,035
Inverclyde	0	0	42,371	0	0	0	0	0	42,371
Midlothian	0	0	53,629	0	0	1	0	0	53,630
Moray	0	0	58,192	0	0	0	0	0	58,192
North Ayrshire	0	0	84,280	0	0	0	0	0	84,280
North Lanarkshire	179,046	0	0	0	0	0	0	0	179,046
Orkney Islands	1,600	0	0	0	0	8,130	0	0	9,730
Perth & Kinross	0	0	77,900	2,232	0	1,052	0	0	81,184
Renfrewshire	0	94,718	1,370	529	0	0	0	0	96,617
Scottish Borders	0	0	54,152	8,434	0	0	0	0	62,586
Shetland Islands	0	0	2,348	0	8,610	0	0	0	10,958
South Ayrshire	0	58,089	15,261	0	0	0	0	0	73,350
South Lanarkshire	0	170,091	0	0	0	0	0	24,000	194,091
Stirling	0	0	70,477	0	0	0	0	0	70,477
West Dunbartonshire	55,681	0	0	0	0	0	0	0	55,681
West Lothian	0	88,722	7,083	0	0	0	0	0	95,805
Western Isles	0	0	23,270	0	0	0	0	0	23,270
Total	711,094	456,166	1,312,479	500,106	59,302	28,513	0	24,020	3,091,680

Waste Disposal

Local Authority Energy Recovery

There were two municipal waste incinerators recovering energy from waste operating in Scotland in 2001; one in Dundee and the other on the Shetland Islands. The Dundee facility was licensed to accept 105,000 tonnes of municipal solid waste and 15,000 tonnes of commercial and industrial wastes per year. Energy in the form of electricity was produced by the plant and was sold into the National Grid. The Shetland facility was licensed to deal with 26,000 tonnes of municipal solid waste per year, including 200 tonnes of clinical waste. Waste heat was used in a district heating scheme.

Six local authorities reported they sent a total of 87,815 tonnes of waste for incineration with energy recovery in 2001/2002. A breakdown of this figure is provided in Table 17.

Table 17 – Scottish local authority waste sent for incineration with energy recovery 2001/2002

Local authority	Tonnes sent for incineration with energy recovery	
	Within authority	Outwith authority
Angus	0	19,330
Dundee	50,692	0
Midlothian	0	1
Orkney Islands	0	8,130
Perth & Kinross	0	1,052
Shetland Islands	8,610	0
Total	59,302	28,513

Incineration and Thermal Treatment Plants

Many incinerators are not subject to the Waste Management Licensing Regulations 1994 (as amended) as they are regulated either under Integrated Pollution Control (under Part 1 of the Environmental Protection Act 1990) or the Pollution Prevention and Control (Scotland) Regulations 2000.

In addition to the two municipal waste incinerators, there were 20 operational incinerators and thermal treatment plants that dealt with commercial and industrial wastes during 2001; Appendix IV provides details of these sites. The total licensed capacity of these facilities was approximately 70,000 tonnes per year in 2001. Many only handled waste arising on site and were designed to handle specific waste streams such as clinical waste and other industrial wastes.

Waste Disposal

Waste Management Licence Facility Disposals

Under the Waste Management Licensing Regulations 1994, as amended, waste management licence holders are obligated to make available information regarding the wastes handled on their site. In April 2001, SEPA introduced a standardised quarterly return form requesting information from waste management licence site operators in a nationally consistent format. This included requesting that European Waste Catalogue - Substance Aggregated (EWC-SA) codes are used when recording details of wastes handled on site. Uptake of the EWC-SA codes progressed well during 2001, but the transition from one classification system to another resulted in the 2001 data set comprising a mix of EWC-SA coded waste and waste categorised according to the classification system previously used.

The total amount of controlled waste sent to Scottish landfills in 2001 was 8.91million tonnes. This figure was obtained from waste management licence return data plus an estimated amount accounting for incomplete returns from some sites. This estimate amounted to 0.9 million tonnes. The waste management licence quarterly return data set for Scottish landfills for 2001 was significantly more complete than that for 1999 and 2000 therefore reducing the need to use estimates to fill data gaps. Consideration of the trends in waste disposal is contained in the conclusions section of the digest.

A breakdown of the total landfill tonnage for each Waste Strategy Area (WSA) is detailed in Table 18. A map showing WSAs and their constituent local authorities is presented in Appendix V. A breakdown of the total EWC-SA coded figures detailed in Table 18 is presented in Table 19.

Table 18 – Controlled waste to landfill 2001

Waste strategy area	Waste type (Tonnes)						Total
	Household	Commercial	Industrial - construction & demolition	Industrial - other	EWC-SA coded*	Other	
Orkney & Shetland	7,049	0	2,275	0	16,710	17,461	43,494
Western Isles	16,349	2,497	4,319	6,386	0	0	29,551
Highland	53,489	5,905	92,086	598	93,054	21,847	266,979
North East	220,489	9,531	235,664	12,666	418,644	119,741	1,016,734
Tayside	170,636	5,969	151,880	5,002	234,535	49,170	617,193
Forth Valley	180,286	85,397	147,503	35,755	114,785	33,723	597,447
Fife	127,029	11,027	46,544	199,953	551,714	0	936,268
Lothian & Borders	422,989	26,102	283,828	140,458	598,827	104,568	1,576,771
Ayrshire, Dumfries & Galloway	297,769	121,203	309,982	58,535	14,501	35,012	837,001
Glasgow & Clyde Valley	1,017,093	380,827	891,016	121,976	381,444	117,529	2,909,885
Argyll & Bute	21,104	42,683	10,838	46	5,251	0	79,922
Scotland	2,534,282	691,141	2,175,935	581,374	2,429,465	499,051	8,911,245

* A breakdown of the EWC-SA coded figures is provided in Table 19

Waste Disposal

Table 19 – Breakdown of EWC-SA coded waste disposed to landfill 2001

Waste strategy area	European Waste Catalogue – Substance Aggregated (Tonnes)						
	1 Chemical compound waste	2 Chemical preparation waste	3 Chemical and physical process wastes	4 Radio-active wastes	5 Healthcare and biological wastes	6 Metallic wastes	7 Non-metallic wastes
Orkney & Shetland	1	1	114	0	8	342	372
Western Isles	0	0	0	0	0	0	0
Highland	0	0	0	0	121	453	608
North East	0	0	73,441	0	262	189	15,699
Tayside	0	0	2,749	0	2,958	150	22,616
Forth Valley	234	622	25,709	0	1,118	330	7,925
Fife	0	0	84	0	0	0	13
Lothian & Borders	0	494	7,269	0	639	165	26,250
Ayrshire, Dumfries & Galloway	0	50	1,530	0	0	44	176
Glasgow & Clyde Valley	2,789	1,016	101,989	1	5,653	305	18,978
Argyll & Bute	0	0	0	0	0	6	37
Scotland	3,025	2,185	212,883	1	10,759	1,984	92,674

Waste strategy area	European Waste Catalogue – Substance Aggregated (Tonnes)						
	8 Discarded equipment	9 Animal and vegetal matter	10 Mixed ordinary wastes*	11 Common sludges	12 Mineral wastes†	13 Solidified stabilised or vitrified wastes	Total
Orkney & Shetland	0	2,682	0	219	12,971	0	16,710
Western Isles	0	0	0	0	0	0	0
Highland	208	140	86,590	438	4,497	0	93,054
North East	0	1,500	191,922	3,330	96,599	35,701	418,644
Tayside	8,826	11,301	121,027	2,337	62,570	0	234,535
Forth Valley	6,936	7,032	56,132	922	7,821	4	114,785
Fife	0	0	112,778	0	438,839	0	551,714
Lothian & Borders	2,090	6,957	87,771	14,290	452,903	0	598,827
Ayrshire, Dumfries & Galloway	0	84	7,499	0	5,117	0	14,501
Glasgow & Clyde Valley	19	5,295	149,112	499	95,788	0	381,444
Argyll & Bute	39	200	4,247	652	70	0	5,251
Scotland	18,119	35,192	817,078	22,686	1,177,175	35,705	2,429,464

* Excluding household and similar wastes (EWC-SA 10.1) which have been added to the household total in Table 18

† Excluding construction and demolition wastes (EWC-SA 12.1) which have been added to the industrial – construction and demolition total in Table 18



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 2001/2002, the total number of registered carriers and brokers was 5,823. Of this, approximately 98% were registered solely as carriers of waste, 1.5% were jointly registered as carriers and brokers of waste and 0.5% were registered solely as brokers.

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. These are issued by SEPA in Scotland. 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. In accordance with the Landfill (Scotland) Regulations 2003 all landfills will cease to be regulated under waste management licensing and will be authorised by PPC permits.

A total of 1,012 licences were in force during 2001/2002. A breakdown of these licences is given in Table 20 and Figure 4. This was obtained from the SEPA Waste Management Charging Scheme for the financial year 2001/2002. Details of the charging scheme can be obtained on SEPA's website⁴.

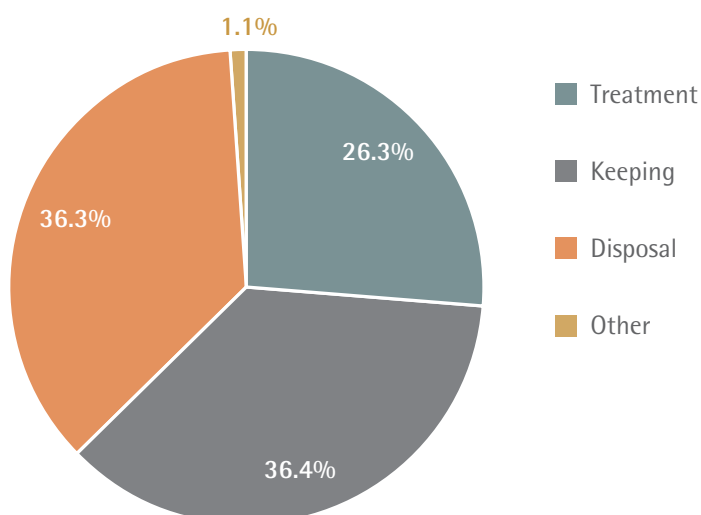
Table 20 – Number of waste management licences by activity 2001

Activity	Number of licences
Treatment	
Recycling	205
Other	61
Keeping	
At civic amenity sites	150
For recycling	31
Other	187
Disposal	
Disposal – operational	257
Post-closure sites	110
Other	
Incinerators	3
Mobile plants	8
Total	1,012

⁴www.sepa.org.uk/charging

Waste Related Operational Activities

Figure 4 - Waste management licences by activity 2001/2002



Waste management licences related to special waste

In 2001/2002, 123 sites were licensed to handle special waste. Table 21 provides a breakdown of this information.

Table 21 - Number of waste management licences authorising the handling of special wastes 2001/2002

Activity	Number of licences
Treating	28
Keeping	68
Disposal – operational	24
Disposal – post-closure	3
Total	123

Waste management licences related to recycling activity

Table 22 below shows that, in 2001/2002, there were 205 operations licensed to carry out recycling activities.

Table 22 - Number of licensed recycling operations by charging band 2001/2002

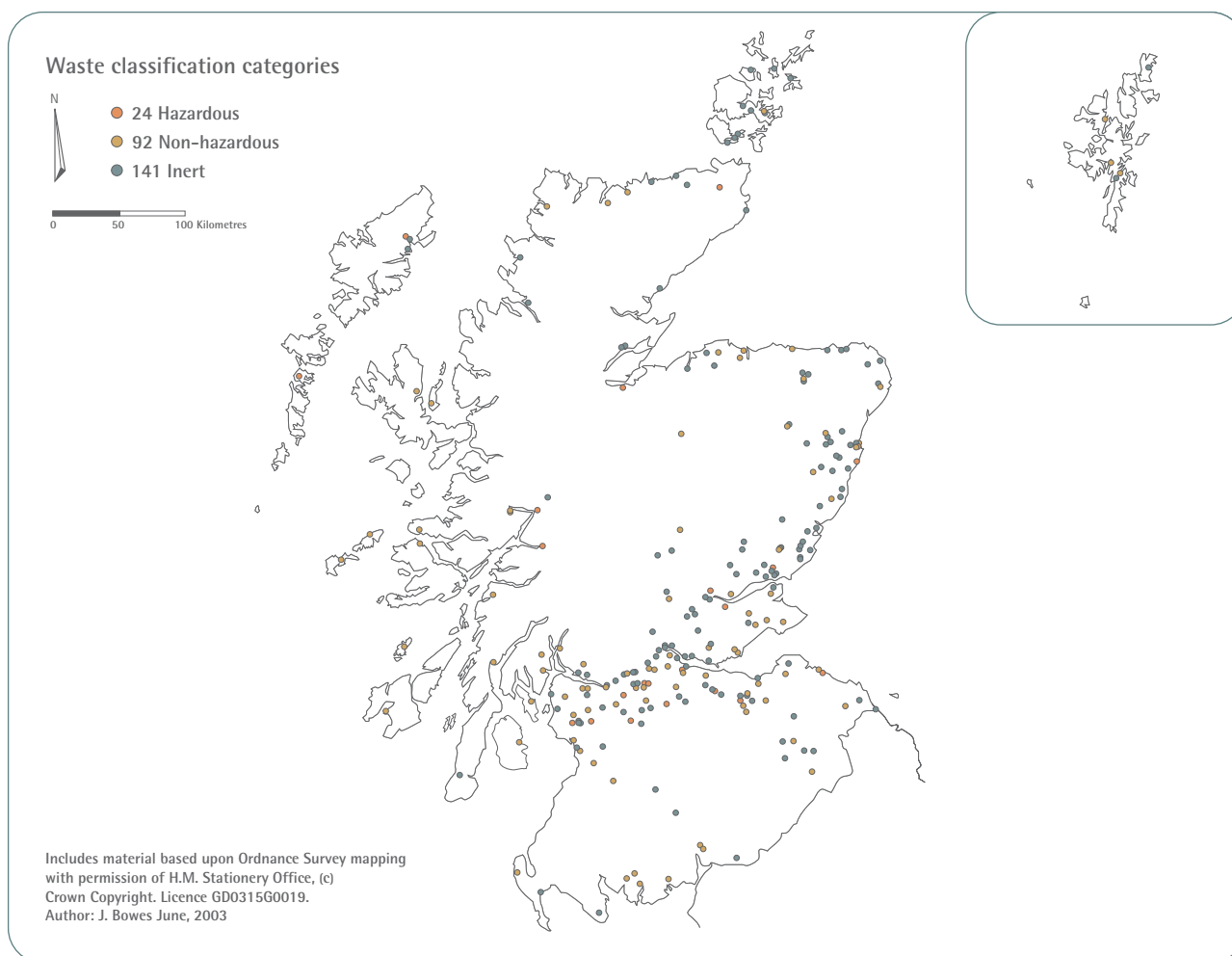
Licensed capacity (tonnes)	Number of licences
75,000 and above	176
25,000 to < 75,000	17
5,000 to < 25,000	40
0 to < 5,000	132
Total	205

Waste Related Operational Activities

Waste management licences related to disposal activity

Landfill is by far the most common disposal route for municipal waste in Scotland, accounting for over 90% of the total disposed in 2001/2002. The 257 landfill sites in operation during 2001/2002 form the principal network of disposal facilities as shown on the map in Figure 5. A list of the landfill sites is provided in Appendix IV.

Figure 5 – Landfill sites in Scotland 2001/2002



The 257 operational landfill sites in Scotland 2001/2002 are detailed in Table 23 according to waste management charging band annual throughput tonnage. This tonnage is the amount of waste that each site is licensed to handle in any year.

Table 23 – Waste management licences for operational landfills by charging band 2001/2002

Licensed capacity (tonnes)	Number of licences
150,000 and above	14
75,000 to <150,000	49
25,000 to <75,000	40
0 to <25,000	154
Total	257

Waste Related Operational Activities

Post-closure landfill sites

Table 24 shows that 110 licensed sites had ceased landfilling waste and were in their period of aftercare in 2001/2002. 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.

Table 24 – Number of waste management licences for post-closure landfill sites 2001/2002

Total waste deposited (million tonnes)	Number of licences
2.5 and above	0
1 to <2.5	9
0.25 to <1	13
0 to <0.25	88
Total	110

Landfill site gas and leachate operational controls

At some of the larger landfill sites gas and/or leachate management is carried out. During 2001, 58 sites undertook some form of gas management; the most common method of which was venting. Flaring or energy production took place at a limited number of sites. Leachate management was carried out at 52 sites. Recirculation was the most common method of management. However, aerobic treatment and other methods were also used. Table 25 gives a breakdown of the operational controls in place.

Table 25 – Gas and leachate operational controls at landfill sites 2001

Operational controls*	Number
Gas operational controls	
Total number of sites where gas is managed	58
Energy production	5
Flaring	15
Venting	42
Leachate operational controls	
Total number of sites where leachate is managed	52
Recirculation	27
Aerobic treatment	13
Waste stabilisation	0
Other	20

* 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 2001/2002, SEPA staff made 12,913 planned inspections of waste management facilities.

Enforcement

Table 26 below records the formal enforcement proceedings with respect to waste instigated by SEPA during 2001/2002.

Table 26 – Waste related enforcement activities 2001/2002

Nature of enforcement	Number
Final warning letters	71
Enforcement notices issued	38
Referrals to procurator fiscal	28
Convictions secured	11
Total	150

Fly-tipping

The illegal dumping of waste is not only an eyesore but can also pose a potential risk to health, has the potential to harm the environment, and is an expensive problem to resolve.

A number of initiatives around Scotland have been set up to tackle illegal waste dumping 'hotspots'. During 2001/2002 SEPA fly tipping action plans were carried out in the Aberdeen, Elgin and Fraserburgh areas. Partnerships with local councils and other relevant parties were set up in the Aberdeen and Elgin areas to tackle the issue. Known sites were targeted and enforcement and licensing action taken where appropriate.

In the LAWAS 2001/2002, local authorities were asked to provide, if known, separate tonnages for the clearance of fly-tipped material. Six out of the 32 local authorities were able to provide this information. The total amount of fly-tipped material separately cleared was 3,710 tonnes. However, as most local authorities will collect fly-tipped material as part of their mainstream collection rounds they were not able to provide separate tonnages. It is not possible, therefore, to accurately represent the level of the fly-tipping problem in Scotland from this data.



Conclusions

Local Authority Waste Collection

Disposal of Waste to Landfill

CHP06



Conclusions

This chapter looks at emerging trends from currently available data. It covers waste collected by, or on behalf of, local authorities and wastes disposed of to landfill, as these are the most reliable and robust data sets for the period from which to draw conclusions.

Local Authority Waste Collection

There has been an increase of 8.7% in the total local authority waste arisings between 1997 and 2001/2002. This represents an average annual increase of approximately 2.0%. If other starting years are chosen then a range of increases is obtained. This puts the annual rate of increase as lying between 1% and 2%.

The total waste collected for recycling and composting increased from 93,400 tonnes in 1997 to 175,500 tonnes in 2001/2002. This is an increase of 88%. The recycling rate of 3.1% in 1997 increased to 5.37% in 2001/2002. As stated in the waste recovery section of the digest this rate is different from that obtained by the Accounts Commission. This difference is being investigated. The National Waste Plan 2003 identifies a target of 25% for the recycling and composting of total municipal waste arisings by 2006.

Table 27 and Figure 6 present the available data for controlled waste collected for both recycling and disposed by, or on behalf of, Scottish local authorities.

Figure 6 – Controlled waste collected by, or on behalf of, Scottish local authorities in Scotland 1991–2001



Conclusions

Table 27 – Controlled waste collected by, or on behalf of, Scottish local authorities 1991–2001 (thousand tonnes)

Waste type	1991*	1992*	1993*	1994*	1995†
Waste collected for disposal, of which:					
Household, commercial & industrial	2,403.3	2,427.9	2,392.9	2,471.0	n/k
Civic amenity	466.5	515.2	507.1	518.1	n/k
Total waste collected for disposal	2,869.9	2,943.1	2,899.9	2,989.1	n/k
Total waste collected for recycling and composting	64.5	72.2	82.3	93.2	n/k
Total local authority waste arisings	2934.4	3,015.2	2,982.3	3,082.3	n/k

Waste type	1996‡	1997‡	1998‡	1999§	2000/ 2001¶	2001/ 2002¶
Waste collected for disposal, of which:						
Household, commercial & industrial	n/k	2,567.6	2,396.0	2,763.9	2,682.2	2,739.6
Civic amenity	n/k	340.0	385.7	402.1	384.6	351.6
Total waste collected for disposal	n/k	2907.6	2,781.8	3,166.0	3,066.7	3,091.2
Total waste collected for recycling and composting	n/k	93.4	115.0	162.0	144.7	175.5
Total local authority waste arisings	n/k	3,001.0	2,896.8	3,328.0	3,211.4	3,267.0

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

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

‡ 1997–1998 figures are based on data reported in Databridge

§ 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 and 2001/2002 figures are from the respective Local Authority Waste Arisings Surveys

Conclusions

Disposal of Wastes to Landfill

The total amount of controlled waste sent to Scottish landfills in 2001 was 8.91 million tonnes. This represents a fall of almost 2.25 million tonnes from the 2000 figure. Most of this reduction (1.94 million tonnes) can be accounted for by the drop in construction and demolition wastes. This fall may be due to a number of reasons including a drop in waste being generated and a greater uptake of exemptions.

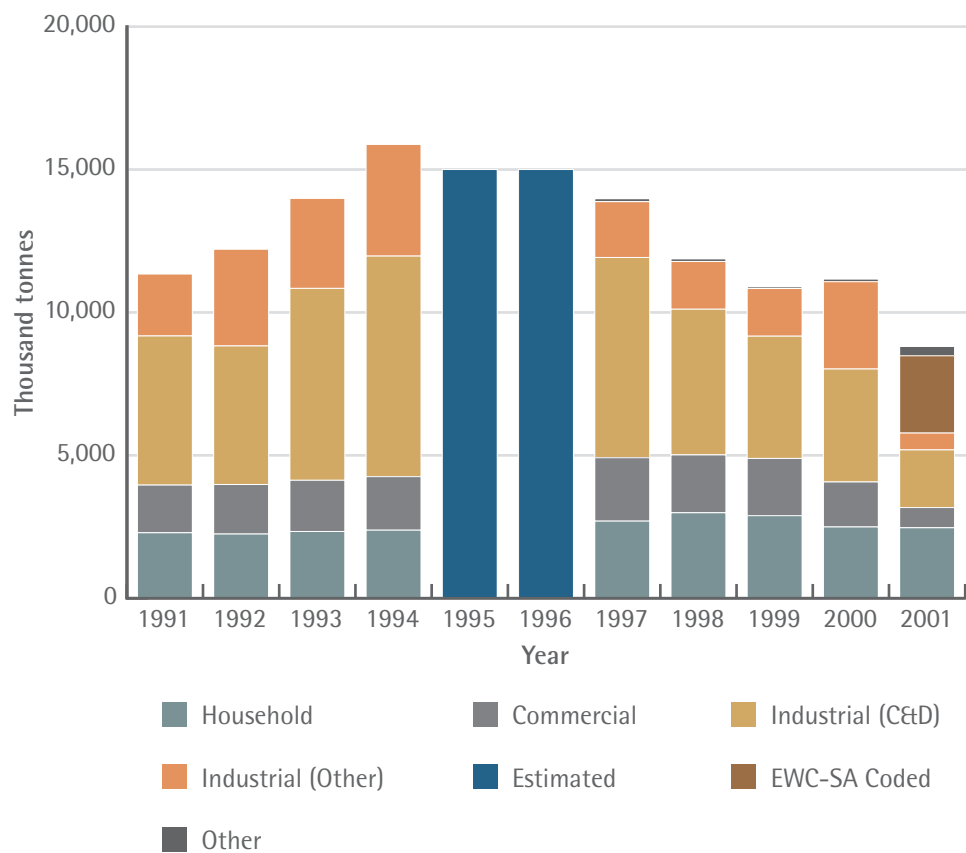
Until 2001 it appeared that landfill disposals were levelling out at approximately 11 million tonnes but the data for 2001 do not confirm this. Two issues, however, make the interpretation of the data more difficult.

First, the 2001 data are the most complete collected by SEPA for landfill disposals. As identified in previous Data Digests, it was necessary to make substantial estimates of waste disposed for the 1999 and 2000 totals due to incomplete data returns. These estimates resulted in an uncertainty in the totals given. For 2001 data that uncertainty is much reduced.

Secondly, SEPA has adopted a new coding system for the waste; the European Waste Catalogue – Substance Aggregated (EWC-SA) code. This is a more comprehensive system than previously used and gives a better breakdown of wastes deposited. However, the transition from one classification system to another has resulted in the 2001 data set comprising a mix of EWC-SA coded waste and waste categorised according to the classification system previously used. This makes direct comparisons difficult.

The total amounts of wastes being landfill in Scotland from 1991 to 2001 are presented in Table 28 and Figure 7.

Figure 7 – Total controlled waste to landfill in Scotland 1991–2001



Conclusions

Table 28 – Total controlled waste to landfill in Scotland 1991–2001 (thousand tonnes)

Waste Type	1991*	1992*	1993*	1994*	1995†
Household	2,291.3	2,246.6	2,336.1	2,381.6	n/k§
Commercial	1,667.5	1,733.8	1,790.6	1,873.5	n/k
Industrial (total)	7,384.5	8,229.4	9,862.1	11,622.3	n/k
Other	–	–	–	–	n/k
EWC-SA	–	–	–	–	n/k
Total	11,343.3	12,209.8	13,998.8	15,877.4	15,000.0
Industrial (C&D)	5,217.9	4,847.3	6,714.6	7,716.4	n/k
Industrial (other)	2,166.6	3,382.1	3,147.5	3,905.9	n/k
Industrial (total)	7,384.5	8,229.4	9,862.1	11,622.3	n/k

Waste type	1996†	1997‡	1998‡	1999¶	2000¶	2001¶
Household	n/k	2,698.0	2,990.9	2,888.9	2,494.2	2,534.3
Commercial	n/k	2,218.0	2,024.0	2,003.0	1,574.0	691.1
Industrial (total)	n/k	8,959.5	6,767.9	5,946.3	7,006.6	2,757.3
Other	n/k	103.1	90.7	57.9	90.9	499.1
EWC-SA	n/k	–	–	–	–	2,429.5
Total	15,000.0	13,978.5	11,873.4	10,896.2	11,165.7	8,911.2
Industrial (C&D)	n/k	7,007.5	5,096.9	4,277.0	3,952.6	2,175.9
Industrial (other)	n/k	1,951.9	1,671.1	1,669.3	3,054.0	581.4
Industrial (total)	n/k	8,959.4	6,767.9	5,946.3	7,006.6	2,757.3

* 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 was available for these years

‡ 1997–1998 figures taken from ERM study for SEPA and the Scottish Executive

§ n/k – not known

¶ 1999–2001 SEPA waste management licensed site returns

Appendices

Appendix I - Glossary

Appendix II - Acronyms and Abbreviations

Appendix III - Accredited Reprocessors
and Exporters of
Packaging Waste

Appendix IV - Licensed Sites in Scotland

Appendix V - Waste Strategy Area Map



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Appendix I

Glossary

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.
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 and part of a hospital or nursing home.
Incineration	The controlled burning of waste, either to reduce its volume, or its toxicity.
Industrial waste	Waste from a factory (within the meaning of the Factories Act 1961) or from any premises used for, or in connection with: Provision of public transport; Public supply of gas, water, electricity or sewerage services; Provision to the public of postal or communication services.
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
Municipal Solid Waste (MSW)	Includes household waste and any other wastes collected by a Waste Collection Authority, or its agents, such as municipal parks and garden waste, beach cleansing waste, commercial or industrial waste, and waste resulting from the clearance of fly-tipped materials.

Appendix I

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.
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 carrier	Someone registered to transport controlled waste by road, rail, air, sea or inland waterways
Strategic Waste Management Baseline Assessment (SWMBA)	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.
Sustainable development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This definition can be extended to address waste and resources, i.e., development that recognises the need to limit the use of resources and production of waste to levels that do not damage the ability of natural ecosystems to remain stable and healthy. This will involve efficient use of resources including the reuse and recovery of wastes and a move from resources whose supply is finite to renewable.
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 RDF.
Waste	Any substance or object in the categories set out in Appendix 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
Waste Hierarchy	Seeks to capture the desirability of different waste management options in descending order of preference, from reducing and reusing waste, through recycling and composting, energy recovery and finally disposal. The concept is meant as a guide to thinking rather than a rigid rulebook.
Waste Minimisation	Waste Minimisation is the systematic prevention or reduction of raw material, water and energy consumption and the reuse and recycling of waste on site.
Waste transfer station	A site to which waste is derived for sorting or compacting prior to transfer to another place for recycling, treatment or disposal.

Appendix II

Acronyms and Abbreviations

C&D	Construction & Demolition Waste
EA	Environment Agency
EC	European Commission
ELVs	End-Of-Life Vehicles
ERM	Environmental Resource Management
EU	European Union
EWG – SA	European Waste Catalogue – Substance Aggregated
LA	Local Authority
LAWAS	Local Authority Waste Arisings Survey
MRF	Materials Recycling Facility
MSW	Municipal Solid Waste
NHWAP	National Household Waste Analysis Programme
NIEHS	Northern Ireland Environment and Heritage Service
NWS	National Waste Strategy
PERN	Packaging Waste Export Recovery Notes
PRN	Packaging Waste Recovery Notes
PWSP	Priority Waste Stream Projects
SE	Scottish Executive
SEPA	Scottish Environment Protection Agency
SI	Statutory Instrument
SWMBA	Strategic Waste Management Baseline Assessment
TRL	Transport Research Laboratory
UK	United Kingdom
WDD	Waste Data Digest
WEEE	Waste Electronic and Electrical Equipment
WML	Waste Management Licence
WSA	Waste Strategy Area

Appendix III

Accredited reprocessors and exporters of packaging waste 2001

Reprocessors accredited in 2001

Name of company	Site	Principal operation
Adam Robertson & Co Ltd	Newcalder Paper Mill, West Lothian	Paper
Armstrong Waste Management Ltd	Auchenlosh Landfill Site, Dumfries & Galloway	Paper Composting
Armstrong Waste Management Ltd	Auchenlosh Landfill Site, Dumfries & Galloway	Wood Composting
BPB Paperboard	Davidson Mill, Aberdeen	Paper
bpi.recycled products – Dumfries	College Road, Dumfries	Plastic
British Polythene Industries plc	96 Port Glasgow Road, Greenock	Plastic
Caledonian, Ferguson, Timpson	5 Atholl Avenue, Glasgow	Plastic
Caledonian Tree Company	Pathhead, Midlothian	Plastic
Comhairle Nan Eilean Siar	Council Offices, Stornaway	Glass
Decocrete	Cunningsburgh Industrial Estate, Shetland	Glass
Dundee Energy Recycling Ltd	Forties Road, Dundee	Energy from waste
John W Hannay & Co Ltd	Linwood Avenue, East Kilbride	Paper
Lerwick Waste to Energy Plant	Shetland Island Council, Shetland	Energy from waste
M McKenzie	Old Pentland Sawmill, Midlothian	Wood
Mac-Glass Recycling	52 Easthouses Road, Dalkeith	Glass
Nexfor Limited	Station Road, Stirling	Wood
Norfrost Limited	Murrayfield, Caithness	Plastic
Plastic Polymer Processors Ltd	12 Inchyra Road, Grangemouth	Plastic
Plastic Technology Services Limited	Garroch Business Park, Dumfries	Plastic
Robert Cullen & Sons Limited	10 Dawsholm Avenue, Glasgow	Paper
Rockware Glass Ltd	Portland Plant, Ayrshire	Glass
Smith Anderson & Sons Ltd	Fettykil Mills, Fife	Paper
Snowie Ltd	Lambhill Farm, Blairingone	Paper Composting
Snowie Ltd	Lambhill Farm, Blairingone	Wood Composting
Tracey Timber Recycling Limited	Burnbrae Road, Linwood	Wood
United Glass Ltd	Glasshouse Loan, Alloa	Glass
Vencel Resil Ltd	160 East Wellington Street, Glasgow	Plastic

Appendix III

Accredited reprocessors and exporters of packaging waste 2001

Exporters accredited in 2001

bpi.recycled products (Heanor)	Heanor Gate, Derbyshire	Plastic Export
Bunzi Retail Supplies	Heanor Gate, Derbyshire	Plastic Export
CELL Glasgow	P O Box 8, Troon	Paper Export
Christie & Son (Metal Merchants) Ltd	Lobnitz Dock, Renfrew	Steel Export
Independent Waste Paper Producers Ltd	Daventry, Northhamptonshire	Paper Export
John Lawrie (Aberdeen) Ltd	Forties Road, Montrose	Steel Export
John R Adam & Sons Ltd	Riverside Berth, Glasgow	Steel Export
John R Adam & Sons Ltd	Riverside Berth, Glasgow	Aluminium Export
R M Supplies (Inverkeithing) Ltd	The Bay, Fife	Steel Export
Solway Recycling Ltd	Rigghead Farm, Dumfries	Plastic Export
Wastepack UK Limited	Pishiobury House, Hertfordshire	Plastic Export

Appendix IV

Licensed sites in Scotland in 2001

Licence Holder	Site	National grid reference
Landfill Sites *Licensed to accept special waste.		
*Aberdeen City Council	Ness Farm, Aberdeen	NJ967037
*Alcan Smelting and Power UK	Alcan, Lochaber Works	NN125753
*Alcan Smelting and Power UK	Alcan, Kinlochleven	NN180619
*Biffa Waste Services Ltd.	Wellbank Quarry, Dundee	N0473378
*Binn Landfill (Glenfarg) Ltd.	Binn Farm, Glenfarg	N0178142
*Comhairle nan Eilean Siar	Bennadrove, Stornoway	NB386345
*Comhairle nan Eilean Siar	Rueval, Isle of Benbecula	NF 811535
*Highland Council	Longman, Inverness	NH675468
*Highland Council	Seater Landfill Site, By Wick	ND248603
*I & H Brown (Plant) Ltd	Battleby, Perth	N0082295
*Levenseat Ltd	Muldron Quarry, near Fauldhouse	NS915575
*Patersons of Greenoakhill Ltd	Greenoakhill, Glasgow	NS666627
*Shanks Avondale Ltd	Avondale Quarry, Polmont	NS952787
*Shanks Northern Ltd.	Hartloughill, Airdrie	NS770699
*Shanks Northern Ltd.	Tarbothill, Murcar	NJ957138
*Shanks Northern Ltd.	Greengairs, Airdrie	NS789698
*Shanks Northern Ltd.	Wester Hatton Landfill, Balmedie, Aberdeenshire	HJ954152
*Stirling Council	Lower Polmaise Landfill, Stirling	NS834931
*Tarmac Environmental Services	Craignaught Quarry, Dunlop	NS444516
*Viridor Ltd	South Quarry, Dunbar	NT720755
*Waste Recycling Group Ltd	Kaimes Quarry, Kirknewton	NT130665
*Waste Recycling Group Ltd	Oatslie(No 7) Sandpit, Roslin	NT258626
*West of Scotland Water	Glassford Water Treatment Works	NS708478
*William Tracey Ltd	Barkip Landfill	NS335505
A & M Smith	Bankhead, Portlethen	N0928996
Aberdeen City Council	Hill of Tramaud, Aberdeen	NJ948133
Aberdeenshire Council	Brandon Howe Landfill, Banff	NJ667638
Aberdeenshire Council	Crows Nest Landfill, Banchory	N0688973
Aberdeenshire Council	Pitdrichie Landfill, Drumlithie	N0798819
Aberdeenshire Council	Burnside Quarry, Kintore	NJ774127
Aberdeenshire Council	Govals Quarry, Lumsden	NJ477232
Aberdeenshire Council	Millmoss Landfill, Turriff	NJ728493
Aggregate Industries Ltd	Upper Townhead Farm, Kintore	NJ782170
Aggregate Industries UK Ltd	Fledmyre, Montrose Rd, Forfar (Site 2)	N0487516
Alcan Chemicals Europe	Whinneyhall Landfill, Burntisland	NT248874
Alexander Sandison & Sons Ltd	Hagdale Quarry, Shetland	HP638101

Appendix IV

Licence Holder	Site	National grid reference
Andrew Cook (Containers) Ltd	Belliston Quarry, Arncroach	NO498063
Andrew Cook (Containers) Ltd	Devon Quarry, Kennoway	NO337048
Angus Council	Restenneth Landfill Site, Forfar	NO483515
Angus Council	Lochhead Landfill, Forfar	NO480510
Angus Council	Arrats Mill, Brechin	NO646587
Angus M Howie	Millhouse Farm, Dunning	NO020143
Argyll and Bute Council	Dalinalongart Landfill Site, near Dunoon	NS138814
Argyll and Bute Council	Glengorm Landfill Site, Isle of Mull	NM488558
Argyll and Bute Council	Larkhall/Westland Road, Isle of Bute	NS078648
Argyll and Bute Council	Moleigh Landfill Site, Oban	NM869268
Argyll and Bute Council	Bonaveh Landfill Site, Isle of Colonsay	NR398955
Argyll and Bute Council	Cliad Landfill Site, Isle of Coll	NM204602
Argyll and Bute Council	Garetbreck Landfill Site, Isle of Islay	NR291579
Argyll and Bute Council	Gott Bay Landfill Site, Isle of Tiree	NM028462
Argyll and Bute Council	Lingerton Landfill Site, Lochgilphead	NR867853
Armstrong Waste Management Ltd	Auchenlosh Quarry, Dalbeattie (Phase II)	NX851612
Banchory Contractions Ltd	South Hirn, Crathes	NJ737002
Bardon Aggregates Ltd.	West Quarry, Charlestown	NT065840
Bardon Aggregates Ltd.	Marybank Quarry, Stornoway	NB408328
Barr Ltd	Garlaff Quarry, Cumnock	NS542176
Barr Ltd	Site 5, Mid Auchencarroch Farm, Jamestown	NS420813
Barr Ltd	Clayshant, Sandhead	NX110525
Blue Circle Industries plc	North Quarry, Dunbar	NT700775
Booth Plant & Equipment Ltd	Tarbolton Moss Landfill Site, Tarbolton	NS426283
Borderland Reclamation Ltd	Meigle Potts, Clovenfords	NT453365
BP Exploration Operating Co. Ltd.	Caldback Ness, Sullom Voe	HU403765
Bruce Plant Hire	Arnhall Quarry, Edzell	NO608697
Bruce Plant Hire	Lochburn Quarry, Stonehaven	NO854832
Bruce Plant Hire	Ury Quarry, Stonehaven	NO860874
Burnthills Demolition	Summerston Farm, Glasgow	NS581725
C & S Smith	Drumsleed, Fordoun	NO733777
C A Duguid & Sons	Knapps of Thernie, Turriff	NJ738446
Chap Quarries (Aberdeen) Ltd	Park Quarry, Durris	NO804979
Clackmannanshire Council	Black Devon Landfill Site, Alloa	NS895913
D Geddes (Contractors) Ltd	Ardownie Quarry, Monifieth	NO493345
D Geddes (Contractors) Ltd	Border Quarry, Leysmill	NO600485
D Geddes (Contractors) Ltd	Kinnell, Friockheim	NO607503
D Geddes (Contractors) Ltd	Lochaber, Arbroath	NO604433
D Geddes (Contractors) Ltd	Prettycur, Montrose	NO698608
D J Laing (Contractors) Ltd	Gallowflats, Errol	NO209213
D J Laing (Contracts) Ltd	Petterden Land Reclamation, Dundee	NO424398
Dr & Mrs H Riffkin	Teuchats Farm, By Leven, Fife	NO403075

Appendix IV

Licence Holder	Site	National grid reference
Dumfries & Galloway Council	Galdenoch, Leswalt, Stranraer	NW988644
Dumfries & Galloway Council	Locharmoss Waste Disposal Site, Dumfries	NY007774
Dumfries & Galloway Council	Blacks Plantation Landfill, Whithorn	NX428406
Dumfries & Galloway Council	Gatelawbridge Waste Disposal Site, Thornhill	NX902965
Dumfries & Galloway Council	St Mary's Street Disposal Site, Sanquhar	NS782104
Dumfries & Galloway Council	Corsiehill Waste Disposal Site, Annan	NY206697
Dundee City Council	Longhaugh Landfill, Dundee	N0433329
Dundee City Council	Riverside Landfill, Dundee	N0037029
E W G Dickey & Co	Kingsdale, Firth, Orkney	HY378115
E. Bowman	Kinlochiel	NN009767
East Ayrshire Council	Milton Landfill Site, Kilmarnock	NS480376
East Coast Skips	Hope Quarry Near Pathhead	NT403630
East Lothian Council	Carberry Landfill Site, East Lothian	NT364701
East of Scotland Water Authority	Upperside Quarry, Near Temple	NT291559
East of Scotland Water Authority	Broadside Reservoir, Denny	NS769831
East of Scotland Water Authority	Craggans Hill, Glenturret	NN856243
Easter Hatton Environmental (Waste Away) Ltd	Easter Hatton Farm, Balmedie	NJ965157
Easter Hatton Environmental (Waste Away) Ltd	Easter Hatton Farm, Balmedie	NJ965157
Edgar Allan Ltd	Balbarnie Works Landfill	NS974682
Ennston Thistle Ltd	Ethiebeaton Quarry, Monifieth	N0486339
Falkirk Council	Kinneil Kerse Landfill Site, Bo'ness	NS975810
Fife Council	Lochhead Landfill Site, By Wellwood	NT080903
Fife Council	Lower Melville Wood , By Ladybank	N0300117
G & F Milne	Bodychell, Memsie, Fraserburgh	NJ954629
G S Brown Construction Ltd	North Ballo Quarry	N0247359
Glasgow City Council	Kilgarth Cartgill Road, Coatbridge	NS719675
Glasgow City Council	South Cathkin Landfill, East Kilbride	NS624574
Glasgow City Council	Summerston Landfill, Glasgow	NS579718
Henry Boot Scotland	Marchbanks WTW, Balerno	NT166 646
Henry Gilles Haulage Contractor	Drumshoreland Bing, Pumpherston	NT074700
Highland Council	Bettyhill Landfill, Sutherland	NC737603
Highland Council	Granish Landfill, Aviemore	NH900148
Highland Council	Kilchoan Landfill, Argyll	NM469649
Highland Council	Portree	NG471447
Highland Council	Raasay Waste Disposal Site, Creachan	NG554379
Highland Council	Rhiconich Landfill, Sutherland	NC262526
Highland Council	Tongue Landfill, Sutherland	NC612547
Highland Council	Ardachu Landfill Site, Brora	NC893047
Highland Council	Brackletter	NN190828
Highland Council	Melvich Landfill, Sutherland	NC866645

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Licence Holder	Site	National grid reference
Highland Council	South Head, Wick	ND372501
Highland Council	Stoneyfield, Invergordon	NH690713
Highland Council	Torbreck, Lochinver	NC097241
Highland Council	Ullapool Waste Transfer Station, Ullapool	NH122964
Holt Drainage	Achscrabster, near Thurso	ND080633
Howegarden Ltd	Hospital Wood, Turriff	NJ735458
International Paper (UK) Ltd	Broomend, Inverurie	NJ770190
J & A Plant Services in liquidation	Beithglass Quarry, Skelmorlie	NS200672
J & S Mackie	South House, Tankerness	HY507076
J H Connon Ltd	Greendams, Newmachar	NJ868202
J Haig-Hamilton and Sons	West Fortune Landfill, Drem	NT534801
J M Kennie(Demolitions) Ltd	Auldcaithie, Winchburgh	NT075755
J M Murdoch & Sons Ltd	Capellie Landfill, Neilston	NS472583
J.D.H. Gordon, Esq	Railway Cutting, Whitehill Farm, St Boswells	NT578310
James Fairbairn	Lamberton Landfill, Berwick upon Tweed	NT973575
James Rae	Auchenstarry Farm, Innerwick	NS712765
John Gibbons	Site No. 2, Middle Essie, St Fergus	NK076546
John Marshall & Son	Dalreoch Farm, Dunning	N0003173
Joss (Aberdeen) Ltd	Loch-hills Quarry, Dyce	NJ914144
King Contractors (Perth) Ltd	Huntingtower Quarry, Perth	N0076247
Kirkmyres Sand & Gravel	Balquhindachy Farm, Turriff	NJ761486
Kirkmyres Sand & Gravel	Pitnacalder Quarry, New Aberdour	NJ873628
Kirkton Barns Reclamation Account	Kirktonbarns Landfill, Tayport	N0452261
L H Spence & Sons	Brackmont Mill, St Michaels, Leuchars	N0437224
Leiths Surfacing Ltd	Home Farm, Kingswells	NJ863063
Les Taylor Contractors Ltd	Boghead Farm, Kintore	NJ803140
Les Taylor Contractors Ltd	Newton of Savoch, Longside, Peterhead, Aberdeen	NK066424
Les Taylor Contractors Ltd	Savoch Quarry, Peterhead	NK066425
Levenseat Ltd	Torphin Quarry, West Calder	NT028597
Lothian Recycling 1996 Ltd	Pentland Mains Landfill, Midlothian	NT254654
Luddon Construction Ltd	Birdston Tip, Kirkintilloch	NS649751
Luddon Construction Ltd	East Mavis Valley, Bishopbriggs	NS597714
Luddon Construction Ltd	Dalreoch Quarry, Dumbarton	NS388761
M & J Ballantyne	Broomhouse Quarry, Maxton	NT633309
M K Leslie Ltd	West Staney Hill, Lerwick	HU448422
M Ridgeway, Esq	Railway Cutting, Nether Howden Farm, Oxtou	NT499532
Mardon Plant Hire Ltd	Hillhouse Farm	NT117674
Marshall Farms	Balquharn No 2, By Alva	NS866966
Marshall Farms	Muirpark Farm, Tullibody	NS867961

Appendix IV

Licence Holder	Site	National grid reference
McFadyens Contractors Ltd	Dhurrie Quarry, Campbeltown	NR684223
McIntosh Plant Hire (Aberdeen) Ltd	Cairdhilllock Landfill, Kingswells	NJ847068
McIntosh Plant Hire (Aberdeen) Ltd	Leys Quarry, Mintlaw	NK004524
McIntosh Plant Hire (Aberdeen) Ltd	Cairdhilllock East, Kingswells	NJ848069
McTaggart Construction Ltd	Giffenmill Railway Cutting, Barrmill, by Beith	NS372514
Messrs D Menzies & Partners	Mains of Taymouth, Kenmore	NN789477
Messrs George Raeburn	Auchentibber, East Kilbride	NS667527
Messrs J & R Mitchell	Old Pairney Quarry, Auchterarder	NN977130
Michael Bowman	Duisky - 5, Fort William	NN007772
Midlothian Council	Drummond Moor Landfill, Penicuik	NT273597
Moray Council	Kirkhill Landfill, Elgin	NJ234634
Moray Council	Nether Dallachy Landfill, near Buckie	NJ361643
Moray Council	Newtyle Landfill, near Forres	NJ054552
Morris Young (Perth) Ltd	Loanleven Farm, Perth	N0055258
Mr A P Anderson	Kinbuck Quarry	NN795050
Mr George Adam	Muirton Park Cottage, Bannockburn	NS818896
Mr J Halliday	Campbelton Farm, Twynholm	NX657538
Mr J Muir	Inverqueich Farm, Alyth	N0274499
Mr Robert Drummond	Straid Farm, Lendalfoot	NS139907
Murray & Burrell Ltd	Hartwoodburn Farm, Selkirk	NT467269
N.C. Law Construction & Demolition	Burnside Phase 2, By Tillicoultry	NS907968
Norman Jamieson	Gagie Quarries, near Monikie	N0468367
North Ayrshire Council	Nethermains Landfill, Bartonholm, Irvine	NS309415
North Ayrshire Council	Shewalton Landfill, Irvine	NS333365
North Ayrshire Council	Brodict Landfill Site	NS030358
North Lanarkshire Council	Auchinlea Landfill, Cleland	NS280658
North Lanarkshire Council	Dalmacoulter Landfill, Airdrie	NS765678
North of Scotland Water Authority	Killiecrankie Water Treatment Works, Perthshire	NN921626
North of Scotland Water Authority	Lumsden, Rhynie	NJ468224
North of Scotland Water Authority	Elf Hill Quarry, Elgin	NJ211557
North of Scotland Water Authority	Lochcraigs Wood, Lintrathen	N0280543
O McCarroll & Sons	West Carron, Falkirk	NS875820
Orkney Islands Councils	Bossack Quarry, Tankerness, Orkney	HY504084
Orkney Islands Councils	Blossom Quarry, Rousay, Orkney	HY425325
Orkney Islands Councils	Chinglebraes Quarry, St Ola, Orkney	HY427090
Orkney Islands Councils	Gallowtuag Quarry, South Walls, Hoy	ND304896
Orkney Islands Councils	Mitchell's Quarry, Stronsay, Orkney	HY657281
Orkney Islands Councils	Peat Road Landfill, Flotta	ND347926
Orkney Islands Councils	Westside Road Quarry, Eday, Orkney	HY562334

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Licence Holder	Site	National grid reference
P.S. Nelson & Sons	Lower Polmaise, Fallin	NS834931
Pat Munro (Alness) Ltd	Caplich Quarry, Alness	NH668704
Pennant Plant Ltd	Prestonholm, Dalhousie	NT324627
Perth & Kinross Council	North Forr Landfill, By Crieff	NN871202
Peter D Stirling Ltd	Drumcavel Quarry, Darcosh	NS705693
Pure Malt Products Ltd	Victoria Bridge, Haddington	NT518744
R Garrick	The Old Lime Quarry, Girlsta	HU430504
R W & P Millican	Heughhead, Reston	NT877626
Railtrack PLC	Shewalton Moss Tip, Irvine	NS344352
Realm Construction	Lathalmond Tip, near Dunfermline	NT090920
Reclaim (Helensburgh) Ltd	Finnart Landfill, Garelochhead	NS242944
Renfrewshire Council	Linwood Moss, Linwood	NS443656
Robert Russell	Wester Seamores Farm, Dennyloanhead	NS805794
Robertson Contracting	Newton Toll, Elgin	NJ166632
Robinson & Davidson Ltd	Townhead Farm, Collin	NY025755
Russell Coal Limited	Gartshore, Twechar	NS702763
S McAlister	West Thomaston Farm, Banknock	NS778798
Scottish Borders Council	Cleugh Landfill, Preston	NT792592
Scottish Borders Council	Dunion Hill Landfill, Jedburgh	NT625189
Scottish Borders Council	Far Knowes Landfill Site, Galashiels	NT518367
Scottish Power	Foreshore, West Pans, Musselburgh	NT360735
Scottish Power	Longannet	NS960850
Scottish Power	Valleyfield (Torry Bay)	NT000850
Shanks Northern Ltd.	Wester Hatton Farm, Balmedie Aberdeenshire	NJ948153
Shetland Islands Council	Rova Head, Lerwick	HU471452
Smith Skip Ltd	Knowes Farm, Beith	NS342553
Stewart Milne Homes Ltd	Lynturk Tough, Alford	NJ595124
Stoneyhill Waste Management Ltd	Stoneyhill Quarry, Peterhead	NK076409
T Muir (Haulage) Ltd	Balbie Farm, Kirkcaldy	NT232892
Talisman Energy UK Ltd	Golta Tip, Flotta	ND365948
Tarmac (Northern) Ltd	Melville No 2, Lasswade	NT298667
Tarmac (Northern) Ltd	Haverall Wood Quarry, Lasswade	NT293659
Tarmac (Northern) Ltd	Coltness Factory, Wishaw	NS825553
Tarmac Northern Ltd	Addiewell, near West Calder	NS992626
Tayside Contracts	Bolshan Quarry, Friockheim	N0621527
Tayside Contracts	Cultullich, Aberfeldy	NN873504
Tayside Contracts	Isla Bank, By Coupar Angus	N0213414
Tillicoultry Quarries Ltd	Tulliallan Quarry	NS939898
Toffolo Jackson	Burnfield Road, Glasgow	NS557598
Torith Ltd	Baldragon Farm, Dundee	N0378352

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Licence Holder	Site	National grid reference
Tullis Russell & Co Ltd	East Forthar Farm, Ladybank	N0296059
Uist Builders (Construction) Ltd	Grimshader Quarry, Isle of Lewis	NB394275
UKAEA	Dounreay near Thurso	NC992679
Vesuvius-Premier Refractories	Haining Wood, Whitecross	NS955774
W Forrest & Son	Omoa Works, Bellshill	NS798598
W H Malcolm Ltd	Inchbelly Landfill, Kirkintilloch	NS668756
W H Malcolm Ltd	Reilly Quarry, Renfrewshire	NS418695
W H Malcolm Ltd	Southbar Landfill, Inchinnan	NS447693
W H Malcolm Ltd	Giffen Quarry, By Beith	NS379507
W H Malcolm Ltd	Medrox Quarry, Glenboig	NS726699
W H Malcolm Ltd	Shewalton Road Sand Quarry, Irvine	NS330371
W J & R Morgan	Anniston, Inverkeilor, Arbroath	N0663478
Watermill Aggregates Ltd	Broomhead Farm Quarry	NJ983637
West of Scotland Water	Loch Whinyeon, Gatehouse of Fleet	NX620605
West of Scotland Water	Laurieston Forest	NX665635
West of Scotland Water	Carbarns STW, Wishaw	NS772539
West of Scotland Water	Gorbals Works, Glasgow	NS235583
William Hamilton & Sons (Contractors) Ltd	Dovesdale Farm, Stonehouse	NS770460
William Tracey Ltd	Griffenmill Quarry, by Beith	NS373510
Wm Baxter & Son	Baxter's Food Factory, Fochabers	NJ339601
Wm Thompson & Son (Dumbarton) Ltd	Riggangower Quarry, Midton	NS438752

Mobile Plants

Biologic Remediation Ltd	Not applicable as mobile plant
Biologic Remediation Ltd	Not applicable as mobile plant
Biologic Remediation Ltd	Not applicable as mobile plant
Bio-logic Remediation Ltd	Not applicable as mobile plant
Bio-logic Remediation Ltd	Not applicable as mobile plant
Environmental Reclamation Services Ltd	Not applicable as mobile plant
Environmental Reclamation Services Ltd	Not applicable as mobile plant
Land & Water Services (Scotland) Ltd	Not applicable as mobile plant

Appendix IV

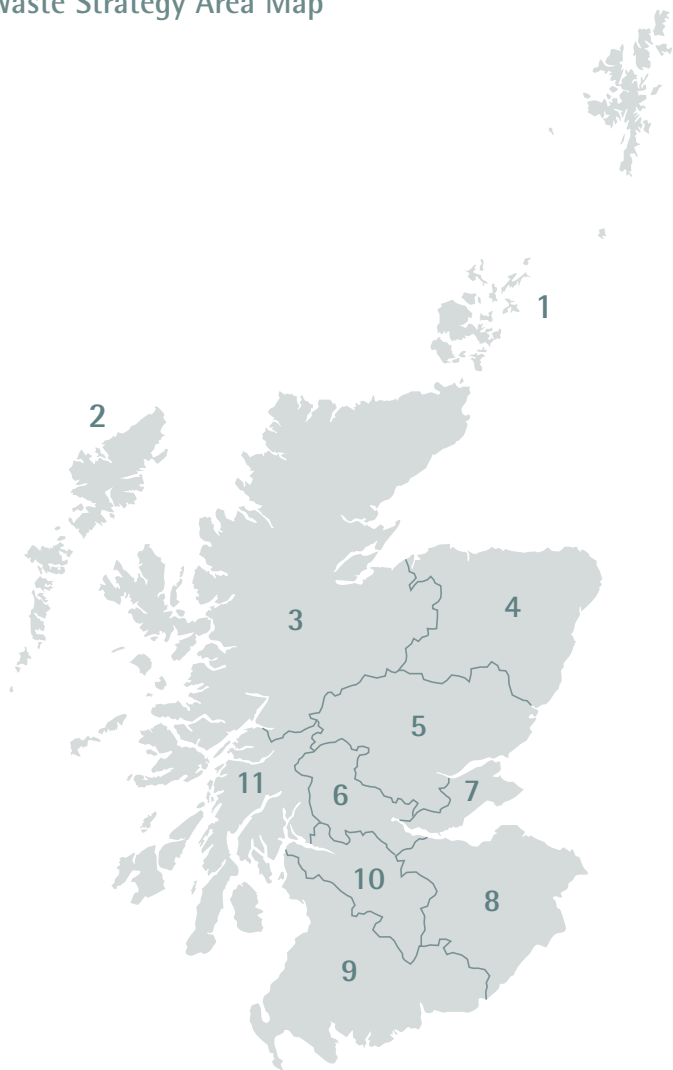
Licence Holder	Site	National grid reference
Treatment Plants		
Aberdeenshire Council	Civic Amenity Site,Souterford Road,Inverurie	NJ778219
Armstrong Waste Management Ltd	Newton Road Ind Est, Dumfries	NX955783
ASAP Contracts Ltd	Rear of Cairnhill Cottage, Sykeside Road, Airdrie	NS754637
Biffa Waste Services Ltd	Greenbank Road, Aberdeen	NJ948038
Biffa Waste Services Ltd	Kilsyth Treatment Centre, Twechar	NS701762
Caledonian Industrial Ltd, Caleco Waste	Caleco Waste Transfer Station, Loanhead, Edinburgh	NT284666
Champion Technologies Inc	Minto Avenue, Altens, Aberdeen	NJ955030
D & W Stewart (Ladybank) Ltd	Lower Melville Wood, Ladybank	N0297116
East Coast Skips	Macmerry Industrial Estate, Macmerry, East Lothian	NT443726
East Dunbartonshire Council	Broomhill Dewatering Facility, Broomhill Ind. Estate, Kirkintilloch	NS662748
East Lothian Council	Barbachlaw Refuse Baling and Transfer Station, Wallyford	NT361719
East of Scotland Water Authority	Dalderse Waste Water Treatment Works, Davids Loan, Falkirk	NS902820
East of Scotland Water Authority	Dunfermline WWTW, St Margarets Bay, North Queensferry	NT122816
East of Scotland Water Authority	Stirling WWTW, Whitehouse Road, Stirling	NS808935
Enviroco Limited	Damhead Waste Management Centre, Upperton Industrial Estate, Peterhead	NK012044
Enviroco Limited	Hillview Ind Est, Hillview Road, East Tullos, Aberdeen	NJ 950037
Enviroscot Limited	Langmuir Way, Bargeddie	NS705641
Enviroscot Limited	600 Gilmerton Road, Edinburgh	NT298681
Euro Environmental Contracts Ltd	2 Whitestone Place, Whitehill Ind Est, Bathgate	NS982663
Highland Council	Torbreck Waste Transfer Station, Torbreck, Lochinver, Sutherland	NC088243
J A Kerins, Kwik Skips	Yard No 5, The Clippens Yard, Station Road, Loanhead	NT269662
J Burnett	Dalkeith Demolition, Mayfield Ind Est, Dalkeith	NT343643
J M Cunningham	Yard No 6, The Clippens Yard, Station Road, Loanhead	NT269662
Lanstar (Scotland) Ltd	Transfer Station (Solvent Processing), 60 Murray St, Paisley	NS476647
Leigh Environmental Ltd	Abbots Road, Bankside Ind Estate, Falkirk	NS897815
M McKenzie	Old Pentland, Loanhead, Edinburgh	NT265662
Marshall Farms	Balquharn Farm, Alva	

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Licence Holder	Site	National grid reference
McIntosh Plant Hire (Aberdeen) Ltd	Birchmoss Plant & Storage Depot, Echt	NJ747502
Ministry of Defence (N)	Ministry of Defence, Clyde Submarine Base, Faslane	NS242901
Morris Young (Perth) Ltd	Loanleven Farm, Perth	
Mr George Kerr	Drumshoreland Road, Pumpherston	NT074695
North Ayrshire Council	46 Metcalf Place, Oldhall Industrial Estate, Shewalton, Irvine	NS333365
North of Scotland Water Authority	Aberdeen Long Sea Outfall, Nigg, Aberdeen	NJ964045
North of Scotland Water Authority	Halkirk Wastewater Treatment Plant, Halkirk	ND141597
Northumbrian Environmental Management	Refuse Treatment Plant, Greenbank Crescent, East Tullos, Aberdeen	NJ953039
Northumbrian Environmental Management Ltd	Civic Amenity Site, Pitmedden Road, Dyce	NJ884131
Northumbrian Environmental Management Ltd	Sclattie Civic Amenity Site, Bucksburn, Aberdeen	NJ893100
Orkney Islands Councils	Workwell Quarry, Orphir, Orkney	HY307054
Perth & Kinross Council	Ladywell Leachate Irrigation System, Dunkeld	
Shanks Northern Ltd	Greenbank Cresc., East Tullos, Aberdeen	NJ952037
Shanks Northern Ltd	Greenbank Road, East Tullos, Aberdeen	NJ950038
Shaun Skinner	Veitch's Yard, Edgefield Rd, Loanhead, Midlothian	NT284668
Shetland Offshore Environmental Services	Layfields/Rova Head, Lerwick	HU470449
Stirling Water Seafeld Limited	Sewage Treatment Works, 4 Marine Esplanade	NT288760
Summerside Skips Ltd	Freightliner Yard, Sir Harry Lauder Road, Portobello	NT305735
Sureclean	10 River Drive, Teaninich Ind Est, Alness, Ross-Shire	NH652692
Swire Oilfield Services	Souterhead Rd, Altens, Aberdeen	NJ950020
T B Williamson & Son Ltd	Unit 39, Newbattle Ind Est, Mayfield, Dalkeith	NT344644
Taylors Industrial Services Ltd	Hareness Circle, Altens, Aberdeen	NJ945027
Tayside Contracts	Loanleven Treatment Facility	N0047253
Watson Skip Hire Ltd	Compound No 5, Easthouses Ind Est, Dalkeith, Midlothian	NT346656
West of Scotland Water	Daldowie Sludge Treatment Centre, Daldowie STW, Broomhouse, Uddingston	NS672621
West of Scotland Water	Sheildhill Sludge Treatment Centre, 38 Renfrew Rd, Glasgow	NS537661
William Finlayson & Son	Wallyford Ind Estate, Mussleburgh	NT369718
William Tracey Ltd	15 Carlibar Road, Barrhead	NS500592
William Tracey Ltd	Burnbrae Road, Linwood	NS432643
William Tracey Ltd	Dunniflats Depot, Lugton	NS418531

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 and 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

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waste.data@sepa.org.uk

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**24 HRS A DAY,
7 DAYS A WEEK**

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wasteactionline
0800 389 5270
Scottish Environment Protection Agency

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Fax: 01292 611130

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Fax: 01349 863987

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Fax: 01387 721154

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Fax: 01355 574688

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