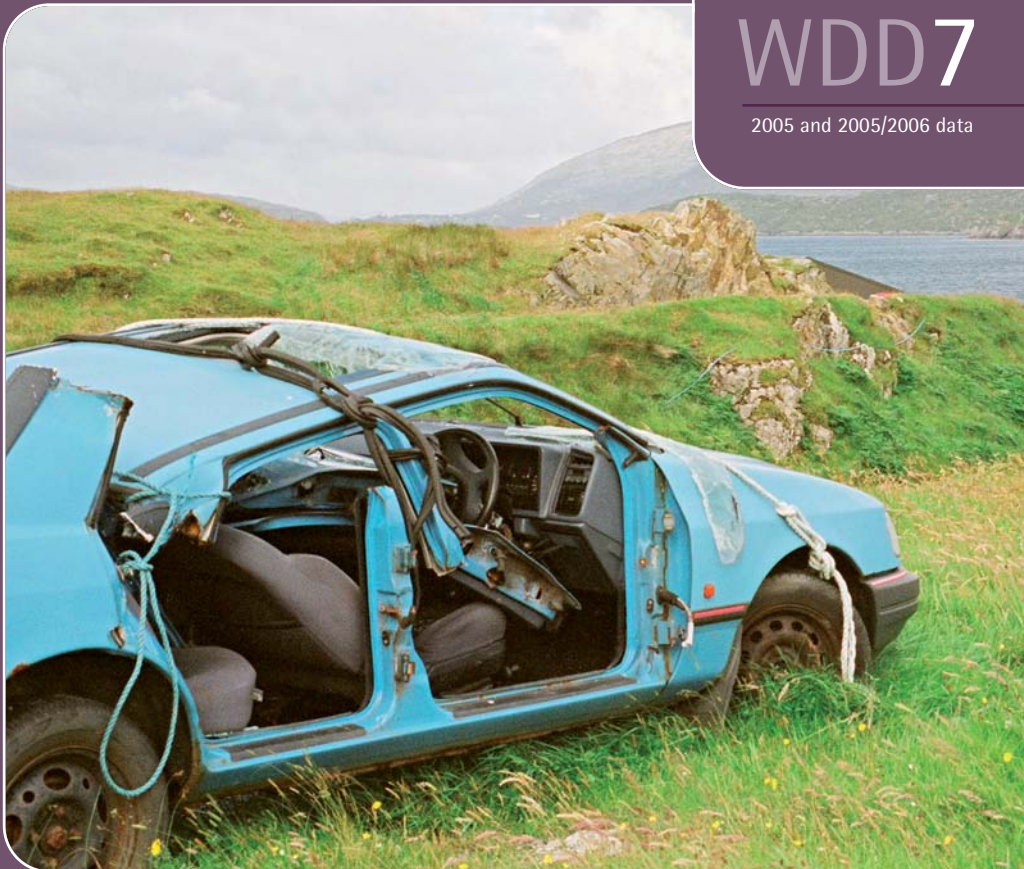




Waste Data Digest 7

WDD7

2005 and 2005/2006 data



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Introduction/ Key Facts



CHP01



Introduction/Key Facts

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

The seventh Waste Data Digest published by SEPA details data collected by, or on behalf of, SEPA on controlled waste in Scotland. Data are reported, as far as possible, for the 2005 calendar year. However, in some instances, only financial year information is available and this is reported for 2005/2006. The data are presented in four chapters dealing with arisings, recovery, disposal and waste related operational activities.

This is the last year in which data from SEPA's annual Local Authority Waste Arisings Survey (LAWAS) will be used in the Digest. In future years, data will be derived from the WasteDataFlow database. This is a web-based system for municipal waste data reporting by UK local authorities. All Scottish local authorities have used WasteDataFlow since 1 April 2006 to report data on waste arisings, recycling and disposal. WasteDataFlow will also provide data to calculate the quantity of biodegradable municipal waste landfilled by Scottish local authorities (a requirement of the Landfill Allowance Scheme (Scotland) Regulations 2005).

Commercial and industrial waste data reported in this Digest are obtained from three main sources. First, details of the waste dealt with by all licensed/permitted waste management sites are reported quarterly by operators using SEPA's waste management licence/permitted site return form. Second, information from special waste consignment notes received by SEPA is recorded in its special waste database. Third, data from certain exempt activities have been collected since April 2004 and are reported annually to SEPA. Additional data in the Digest are from SEPA's Producer Responsibility and Central Regulatory Units.

Data from SEPA's national survey of commercial and industrial waste producers in 2004 have been updated using statistical techniques to produce data for 2005.

As part of the development of a framework to address commercial and industrial wastes, National Best Practice Projects for industry sectors were introduced in April 2004. In March 2007, the Scottish Executive and SEPA published the Business Waste Framework, which outlines their approach to the sustainable management of business waste. The Framework contains a number of actions, one of which is that SEPA will review the scope and application of the National Best Practice Project programme and publish an analysis on its future role by the end of December 2007.

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

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

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

The next data digest, Waste Data Digest 8, reporting on 2006 and 2006/2007 waste data, will be published in spring 2008.

The rest of this section presents key facts about Scotland's waste management. The data for waste recovery are rounded to the nearest hundred tonnes and those for waste arisings and waste disposal to the nearest 10,000 tonnes. Apart from the data about the average Scottish household, more detailed information on each topic is presented later in the Digest.

Introduction/Key Facts

Waste Arisings

Total Waste Arisings

During 2005/2006, an estimated 22.22 million tonnes of controlled waste arose in Scotland. In 2005 the controlled waste regime was extended to include agricultural wastes and non-mineral wastes from mines and quarries (excluding mineral wastes from site workings). The breakdown of tonnages by waste type is:

- Household – 2.89 million tonnes
- Commercial and industrial – 8.41 million tonnes
- Construction and demolition – 10.60 million tonnes
- Agriculture – 320,000 tonnes
- Mines and quarries – no data available for 2005/2006.

Local Authority Waste

A total of 3.54 million tonnes of waste was collected by, or on behalf of, local authorities in Scotland. Of this:

- 2.89 million tonnes were household waste
- 500,000 tonnes were commercial waste
- 127,000 tonnes were industrial waste
- 24,000 tonnes were other non-household wastes.

WDD7

4

Commercial and Industrial Waste

An estimated 8.41 million tonnes of waste was produced by businesses in Scotland. The following business sectors produced 500,000 tonnes or more:

- Retail and wholesale – 1.51 million tonnes
- Miscellaneous business and service activities and public administration – 1.43 million tonnes
- Hotels and restaurants – 1.05 million tonnes
- Education – 640,000 tonnes
- Sewage and refuse disposal – 620,000 tonnes
- Coke, oil, gas, electricity and water – 500,000 tonnes.

The remaining 12 business sectors produced 2.66 million tonnes of waste.

Waste Recovery

Local authority waste recycling and composting

The recycling and composting rate for all the waste collected by, or on behalf of, local authorities in Scotland was 25.2%. The recycling and composting rate for municipal waste in Scotland was 24.4%. The target set by the Scottish Executive is 25% of municipal waste by the end of 2006 (see page 8 for the definition of municipal waste).

A total of 893,000 tonnes of waste was recycled or composted by local authorities in 2005/2006. This was made up of 606,500 tonnes recycled and 286,500 tonnes composted.

Introduction/Key Facts

For the 606,500 tonnes of materials recycled, the collection methods were:

- Kerbside – 242,500 tonnes
- Bring sites – 243,300 tonnes
- Other – 120,800 tonnes.

For the 286,500 tonnes of materials composted, the main sources were:

- Kerbside collection – 179,400 tonnes
- Bring sites – 67,100 tonnes
- Local authority parks, gardens or grounds – 33,200 tonnes

Waste Disposal

Local Authority Waste

Local authorities disposed of 2.65 million tonnes of waste during 2005/2006, of which:

- 2.57 million tonnes were landfilled
- 80,000 tonnes were incinerated
- 505 tonnes were disposed of in other ways.

A total of 1.54 million tonnes of biodegradable municipal waste was landfilled by Scottish local authorities in 2005/2006. This meets the Scottish Executive's target of 1.80 million tonnes by 2005/2006.

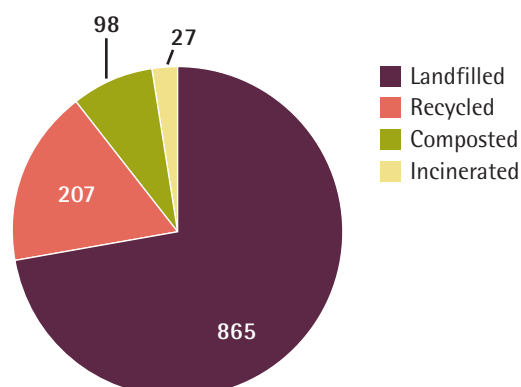
Controlled Waste

A total of 7.32 million tonnes of controlled waste was disposed of to landfill in 2005. Excluding waste landfilled by local authorities, approximately 4.75 million tonnes were wastes produced by commerce and industry.

The Average Scottish Household

Each household in Scotland produced an average of 1,197 kg of waste in 2005/2006. This is an increase of 26 kg over the previous year and represents a growth rate of about 2%. Figure 1 gives a breakdown of how this waste was managed.

Figure 1 – Average waste produced by Scottish households in 2005/2006 by management method (kg)



Waste Arisings

Total Waste Arisings for Scotland

Waste Statistics Regulation

Local Authority Waste Arisings

Composition of household waste

Commercial and Industrial Waste

Construction and Demolition Wastes

Agricultural Wastes

Mines and Quarries Wastes

National Best Practice Projects

Packaging and Packaging Waste

Hazardous and Special Wastes

Waste Management Facilities

Trends and Conclusions

Local authority waste collection



CHP02



Waste Arisings

Total Waste Arisings for Scotland

An estimated 22.22 million tonnes of controlled waste arose in Scotland in 2005. Controlled waste is waste regulated by SEPA and includes five major waste streams:

- household waste collected by, or on behalf of, local authorities;
- commercial and industrial wastes produced by businesses;
- construction and demolition wastes;
- agricultural wastes;
- mines and quarries wastes (non-mineral wastes).

The types and quantities of controlled waste produced in 2005 are presented in Table 1.

Table 1 – Total controlled waste arisings for Scotland in 2005/2006

Waste type	Million tonnes	%
Household	2.89	13
Commercial and industrial*	8.41	38
Construction and demolition*	10.60	48
Agricultural†	0.32	1
Mines and quarries‡	–	–
Total	22.22	100

Source: SEPA Local Authority Waste Arisings Survey 2005/2006, SEPA Commercial and Industrial Waste Study 2005 and SEPA Construction and Demolition Waste Study 2005

* Wastes produced by businesses. These are estimates based on surveys and studies carried out by, and on behalf of, SEPA.

† Data estimated using the Environment Agency's Agricultural Waste Estimates Model.

‡ Data unavailable.

Waste Statistics Regulation

The EU Waste Statistics Regulation (EC 2150/2002) came into force in December 2002. It requires the UK and other Member States to report data on the generation, recovery and disposal of waste to the European Commission every two years. The Department for Environment, Food and Rural Affairs (Defra) is responsible for compiling data for the UK, using data supplied by the four administrations for England, Northern Ireland, Scotland and Wales. Data for Scotland are provided by SEPA. UK data for the first reference year of 2004 were submitted to the Commission in June 2006.

SEPA uses a number of different sources of data to complete the reporting matrices for the Waste Statistics Regulation and undertakes various data collection initiatives to provide the required data. These may include carrying out surveys of commercial and industrial waste producers, studies of construction and demolition wastes, and using data in WasteDataFlow to provide information on waste generation. Statutory returns from waste management facilities regulated by SEPA provide much of the data on the disposal and recovery of waste.

SEPA intends to compile and publish data for Scotland in the Waste Statistics Regulation format every year. Further information on the Waste Statistics Regulation can be found at www.sepa.org.uk/nws/data/waste_stats_reg.htm

Waste Arisings

Local Authority Waste Arisings

The data presented in this section are based on the returns provided for the Local Authority Waste Arisings Survey (LAWAS) 2005/2006. All 32 Scottish local authorities responded to SEPA's 2005/2006 LAWAS.

This is the last Digest that will rely on data gathered by the LAWAS. On 1 April 2006, local authorities started using WasteDataFlow to report data on their waste arisings, recycling and disposal. This is a web-based system for municipal waste data reporting by UK local authorities. Future Digests will use data derived from the WasteDataFlow returns. More information on WasteDataFlow is available at www.sepa.org.uk/nws/data/waste_data_flow.htm

The definition of municipal waste used in this Digest is that set out in the Interim Guidance on the Landfill Allowance Scheme (Scotland) Regulations 2005 published by the Scottish Executive in May 2005. In the Regulations, municipal waste is defined as all waste for which the local authority makes arrangements excluding:

- abandoned vehicles;
- road maintenance waste;
- commercial waste that is delivered to local authority owned or run landfill sites, where the local authority has no part in the collection or disposal arrangements that have led to this delivery;
- industrial waste, collected from industrial premises and taken for disposal or treatment separately from any other waste;
- construction and demolition waste that is collected and taken for disposal or treatment separately from any other waste. Bricks and rubble taken to civic amenity sites must be included in collected municipal waste.

The Interim Guidance has since been replaced by the Scottish Executive's revised Guidance on the Landfill Allowance (Scotland) Regulations published in March 2007.

To maintain consistency with previous Digests, the information given here is taken from the LAWAS reporting on all the waste collected by, or on behalf, of the local authorities in Scotland excluding road maintenance waste. Where reference to municipal waste is required (i.e. calculation of recycling/composting rate and diversion of biodegradable municipal waste), the data on construction and demolition waste, and industrial waste have also been excluded.

Waste Arisings

In 2005/2006, a total of 3.54 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 2, and by individual local authority in Figure 2 and Table 3. Trends in the waste arisings for local authorities are examined at the end of this chapter.

Table 2 – Total controlled waste collected by, or on behalf of, Scottish local authorities 2005/2006

Waste type	Tonnes	%
Waste collected for disposal		
Household*	2,093,922	59.12
Commercial	394,402	11.14
Industrial	74,571	2.11
Other non-household†	23,922	0.68
Total	2,586,817	73.04
Waste collected for recycling and composting		
Household	797,034	22.50
Commercial‡	105,137	2.97
Industrial‡	52,834	1.49
Total	955,005	26.96
Total arisings§	3,541,822	100.00

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

* For many local authorities, the mainstream household waste collection service is a mixed collection and includes household, commercial and industrial wastes. For the purpose of the LAWAS, local authorities were asked to provide the data for household, commercial and industrial waste from this collection round separately.

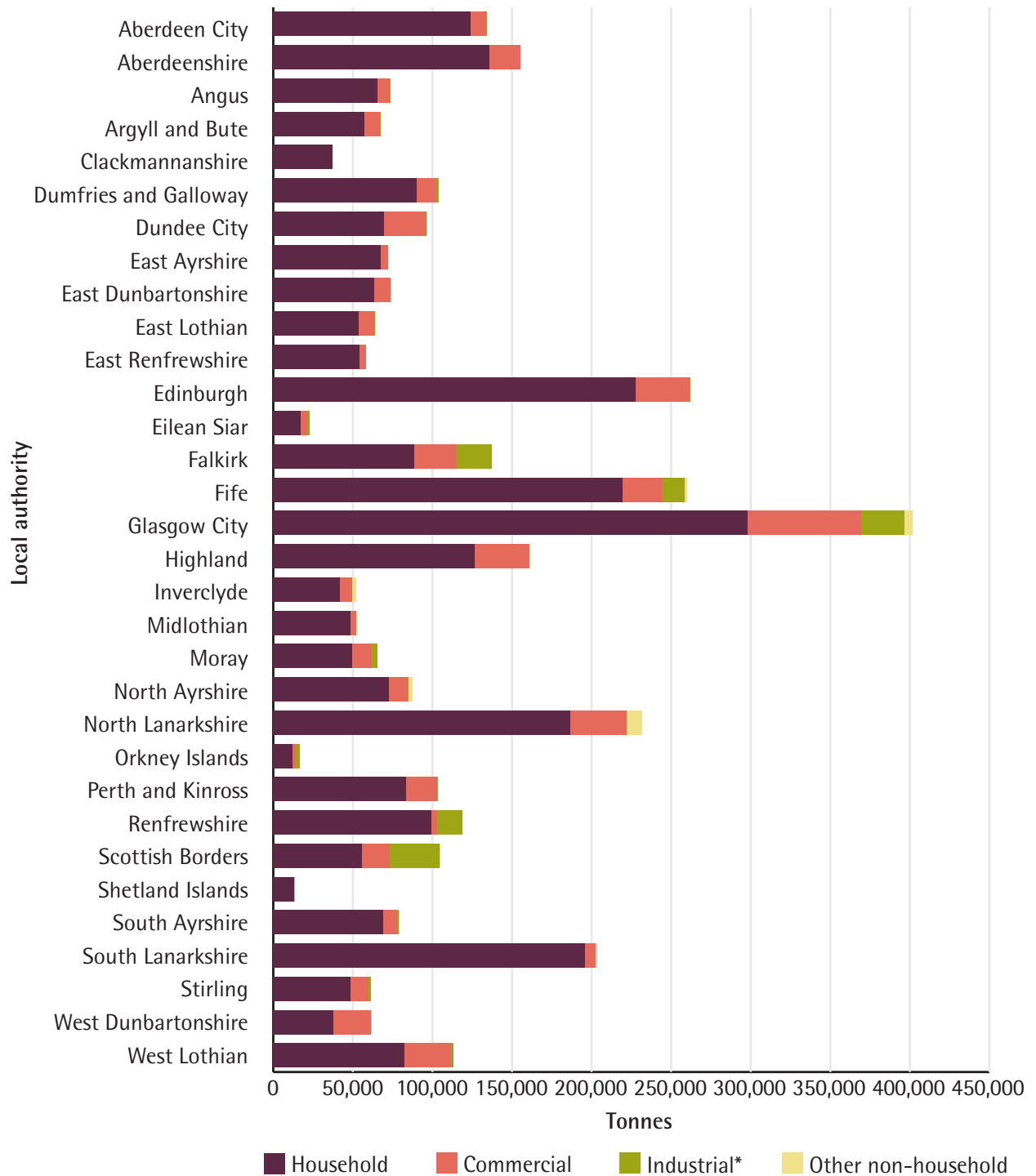
† Other non-household waste includes: local authority parks and gardens waste; beach cleaning waste; clearance of fly-tipped waste and waste not otherwise specified.

‡ Includes incinerator residues.

§ Waste arisings do not include home composting tonnages and road maintenance waste.

Waste Arisings

Figure 2 – Controlled waste collected by, or on behalf of, individual Scottish local authorities 2005/2006



Source: SEPA Local Authority Waste Arisings Survey 2005/2006

* Includes end-of-life vehicles and separately collected construction and demolition waste and industrial waste, but excludes road maintenance waste

Waste Arisings

Table 3 – Controlled waste collected by, or on behalf of, individual Scottish local authorities 2005/2006

Local authority	Number of households provided with a service*	Total local authority waste arisings (tonnes)	Waste collected for disposal (tonnes)				Waste collected for recycling and composting (tonnes)			Household waste produced per household (tonnes)†
			Household	Commercial	Industrial†	Other non-household	Household	Commercial	Industrial†	
Aberdeen	108,141	134,064	99,475	8,684	0	0	24,427	1,089	389	1.15
Aberdeenshire	103,626	155,123	108,102	15,146	0	0	27,691	4,184	0	1.31
Angus	50,984	73,381	35,581	7,203	0	0	29,682	867	48	1.28
Argyll and Bute	45,512	67,582	29,537	4,258	236	0	27,795	5,204	554	1.26
Clackmannanshire	23,450	37,022	21,357	0	32	0	15,633	0	0	1.58
Dumfries and Galloway	70,724	103,540	79,969	11,772	631	0	9,979	659	530	1.27
Dundee	75,036	95,669	58,028	23,144	0	0	11,281	3,509	253	0.92
East Ayrshire	54,004	72,083	44,507	3,658	0	0	22,984	628	307	1.25
East Dunbartonshire	43,474	73,646	47,605	6,649	41	0	15,612	3,739	0	1.45
East Lothian	41,756	64,644	35,148	6,593	280	929	18,598	2,783	313	1.29
East Renfrewshire	37,772	58,144	39,980	3,648	0	85	14,404	0	27	1.44
Edinburgh	225,262	261,938	177,590	27,398	0	0	50,270	6,235	445	1.01
Eilean Siar	14,678	23,126	16,200	3,646	1,302	0	1,034	95	340	1.17
Falkirk	68,295	136,966	60,498	19,160	6,198	0	28,100	7,406	15,600	1.30
Fife	164,007	259,810	148,642	22,931	12,607	1,629	70,713	2,463	825	1.34
Glasgow	290,381	401,698	258,211	50,188	23,736	5,077	39,608	21,061	3,818	1.03
Highland	105,805	161,249	96,615	32,916	0	553	30,003	996	167	1.20
Inverclyde	39,349	52,061	32,004	6,917	0	2,650	9,801	615	73	1.06
Midlothian	34,628	52,678	37,393	3,268	0	680	11,217	9	111	1.40
Moray	41,423	65,233	35,069	7,632	0	0	14,401	4,594	3,537	1.19
North Ayrshire	65,278	87,230	47,175	11,332	619	2,267	25,553	260	25	1.11
North Lanarkshire	143,637	231,898	110,848	25,088	0	10,000	75,918	10,044	0	1.30
Orkney Islands	9,635	16,545	9,052	1,368	0	49	2,857	641	2,577	1.24
Perth and Kinross	65,916	103,231	60,041	15,533	0	0	23,214	4,259	183	1.26
Renfrewshire	80,974	118,605	64,275	3,444	15,990	0	34,897	0	0	1.22
Scottish Borders	53,300	104,445	45,498	15,603	10,588	0	10,098	1,815	20,843	1.04
Shetland Islands	10,200	13,186	12,546	0	0	0	540	0	100	1.28
South Ayrshire	52,750	78,799	41,705	4,593	917	0	27,420	4,068	98	1.31
South Lanarkshire	139,108	202,940	125,183	753	0	0	70,451	6,316	237	1.41
Stirling	38,221	61,114	30,601	7,418	1,301	0	18,037	3,758	0	1.27
West Dunbartonshire	43,906	61,279	26,530	23,059	0	0	11,225	407	58	0.86
West Lothian	71,240	112,752	58,956	21,401	93	0	23,591	7,434	1,375	1.16
Total	2,412,472	3,541,681	2,093,922	394,402	74,571	23,919	797,034	105,137	52,834	1.20

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

* Number of households provided with a service by the local authority.

† Includes end-of-life vehicles and separately collected construction and demolition waste and industrial waste, but excludes road maintenance waste.

‡ Does not include home composting figures.

Waste Arisings

Composition of household waste

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

SEPA is producing a national municipal waste analysis methodology in response to requests from a number of local authorities for guidance in conducting the analysis of municipal waste. This will be published on the SEPA website for local authorities to use on a voluntary basis. It is proposed that this guidance will link directly to the development of a UK Waste Analysis Methodology to enable the comparison, benchmarking and aggregation of data at a Scottish or UK level. The methodology is based on a breakdown of municipal waste into 18 primary categories (see Table 4) developed to highlight parts of the waste stream that can be recycled, composted or recovered.

The LAWAS 2005/2006 asked local authorities if they had carried out a compositional analysis of household waste during 2005/2006. It also asked about the methods used to carry out this analysis. Seven local authorities had carried out an analysis of household waste. The results from the analyses reported by these local authorities are shown in Table 4.

Table 4 – Household waste composition 2005/2006

Material category	% of waste material found by weight						
	Rural*	Mixed*	Mixed*	Mixed*	Mixed*	Mixed*	Urban*
1. Newspapers and magazines	8.28	21.50	7.11	11.80	13.33	4.53	13.41
2. Other recyclable paper	0.00	1.00	3.80	0.00	1.70	2.35	2.57
3. Card and card packaging	5.41	12.30	7.84	4.40	7.35	3.42	6.49
4. Non-recyclable paper	3.28	1.50	4.24	0.00	3.47	5.11	0.46
5. Plastic film	5.17	3.50	5.22	0.00	4.65	5.42	3.85
6. Dense plastic	11.11	7.20	8.09	9.40	8.79	6.88	10.18
7. Textiles	4.10	1.78	7.33	4.40	4.63	5.96	8.58
8. Glass	14.23	12.90	10.15	8.20	5.96	4.00	5.53
9. Organic kitchen (catering) waste	22.96	17.80	26.35	38.00	29.38	39.27	15.26
10. Organic garden waste	5.33	6.30	4.84	5.60	2.25	4.95	5.81
11. Other putrescibles	0.00	2.20	1.71	0.00	4.30	3.60	4.51
12. Ferrous metal	2.58	2.40	3.57	1.00	3.17	1.52	1.86
13. Non-ferrous metal	1.15	1.30	1.19	2.00	2.19	1.26	1.20
14. Electrical/electronic equipment	0.53	0.70	0.79	1.10	1.87	1.32	5.00
15. Potentially hazardous	0.04	0.25	0.71	1.10	0.51	0.92	1.10
16. Other combustibles	6.48	3.50	4.57	4.70	4.83	5.66	7.14
17. Other non-combustible	2.95	3.22	1.46	5.30	1.35	3.09	6.71
18. Fines	6.40	0.65	1.03	3.00	0.27	0.74	0.34
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

* Council type as defined by Audit Scotland

Waste Arisings

Commercial and Industrial Waste

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

Gathering data on commercial and industrial waste arisings in Scotland is difficult. There is currently no requirement for businesses to report information to SEPA on the waste they produce. To address this data gap, SEPA commissioned a national survey of commercial and industrial waste producers in 2004. Its findings were reported in the last Digest. These data have been updated to provide estimates for 2005. These estimates are subject to large confidence intervals and therefore the results are only indicative.

The updated results show that an estimated 8.41 million tonnes of waste were produced by businesses in Scotland in 2005. Of this, 6.06 million tonnes (72%) of waste arose from commerce and 2.35 million tonnes (28%) from industry. A breakdown of commercial and industrial waste by Waste Strategy Area (WSA) is given in Table 5. A map showing WSAs and their constituent local authorities is presented in Appendix V.

Table 5 – Commercial and industrial waste produced by Waste Strategy Area in 2005

Waste Strategy Area	Commercial (tonnes)*	Industrial (tonnes)*	Total (tonnes)*
Orkney and Shetland	60,000	20,000	80,000
Western Isles	30,000	20,000	50,000
Highland	330,000	120,000	450,000
North East	710,000	300,000	1,010,000
Tayside	460,000	170,000	630,000
Forth Valley	310,000	100,000	410,000
Fife	330,000	210,000	540,000
Lothians and Borders	1,160,000	380,000	1,540,000
Ayrshire, Dumfries and Galloway	550,000	210,000	770,000
Glasgow and Clyde Valley	2,000,000	790,000	2,790,000
Argyll and Bute	120,000	20,000	140,000
Total	6,060,000	2,350,000	8,410,000

Source: SEPA Commercial and Industrial Waste Study 2005

* Rounded to the nearest 10,000 tonnes.

Table 6 shows the amounts of waste produced by the different business sectors in Scotland. Almost half of commercial and industrial waste is produced by the retail and wholesale, hotels and restaurants, and miscellaneous commercial (including public administration) sectors. The industrial sectors producing the most waste are: coke, oil, gas, electricity and water; food and drink; and chemicals and chemical products.

Further information and detailed results from the survey are available on the SEPA website at www.sepa.org.uk/nws/data/survey.htm

Waste Arisings

Table 6 – Commercial and industrial waste produced by business sector in 2005

Business sector	Tonnes*
Industrial	
Food and drink	430,000
Textiles and leather production	80,000
Wood and paper production	370,000
Chemicals and chemical products	410,000
Mineral products	90,000
Metals and metal products	100,000
Manufacture of machinery, vehicles and equipment	240,000
Coke, oil, gas, electricity and water	500,000
Recycling	90,000
Miscellaneous industrial	40,000
Commercial	
Retail and wholesale	1,510,000
Hotels and restaurants	1,050,000
Transport and communications	200,000
Finance	130,000
Education	640,000
Health and social work	480,000
Sewage and refuse disposal	620,000
Miscellaneous business and service activities and public administration	1,430,000
Total	8,410,000

Source: SEPA Commercial and Industrial Waste Study 2005

* Rounded to nearest 10,000 tonnes.

Construction and Demolition Wastes

Wastes produced by the construction and demolition (C&D) industry typically include soils, concrete, bricks, glass, wood, plasterboard, asbestos, metals and plastics. These materials are classified under chapter 17 of the European Waste Catalogue List of Wastes (see Appendix III).

The Waste Statistics Regulation requires data on waste generation to be reported by waste type within each industry sector. To meet this need for the construction industry sector, SEPA carried out a study of chapter 17 wastes to ascertain the types and quantities of C&D waste handled in 2005 by sites with a waste management licence or Pollution Prevention and Control (PPC) permit and exempt activities registered under paragraphs 9 and 19 of the Waste Management Licensing Regulations. This information was compiled from statutory returns held by SEPA, and builds on a similar study carried out for 2004 and reported in the last Digest.

Some of the C&D wastes may be double-counted as, for example, waste may pass through a transfer station before going on for recovery or final disposal. In addition, the 10.60 million tonnes handled in 2005 (see Table 7) does not include any C&D wastes crushed or screened by mobile plant.

Waste Arisings

Table 7 – Construction and demolition waste handled by waste management facilities in 2005

Waste Strategy Area	Sites with PPC permit or waste management licence (tonnes)	Exempt activities (tonnes)*	Total (tonnes)
Orkney and Shetland	45,359	37,402	82,760
Western Isles	24,281	137,226	161,508
Highland	118,699	327,135	445,834
North East	621,254	456,851	1,078,104
Tayside	464,259	203,026	667,285
Forth Valley	682,761	337,800	1,020,561
Fife	76,268	182,184	258,453
Lothians and Borders	715,743	593,879	1,309,622
Ayrshire, Dumfries and Galloway	591,434	350,879	942,314
Glasgow and Clyde Valley	3,025,579	1,336,823	4,362,402
Argyll and Bute	46,742	229,066	275,808
Total	6,412,378	4,192,272	10,604,650

Source: SEPA Licensed/Permitted Site Returns and Exempt Activity Returns

* Only exempt activities registered under paragraphs 9 and 19 of the Waste Management Licensing Regulations

The total amount of C&D waste handled by exempt activities registered under paragraphs 9 and 19 in 2005 was 4.20 million tonnes. Around 31% of these data were obtained from annual returns and 42% were estimates taken from the application form completed by operators when applying for the exemption. The remaining 27% of the data were calculated based on an average weight per site obtained from actual annual returns.

The types and quantities of C&D waste handled at waste management facilities in 2005 are shown in Table 8. The vast majority of the C&D wastes were reported to be non-hazardous mineral wastes, which include soils and mixed C&D waste. Only a small proportion of the C&D wastes were reported to be hazardous (contaminated soils, hazardous mineral wastes and asbestos wastes). Less than 5% of the C&D wastes were segregated fractions such as metals, glass, plastic and wood. Waste handled by exempt activities that was calculated using average weight returns could not be broken down by waste type and is therefore identified in Table 8 as 'Unclassified'.

The total quantity of C&D waste handled in Scotland in 2005 (10.60 million tonnes) was 45% greater than that handled in 2004 (7.31 million tonnes). This is associated with a 55% increase in the total number of licensed/permitted sites and exempt activities handling C&D waste in Scotland between these two years (858 in 2004 compared with 1,331 in 2005).

C&D waste handled by exempt activities doubled from 2.11 million tonnes in 2004 to 4.19 million tonnes in 2005. This can be largely explained by an 87% increase in the number of exempt sites operating in these two years (520 in 2004 and 972 in 2005) and by an increase in the amount of waste handled per exempt activity. The quantity of C&D waste handled by licensed/permitted sites increased by 24% from 5.19 million tonnes in 2004 to 6.41 million tonnes in 2005.

The management of C&D wastes in Scotland followed a similar pattern in both years. The majority of the C&D wastes were handled by licensed/permitted activities (60% in 2005 and 71% in 2004), with the remainder being handled by exempt activities (40% in 2005 and 29% in 2004). However, there was a decrease in the proportion handled by licensed/permitted sites and an increase in the proportion handled by exempt activities in 2005 compared with 2004. Continued analysis of data from future years will reveal any trends in the pattern of C&D waste management in Scotland.

More detailed data on C&D wastes will be available on SEPA's website in summer 2007.

Waste Arisings

Table 8 – Types of construction and demolition waste handled at waste management facilities in 2005

Waste type	Tonnes
Metals	249,636
Glass	3,487
Plastics	4,827
Wood	74,296
Dredging spoil	30,130
Mineral waste (non-hazardous)	8,841,766
Mineral waste (hazardous)	25,771
Asbestos	28,092
Contaminated soils	48,233
Unclassified	1,298,413
Total	10,604,650

Source: SEPA Licensed/Permitted Site Returns and Exempt Activity Returns

Agricultural Waste

In January 2005, agricultural waste became controlled waste in Scotland under the Waste (Scotland) Regulations 2005. Agricultural waste is commercial waste and is defined as waste from premises used for agriculture including:

- horticulture
- fruit growing
- seed growing
- dairy farming
- livestock breeding and keeping (including aquaculture)
- use of land as grazing land
- meadow land
- osier land
- market gardens and nursery grounds
- use of land for woodlands where that use is ancillary to the farming of land for other agricultural purposes.

Typical agricultural wastes include packaging, silage plastics, redundant machinery, tyres, netwrap, oils, batteries, fencing, building materials, scrap metal, unused pesticides and veterinary medicines, horticultural plastics and spent sheep dip.

Manure and slurry are not generally regarded as waste if they are used on the farm where they were produced, or on any other farm, providing they are being used as a fertiliser or soil conditioner to meet the crop requirements of agricultural land (i.e. the use is beneficial to the land). Manure and slurry that are excess to requirements, and thus to be disposed of, should be treated as waste.

Further information on agricultural waste can be found in SEPA's Guide to Agricultural Waste (www.sepa.org.uk/agriwaste/index.htm).

Waste Arisings

Waste generated by the agricultural sector in Scotland has been estimated using the Agricultural Waste Estimates Model developed for the Environment Agency. Data from the June 2005 Scottish Agricultural Census were used to produce estimates of waste arisings from farms, based on parameters such as crop and livestock production. There were insufficient data available to generate estimates for some materials such as batteries, building materials, machinery and tyres.

Waste arising from commercial sea and freshwater fish farms (aquaculture) in Scotland was determined from fish mortality data.

The types and quantities of agricultural waste produced in Scotland in 2005 are shown in Table 9. Of the 318,233 tonnes of waste produced, almost three-quarters was classified as hazardous. The largest waste stream was chemical wastes, predominantly pesticides and insecticides, which accounted for 64% of agricultural waste. The next largest waste stream was livestock mortalities (including fish) and animal tissue (21%), followed by plastics (7%), asbestos (4%) and oils (3%).

Table 9 – Agricultural waste produced in Scotland in 2005

Waste type	Tonnes
Oils	8,621
Chemicals	203,302
Plastics	20,731
Paper and cardboard	2,371
Livestock mortalities and animal tissue	59,839
Fish waste	6,653
Milk waste	2,749
Animal healthcare	332
Metal oil drums	315
Cooling equipment	1,837
Asbestos roofing	13,319
Total	318,233

Source: Scottish Agricultural Census 2005, SEPA Sea Farm Mortality Data 2005 and SEPA Fish Waste Survey 2003

Mines and Quarries Waste

The Waste (Scotland) Regulations 2005 extended the controlled waste regime to include non-mineral wastes from mines and quarries. This waste is classed as industrial waste. Mineral wastes from site workings are not considered to be controlled waste because they are already regulated by planning and mining legislation.

Typical controlled wastes arising from mines and quarries include oils, batteries, scrap metal and packaging. Data are not currently available on these wastes and SEPA is looking at ways to collect these data in the future.

Waste Arisings

National Best Practice Projects

In the National Waste Strategy, SEPA undertook to carry out studies into 13 Priority Waste Streams selected due to their size, hazardous nature, potential for recycling, or value. As part of the development of a framework to address commercial and industrial wastes, SEPA set up National Best Practice Projects for industry sectors following the European Waste Catalogue (EWC) classification. These projects aim to obtain data on waste produced in different sectors and to help waste producers identify and develop the most sustainable option for wastes produced by their business. Technical studies are carried out by SEPA into specific waste types in partnership with other key stakeholders including the industry sector and the waste management industry.

National Best Practice Projects are run jointly by National Waste Strategy and Waste Data Strategy staff. Phase 1 is led by the Waste Data Strategy staff and involves the collection of data and information on waste arisings, treatment and disposal, current and projected infrastructure (including capacity), current and forthcoming guidance and legislation, emerging technologies and examples of best practice. During phase 2, best practice guidance is developed by a national multi-stakeholder group led by National Waste Strategy staff.

A phase 1 project on food preparation and processing wastes began in January 2006 and is focusing on raw meat and fish waste arisings. The data phase of this project is due to be completed in spring 2007.

Although the National Best Practice Project programme was originally successful, progress in waste management means there is now a plethora of best practice guidance available, some of which is driven by legislative requirements. This was discussed in the Consultation Paper on the Sustainable Management of Waste from Business and the Public Sector Organisations in Scotland and the responses supported this view.

In March 2007, the Scottish Executive and SEPA published the Business Waste Framework (www.scotland.gov.uk/Topics/Environment/Waste/17103/9197), which outlines their approach to the sustainable management of business waste. One of the actions in the Framework is for SEPA to review the scope and application of the National Best Practice Project programme and publish an analysis on the future role of National Best Practice Projects by the end of December 2007.

The status of the following Priority Waste Stream Projects and National Best Practice Projects is given on SEPA's website (www.sepa.org.uk/nws/business/practice_projects.htm):

- agricultural wastes*
- chlorofluorocarbons and ozone-depleting substances*
- clinical and sanpro waste*
- construction and demolition waste*
- end-of-life vehicles*
- fish wastes
- food preparation and processing wastes – raw meat and fish
- forestry wastes
- household hazardous wastes*
- oil wastes*
 - used cooking oils
 - mineral oils
- newsprint*
- packaging wastes*
- petroleum refining, natural gas purification and pyrolytic treatment of coal wastes
- special wastes*
- used tyres*
- waste batteries*
- waste electrical and electronic equipment (WEEE)*.

* Priority Waste Stream Projects

Waste Arisings

Packaging and Packaging Waste

SEPA handles considerable amounts of data relating to packaging and packaging waste in order to fulfil its duties in relation to the Producer Responsibility Obligations (Packaging Waste) Regulations 2005.

Approximately 10.28 million tonnes of packaging waste were produced in the UK in 2005, an increase of 0.5% compared with 2004. Of this, it was estimated that approximately 1 million tonnes arose in Scotland. Table 10 provides a breakdown of packaging flowing into the UK waste stream in 2005.

Table 10 – Total tonnage of packaging flowing into the UK waste stream 2005

Material	Tonnes
Paper	3,725,652
Glass	2,400,000
Plastic	1,901,345
Steel	686,005
Wood	1,403,694
Aluminium	141,500
Other	22,000
Total	10,280,196

Source: SEPA Producer Responsibility Team

Hazardous and Special Wastes

The Hazardous Waste Directive (91/689/EC) provides the framework for the control of hazardous or 'special' waste. Council Decision 2000/532/EC of 1 January 2002 established the European Waste Catalogue List of Waste, a harmonised, non-exhaustive list of waste types (see Appendix III). It categorises wastes based on a combination of what they are and the process or activity that produces them. Certain wastes on the list are classified as hazardous because they display one or more hazardous characteristics or properties such as being explosive, highly flammable, toxic or carcinogenic.

The Special Waste Regulations 1996 transposed the requirements of the Hazardous Waste Directive into UK law. However, they did not fully transpose all the Directive's requirements. Nor did they take into account possible amendments to, and expansions of, the European Waste Catalogue and the list of hazardous wastes. The Special Waste Amendment (Scotland) Regulations 2004 address these issues.

Every movement of special waste must be accompanied by relevant paperwork referred to as a 'Consignment Note'. Since July 2004, this consignment note has had to give the six-digit code assigned to the waste in the European Waste Catalogue, together with the postcode of the producer. Technical Guidance WM2 (see www.sepa.org.uk/guidance/waste/hazardous) published jointly by SEPA, the Environment Agency and the Northern Ireland Environment and Heritage Service explains the interpretation of the definition and classification of hazardous waste in the UK.

In 2005, approximately 440,000 tonnes of special waste were consigned within Scotland, a reduction of about 17% compared with 2004. There was a decrease of approximately 130,000 tonnes in the quantity of special waste landfilled and an increase of 50,000 tonnes in special waste sent to treatment plants.

Table 11 shows a breakdown of the waste by destination type and Table 12 by EWC 2002 chapter. Chapters 3 and 4 contain more detailed information on special waste sent to treatment plants and landfills.

Waste Arisings

Table 11 – Special waste consigned within Scotland by destination type in 2005

Destination type	Tonnes
Landfill	44,425
Transfer station	83,014
Treatment plant	255,214
Incinerator	27,403
Scrapyard	2,377
Transfer station/treatment plant*	31,124
Unallocated	99
Total	443,656

Source: SEPA Special Waste Database

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

Table 12 – Special waste consigned within Scotland by European Waste Catalogue (EWC 2002) chapter code in 2005

EWC chapter	Description	Consigned within Scotland(tonnes)
01	Mining and minerals	113,752
02	Agricultural and food production	31
03	Wood and paper production	240
04	Leather and textile production	64
05	Petrol, gas and coal refining/treatment	5,137
06	Inorganic chemical processes	19,380
07	Organic chemical processes	25,651
08	Paints, varnish, adhesive and inks	3,593
09	Photographic industry	1,713
10	Thermal process waste (inorganic)	112
11	Metal treatment and coating processes	5,392
12	Shaping/treatment of metals and plastics	3,484
13	Oil and oil/water mixtures	116,945
14	Solvents	1,996
15	Packaging, cloths, filter materials	9,961
16	Not otherwise specified	28,328
17	Construction and demolition waste and asbestos	45,651
18	Health care	923
19	Waste/water treatment and water industry	52,344
20	Municipal and similar commercial wastes	4,722
Uncoded	Unclassified	4,238
Total		443,656

Source: SEPA Special Waste Database

Waste Arisings

Waste Management Facilities

All licensed/permitted waste management facility operators are required to submit waste data information to SEPA on a quarterly basis using the Licensed/Permitted Site Return form. The information collected includes the tonnages of all wastes entering, being processed at, and leaving the facilities and is recorded in SEPA's Waste Data Strategy database. The waste is classified using the European Waste Catalogue (EWC 2002) coding system (see Appendix III). The information provided is used to check the compliance of facilities with their licence/permit conditions, to inform SEPA's National Waste Strategy, and to meet national and international reporting requirements.

Table 13 shows the quantities of waste entering waste management licensed/permitted sites in Scotland in 2005. This does not represent the total amount of waste generated in Scotland as it does not include waste being managed at exempt sites and waste sent directly to sites outside Scotland, but it does include waste sent to sites in Scotland from outside Scotland. The totals may also involve some double counting as, for example, waste may enter a civic amenity site where it is recorded and then is sent on to a recycler where it is recorded again. SEPA is studying ways to produce a more accurate measure of the total waste generated annually in Scotland.

Table 13 – Waste handled by site type in 2005

Site type	Tonnes
Civic amenity	547,736
Landfill	7,693,646
Recycler or reprocessor	1,859,346
Transfer station	4,453,673
Treatment plant	2,230,604

Source: SEPA Licensed/Permitted Waste Management Site Returns

Waste Arisings

Trends and Conclusions

Local authority waste collection

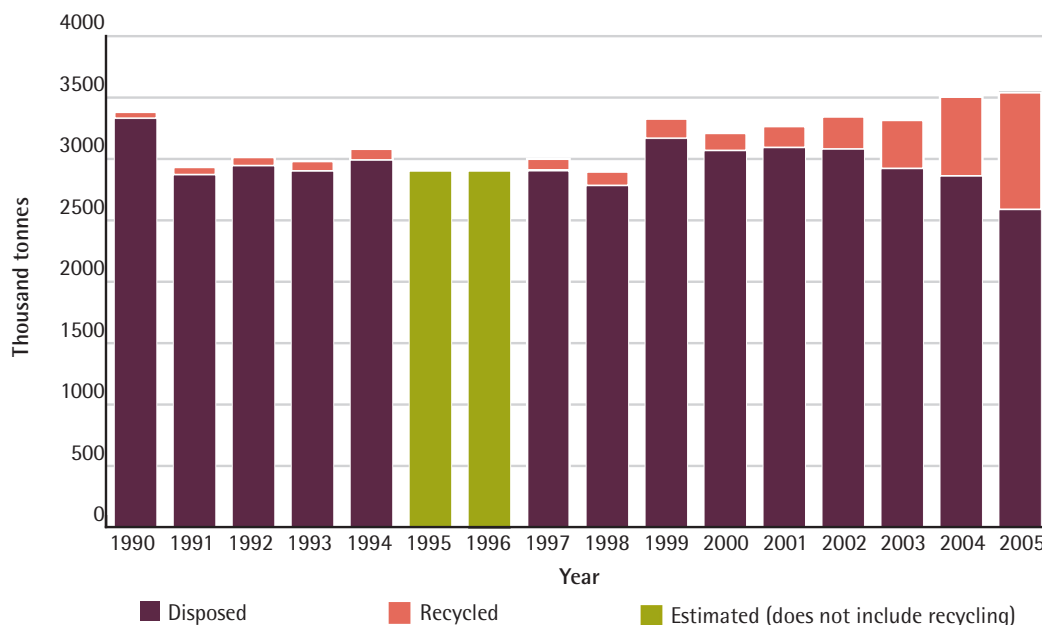
Total local authority waste arisings in 2005/2006 were 3.54 million tonnes. This total consists of all controlled waste collected by, or on behalf of, Scottish local authorities including end-of-life vehicles, and separately collected construction and demolition waste and industrial waste but excluding road maintenance waste. Between 2004/2005 and 2005/2006, the amount of waste collected increased by 1.0% (approximately 36,000 tonnes).

Since 1994, when 3.08 million tonnes was collected in Scotland, there has been an increase of 14.9% in total waste arisings. This equates to an annual growth rate of about 1.25% between 1994 and 2005. At this annual growth rate, local authority waste arisings could increase to approximately 4.26 million tonnes per year by 2020.

The amount of household waste collected for disposal fell by about 182,000 tonnes between 2004/2005 and 2005/2006, while the quantity collected for recycling and composting increased by 275,000 tonnes. Of this increase, composting accounted for 92,000 tonnes and recycling for 183,000 tonnes. The increase in the waste collected for composting may be explained by materials previously composted at home, and thus not entering the waste stream, being sent for centralised composting. The increase in materials collected for recycling corresponds to the decrease in waste collected for disposal and suggests that there is a clear movement among households to recycle materials that were previously disposed of.

Figure 3 and Table 14 present available data for controlled waste collected by, or on behalf of, Scottish local authorities for recycling, composting and disposal.

Figure 3 – Controlled waste collected by, or on behalf of, Scottish local authorities 1990–2005



Source: 1990–1994 figures extracted from Table A1.2 of Scottish Office Bulletin 1994 (refers to 1990–1994 inclusive). 1997–1998 figures are taken from the Databridge study by Environmental Resource Management (ERM) for SEPA and the Scottish Executive. 1999 figures are based on the National Waste Strategy Waste Management Baseline Assessments although further work was carried out to complete the dataset. 2000/2001 to 2005/2006 figures are from the respective Local Authority Waste Arisings Surveys.

Waste Arisings

Table 14 – Controlled waste collected by, or on behalf of, Scottish local authorities 1990–2005 (thousand tonnes)

Waste type	1990	1991	1992	1993	1994
Waste collected for disposal, of which:					
Household, commercial and industrial	2,818.8	2,403.3	2,427.9	2,392.9	2,471.0
Civic amenity	510.6	466.5	515.2	507.1	518.1
Total waste collected for disposal	3,329.4	2,869.9	2,943.1	2,899.9	2,989.1
Total waste collected for recycling and composting	54.1	64.5	72.2	82.3	93.2
Total local authority waste arisings	3,383.5	2,934.4	3,015.2	2,982.3	3,082.3

Waste type	1995*	1996*	1997	1998	1999
Waste collected for disposal, of which:					
Household, commercial and industrial	n/k	n/k	2,567.6	2,396.0	2,763.9
Civic amenity	n/k	n/k	340.0	385.7	402.1
Total waste collected for disposal	n/k	n/k	2,907.6	2,781.8	3,166.0
Total waste collected for recycling and composting	n/k	n/k	93.4	115.0	162.0
Total local authority waste arisings	n/k	n/k	3,001.0	2,896.8	3,328.0

Waste type	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Waste collected for disposal, of which:						
Household, commercial and industrial	2,682.2	2,739.6	2,697.0	2,560.5	2,561.6	2,347.9
Civic amenity	384.6	351.6	381.7	359.9	297.8	239.0
Total waste collected for disposal	3,066.7	3,091.2	3,078.9	2,920.4	2,859.5	2,586.8
Total waste collected for recycling and composting	144.7	175.8	266.6	396.7	646.8	955.0
Total local authority waste arisings	3,211.4	3,267.0	3,345.5	3,317.1	3,506.3	3,541.8

Source: 1990–1994 figures extracted from Table A1.2 of Scottish Office Bulletin 1994 (refers to 1990–1994 inclusive).
 1997–1998 figures are taken from the Databridge study by Environmental Resource Management (ERM) for SEPA and the Scottish Executive.
 1999 figures are based on the National Waste Strategy Waste Management Baseline Assessments although further work was carried out to complete the dataset.
 2000/2001 to 2005/2006 figures are from the respective Local Authority Waste Arisings Surveys.

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

Waste Recovery



Local Authority Waste Recovery

Landfill Allowance Scheme Quarterly Monitoring Return

Local authority recycling

Local authority recycling initiatives

Local authority composting

Local authority composting initiatives

Home composting

Waste Treatment

Exempt Activities

Packaging and Packaging Waste

Hazardous and Special Waste

Imports and Exports of Wastes Covered by the Waste Shipments Regulation

Trends and Conclusions

CHP03



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 2005. These are, however, classified as disposal activities and their details are included in the Waste Disposal chapter of this Digest.

The combined recycling and composting rate for Scotland for 2005/2006 was 24.4% of the total municipal waste collected by, or on behalf of, Scottish local authorities. SEPA has continued to work with Audit Scotland to obtain consistency in the reporting of local authority recycling rates. For 2005/2006, there is good agreement between the rates published by the two organisations, 24.7% from Audit Scotland and 24.4% from SEPA.

The recycling and composting rate for 2005/2006 shows a substantial rise over the 17.5% achieved in 2004/2005. This reflects the work by local authorities to implement their recycling and composting plans in conjunction with the National Waste Plan 2003 and the Strategic Waste Fund monies allocated by the Scottish Executive. The National Waste Plan 2003 provides Scotland with guidelines for meeting the target of recycling and composting 25% of municipal waste by the end of 2006. Trends in the recycling and composting rate for local authorities are examined at the end of this chapter.

There are a number of ways in which the recycling and composting rate can be calculated. Following the Interim Guidance on the Landfill Allowances Scheme (Scotland) Regulations 2005, SEPA has calculated it using the collected municipal waste figure. This is all waste for which the local authority makes arrangements, with the following exceptions:

- abandoned vehicles;
- road maintenance waste;
- commercial waste that is delivered to local authority owned or run landfill sites, where the local authority has no part in the collection or disposal arrangements that have led to this delivery;
- industrial waste, collected from industrial premises and taken for disposal or treatment separately from any other waste;
- construction and demolition waste that is collected and taken for disposal or treatment separately from any other waste. Bricks and rubble taken to civic amenity sites must be included in collected municipal waste.

Table 15 shows the recycling and composting rates for Scottish local authorities for 2005/2006 derived from the LAWAS returns.

Landfill Allowance Scheme Quarterly Monitoring Return

With the coming into force of the Landfill Allowance Scheme (Scotland) Regulations 2005 in April 2005, Scottish local authorities submitted data to SEPA using the Landfill Allowance Scheme Quarterly Monitoring Return (LASQM), which was piloted in 2004/2005 under the name of Local Authority Quarterly Recycling/Composting Return.

The data are used to monitor the compliance with the Landfill Allowance Scheme in terms of calculating the total amount of biodegradable municipal waste (BMW) landfilled and to monitor progress towards reaching the targets for recycling and composting of municipal waste. Since April 2006 local authorities have submitted these data to SEPA using WasteDataFlow.

Waste Recovery

Table 15 – Recycling and composting rates for Scottish local authorities 2005/2006

Local authority	Total local authority waste arisings (tonnes)*	Waste recycled (%)	Waste composted (%)	Waste composted or recycled (%)
Aberdeen	133,675	12.5	6.6	19.1
Aberdeenshire	155,123	11.9	4.4	16.3
Angus	73,333	24.1	8.6	32.7
Argyll and Bute	67,259	14.0	11.1	25.1
Clackmannanshire	36,990	29.1	11.1	40.1
Dumfries and Galloway	102,379	10.3	0.1	10.4
Dundee	95,416	24.1	6.8	30.9
East Ayrshire	71,776	21.3	11.3	32.6
East Dunbartonshire	73,605	14.8	11.0	25.7
East Lothian	64,331	18.0	9.5	27.5
East Renfrewshire	58,117	18.1	12.1	30.2
Edinburgh	261,493	14.3	7.3	21.6
Eilean Siar	22,786	11.0	0.0	11.0
Falkirk	115,168	21.2	9.0	30.1
Fife	252,904	21.3	7.7	28.9
Glasgow	397,880	6.5	8.0	14.5
Highland	161,082	12.8	7.1	19.9
Inverclyde	51,988	13.2	5.4	18.6
Midlothian	52,567	10.8	10.6	21.4
Moray	61,696	21.7	9.1	30.8
North Ayrshire	87,205	15.0	10.7	25.6
North Lanarkshire	231,898	18.2	10.0	28.1
Orkney Islands	13,968	15.7	7.1	22.7
Perth and Kinross	103,048	20.9	12.4	33.3
Renfrewshire	102,615	18.3	6.2	24.5
Scottish Borders	73,214	13.1	2.9	16.0
Shetland Islands	13,086	9.6	0.0	9.6
South Ayrshire	78,701	22.6	11.7	34.4
South Lanarkshire	202,703	23.4	9.9	33.3
Stirling	59,813	20.0	13.9	33.9
West Dunbartonshire	61,220	13.5	5.5	19.0
West Lothian	111,374	13.2	13.8	27.0
Total	3,448,414	16.1	8.3	24.4

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

* Excluding end-of life vehicles, road maintenance waste and separately collected construction and demolition waste and industrial waste.

Waste Recovery

Local authority recycling

A total of 606,533 of waste collected by, or on behalf of, Scottish local authorities was recycled during 2005/2006. This figure excludes road maintenance waste. When 52,512 tonnes of end-of-life vehicles and separately collected construction and demolition waste are excluded, the total recycled is 554,021 tonnes (Table 16).

Although a total of 621,065 tonnes was collected for recycling in 2005/2006, 67,045 tonnes were sent for disposal either because there was no market for the materials or because they were contaminated. Of the waste collected for recycling but sent for disposal, approximately 66,000 tonnes were co-mingled materials and only 1,100 tonnes were individually collected materials. Local authorities increasingly collect co-mingled materials and send them for separation and recycling, although it is not expected that all the separated materials will be suitable for recycling.

A total of approximately 415,000 tonnes of material was sent for recycling outside the local authority area within which it was collected and around 94,000 tonnes were recycled within the authority. The destination of approximately 45,000 tonnes was unknown.

Recyclables were collected mainly through kerbside schemes and bring (drop-off) collection schemes consisting of 163 local authority recycling centres and 2,850 recycling points. A total of 274,234 tonnes was collected for recycling by kerbside collections and a total of 271,801 tonnes was collected for recycling at recycling centres and points. Of these totals, 242,486 tonnes from kerbside collections and 243,265 tonnes from bring sites were actually recycled.

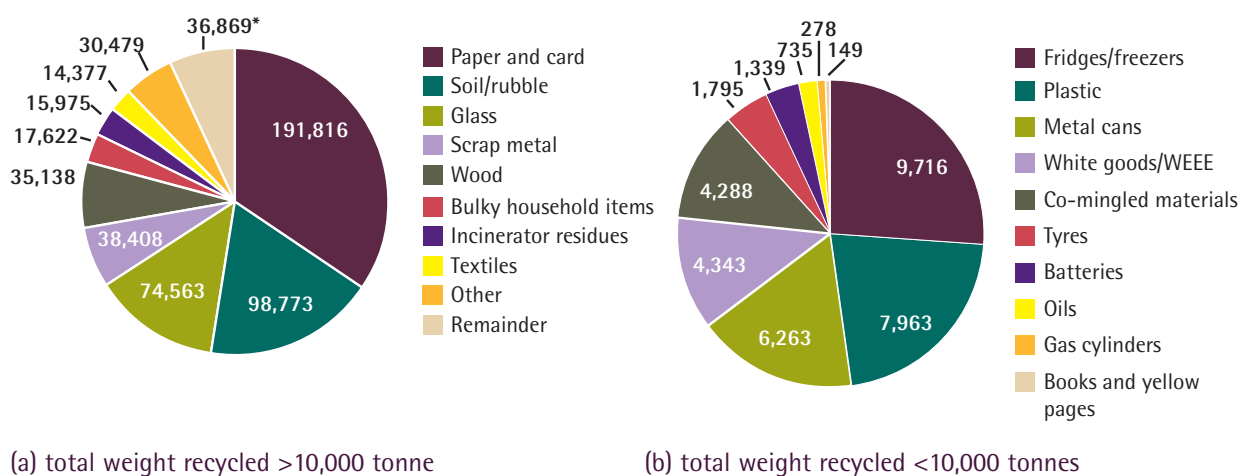
The recycling figures relate only to waste collected for recycling by, or on behalf of, Scottish local authorities. This covers waste collected by the local authority itself, and organisations in the private and voluntary sector with an agreement with the local authority to collect recyclables.

Figures 4a and 4b show the breakdown of Scottish local authority recycling in 2005/2006 by material. For clarity, Figure 4a shows those materials where the weight recycled exceeded 10,000 tonnes and Figure 4b shows those where the weight was less than 10,000 tonnes. Table 16 gives the quantities of the materials recycled by, or on behalf of, Scottish local authorities and the local authorities recycling rates expressed as a percentage of total waste collected. Table 17 shows the amount recycled by the local authorities by the source of the material and the type of collection.

WDD7

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Figure 4 – Scottish local authority recycling 2005/2006: breakdown of materials (tonnes)



Source: SEPA Local Authority Waste Arisings Survey 2005/2006

* A breakdown is shown in Figure 4b.

WEEE = waste electrical and electronic equipment

Waste Recovery

Table 16 – Breakdown by material of waste recycled by, or on behalf of, Scottish local authorities 2005/2006

Local authority	Tonnes												
	Glass	Paper	Card	Mixed paper & card	Steel cans	Aluminium cans	Mixed cans	Plastics	Textiles	Oils	Scrap metal*	White goods/WEEE	Batteries
Aberdeen	4,151	339	0	7,678	165	74	2	429	130	21	1,037	259	40
Aberdeenshire	4,485	6,907	2,643	589	0	0	270	287	838	54	1,851	4	116
Angus	2,372	3,186	1,212	0	0	0	260	240	117	17	1,615	0	56
Argyll and Bute	2,088	3,686	742	0	36	19	555	91	270	20	1,511	59	16
Clackmannanshire	1,371	1,826	234	0	0	0	281	295	120	8	625	14	19
Dumfries and Galloway	2,356	5,573	189	0	1	4	37	9	490	27	1,265	18	63
Dundee	2,449	2,918	894	421	0	16	0	48	492	5	1,232	0	38
East Ayrshire	0	193	529	6,825	0	0	0	49	232	68	537	0	33
East Dunbartonshire	2,745	3,845	0	0	0	0	142	186	213	5	142	0	0
East Lothian	1,887	3,270	201	0	121	20	30	181	388	20	1,215	9	30
East Renfrewshire	1,131	2,643	98	0	1	1	38	18	213	2	602	0	16
Edinburgh	8,147	13,177	1,596	1,631	200	55	0	25	2,053	12	1,637	657	106
Eilean Siar	310	361	0	0	0	0	34	55	0	97	1,426	0	0
Falkirk	1,745	7,154	751	0	0	0	506	501	261	15	126	499	66
Fife	4,926	0	0	17,971	0	0	179	199	1,547	70	3,368	274	116
Glasgow	4,871	9,351	174	0	218	106	3	266	3,516	23	796	36	46
Highland	3,795	4,853	1,433	0	0	0	148	0	672	31	1,867	1,061	123
Inverclyde	979	2,858	607	175	107	10	137	291	366	3	531	9	18
Midlothian	1,465	1,674	567	9	0	0	247	174	65	12	629	61	37
Moray	2,733	0	1,189	4,033	0	0	256	0	211	17	746	151	53
North Ayrshire	2,068	3,354	270	0	0	3	0	5	474	19	1,597	616	4
North Lanarkshire	1,151	8,149	1,027	0	0	0	33	2	365	39	3,491	0	41
Orkney Islands	422	0	0	315	8	6	1	0	0	96	346	69	15
Perth and Kinross	2,987	5,083	1,468	0	0	0	1	801	188	11	1,250	94	51
Renfrewshire	2,503	3	741	4,361	0	0	178	236	57	15	1,683	0	40
Scottish Borders	2,227	0	0	5,692	0	0	210	283	113	7	570	0	34
Shetland Islands	394	0	0	0	23	11	0	100	0	0	582	0	42
South Ayrshire	2,780	459	1,420	4,286	193	7	12	198	357	0	1,270	0	2
South Lanarkshire	1,952	9,470	866	2,693	0	0	604	2,244	150	0	3,109	0	13
Stirling	2,351	3,898	115	452	0	0	397	161	340	4	526	0	22
West Dunbartonshire	686	3,010	117	65	3	1	0	75	81	4	195	374	16
West Lothian	1,036	4,517	971	2,810	7	2	282	513	60	14	1,031	80	66
Total	74,563	111,756	20,055	60,005	1,083	336	4,844	7,963	14,377	735	38,408	4,343	1,339

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

* Scrap metal includes both ferrous and non-ferrous metal.

Waste Recovery

Table 16 – Breakdown by material of waste recycled by, or on behalf of, Scottish local authorities 2005/2006 (continued)

Local authority	Tonnes												Recycled (%)	Additional waste recycled [‡]
	Co-mingled materials*	Wood	Residue from incineration	Soil/rubble [†]	Bulky household items	Fridges/freezers	Tyres	Gas cylinders	Books/Yellow Pages	Others	Total			
Aberdeen	0	0	0	1,896	0	470	0	0	0	0	16,691	18.1	389	
Aberdeenshire	0	0	0	0	0	406	0	0	0	0	18,449	15.2	0	
Angus	0	463	4,104	2,952	0	245	0	10	0	793	17,641	32.7	48	
Argyll and Bute	0	0	0	216	31	71	5	0	0	0	9,416	25.2	323	
Clackmannanshire	0	982	0	4,811	32	95	29	6	0	0	10,748	15.2	0	
Dumfries and Galloway	0	0	0	0	175	311	0	23	0	0	10,541	10.4	530	
Dundee	0	113	11,370	2,743	0	259	0	0	0	2	23,000	18.6	253	
East Ayrshire	0	687	0	2,038	0	185	11	7	3	3,896	15,292	27.1	307	
East Dunbartonshire	0	12	0	811	0	508	0	1	0	2,261	10,871	26.1	0	
East Lothian	0	1,269	0	2,600	62	166	0	7	0	101	11,577	27.6	313	
East Renfrewshire	0	489	0	3,051	0	180	0	0	0	2,011	10,493	29.8	27	
Edinburgh	2,566	1,549	0	2,340	744	834	33	0	50	14	37,426	21.6	445	
Eilean Siar	0	0	0	0	0	0	195	0	0	35	2,513	10.9	340	
Falkirk	0	2,458	0	9,616	312	183	32	20	1	116	24,363	30.1	15,600	
Fife	1,722	6,041	0	16,376	0	735	232	45	0	0	53,802	29.7	825	
Glasgow	0	767	0	3,106	982	891	747	65	2	0	25,966	15.7	3,818	
Highland	0	1,128	0	4,248	591	504	88	6	11	96	20,655	19.9	167	
Inverclyde	0	379	0	148	153	90	0	2	0	0	6,862	18.6	73	
Midlothian	0	127	0	392	5	125	62	10	2	0	5,663	21.6	111	
Moray	0	1,683	0	2,097	0	176	9	0	16	0	13,368	30.9	3,537	
North Ayrshire	0	3,869	0	462	0	281	13	8	2	0	13,046	25.8	25	
North Lanarkshire	0	2,716	0	1,344	3,347	658	34	15	0	19,722	42,134	26.8	0	
Orkney Islands	0	50	125	0	0	49	40	0	0	648	2,190	22.7	2,577	
Perth and Kinross	0	857	376	7,730	320	241	41	14	5	2	21,522	33.3	183	
Renfrewshire	0	1,032	0	6,794	130	346	0	0	0	625	18,743	24.5	0	
Scottish Borders	0	0	0	195	0	205	9	13	3	0	9,559	16.0	20,843	
Shetland Islands	0	0	0	0	0	0	100	0	0	0	1,252	10.9	100	
South Ayrshire	0	2,982	0	3,603	0	247	0	0	0	0	17,816	35.8	98	
South Lanarkshire	0	2,606	0	13,783	9,351	585	59	0	3	0	47,488	33.3	237	
Stirling	0	1,419	0	2,050	36	156	0	8	6	12	11,953	32.5	0	
West Dunbartonshire	0	486	0	1,797	1,159	168	4	20	0	0	8,261	19.0	58	
West Lothian	0	975	0	1,574	192	347	52	0	46	145	14,719	27.1	1,285	
Total	4,288	35,138	15,975	98,773	17,622	9,716	1,795	278	149	30,479	554,021	24.4	52,512	

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

* Where a breakdown of co-mingled materials was provided, the total has been divided between the components and added to the relevant category.

† Includes sand, gravel, inert, sweepings and aggregates.

‡ Additional waste recycled includes end-of-life vehicles and separately collected construction and demolition waste, but excludes road maintenance waste. None of these wastes were included in calculating either the total waste recycled or the recycling rate for the local authorities.

Waste Recovery

Table 17 – Breakdown of the local authority recycling by material source and collection type 2005/2006

Local authority	Tonnes								
	Household			Commercial			Total	Materials sent to sorting facility (already in totals)	Additional waste recycled†
	Kerbside	Bring	Other*	Kerbside	Bring	Other*			
Aberdeen	10,452	5,149	0	1,089	0	0	16,691	5,996	389
Aberdeenshire	954	13,312	0	4,184	0	0	18,449	0	0
Angus	2,971	9,699	4,104	0	867	0	17,641	1,708	48
Argyll and Bute	4,371	4,176	0	20	849	0	9,416	0	323
Clackmannanshire	3,416	7,332	0	0	0	0	10,748	0	0
Dumfries and Galloway	5,941	4,038	0	562	0	0	10,541	0	530
Dundee	3,115	2,830	10,733	2,276	90	3,956	23,000	0	253
East Ayrshire	9,792	4,873	0	628	0	0	15,293	10,721	307
East Dunbartonshire	6,017	2,154	0	439	0	2,261	10,871	0	0
East Lothian	3,829	6,443	0	652	653	0	11,577	3,857	313
East Renfrewshire	2,902	4,465	2,554	0	0	572	10,493	0	27
Edinburgh	13,952	16,691	1,325	5,458	0	0	37,426	0	445
Eilean Siar	0	797	1,438	0	95	183	2,513	35	340
Falkirk	8,568	8,287	191	821	6,437	59	24,363	7,528	15,600
Fife	18,960	32,379	0	2,463	0	0	53,802	1,174	825
Glasgow	8,384	15,957	0	1,626	0	0	25,967	9,080	3,818
Highland	3,508	15,418	1,087	641	0	0	20,655	0	167
Inverclyde	3,488	2,759	0	615	0	0	6,862	4,152	73
Midlothian	2,680	2,512	462	9	0	0	5,663	462	111
Moray	3,518	4,285	2,097	1,785	0	1,684	13,369	0	3,537
North Ayrshire	6,134	6,564	89	260	0	0	13,046	4,796	25
North Lanarkshire	18,728	3,648	19,758	0	0	0	42,134	6,595	0
Orkney Islands	174	737	757	161	345	16	2,190	0	2,577
Perth and Kinross	4,848	7,352	6,738	2,516	0	68	21,522	6,455	183
Renfrewshire	6,260	10,109	2,373	0	0	0	18,743	7,476	0
Scottish Borders	5,025	3,321	0	1,214	0	0	9,559	0	20,843
Shetland Islands	137	261	854	0	0	0	1,252	568	100
South Ayrshire	10,283	6,757	0	777	0	0	17,816	9,249	98
South Lanarkshire	25,851	17,371	0	0	0	4,265	47,487	14,213	237
Stirling	6,232	3,538	88	452	1,643	0	11,953	0	0
West Dunbartonshire	3,998	3,857	0	407	0	0	8,261	0	58
West Lothian	7,640	4,409	220	1,302	806	341	14,718	8,033	1,285
Total	212,130	231,479	54,867	30,356	11,786	13,403	554,021	102,098	52,512

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

* 'Other' includes material extracted (metal, ash, etc.)

† Additional waste recycled includes end-of-life vehicles and separately collected construction and demolition waste, but excludes road maintenance waste. None of these wastes were included in calculating either the total waste recycled or the recycling rate for the local authorities.

Local authority recycling initiatives

In 2005/2006, all local authorities had a bring (drop-off) recycling collection scheme operating in their area. All 32 local authorities reported that they had a kerbside recycling collection scheme for household waste and 24 reported that they had a kerbside recycling collection scheme for commercial/industrial waste.

A kerbside recycling collection was offered to 1.72 million households (equivalent to 71% of all households in Scotland). This is an increase of approximately 300,000 households between 2004/2005 and 2005/2006. Household kerbside recycling accounts for 38% of all waste recycled in Scotland excluding end-of-life vehicles, road maintenance waste and separately collected construction and demolition waste. Table 18 gives a breakdown by local authority.

Waste Recovery

Table 18 – Scottish households offered a kerbside recycling collection 2005/2006

Local authority	Number of households offered kerbside recycling collections*	Percentage of total households	Total collected for recycling (tonnes)	Total collected for recycling but disposed of (tonnes) [†]	Total recycled (tonnes)	Household waste recycled per household (kg)
Aberdeen	80,000	74	10,452	0	10,452	131
Aberdeenshire	27,000	26	954	0	954	35
Angus	43,000	84	2,971	0	2,971	69
Argyll and Bute	35,000	77	4,371	0	4,371	125
Clackmannanshire	20,946	89	3,416	0	3,416	163
Dumfries and Galloway	67,000	95	5,941	0	5,941	89
Dundee	52,811	70	3,115	0	3,115	59
East Ayrshire	54,004	100	9,792	0	9,792	181
East Dunbartonshire	35,049	81	6,017	0	6,017	172
East Lothian	38,000	91	3,905	76	3,829	101
East Renfrewshire	35,000	93	2,902	0	2,902	83
Edinburgh	120,000	53	13,952	0	13,952	116
Eilean Siar	3,646	25	0	0	0	0
Falkirk	63,380	93	9,432	864	8,568	135
Fife	144,636	88	18,960	0	18,960	131
Glasgow	100,000	34	10,834	2,450	8,384	84
Highland	48,000	45	3,508	0	3,508	73
Inverclyde	28,000	71	4,230	742	3,488	125
Midlothian	28,612	83	2,680	0	2,680	94
Moray	31,418	76	3,518	0	3,518	112
North Ayrshire	62,883	96	7,198	1,064	6,134	98
North Lanarkshire	120,000	84	33,212	14,484	18,728	156
Orkney Islands	4,736	49	174	0	174	37
Perth and Kinross	53,406	81	4,848	0	4,848	91
Renfrewshire	67,840	84	6,621	361	6,260	92
Scottish Borders	53,300	100	5,209	184	5,025	94
Shetland Islands	4,500	44	137	0	137	30
South Ayrshire	52,759	100	11,841	1,558	10,283	195
South Lanarkshire	108,000	78	34,249	8,398	25,851	239
Stirling	36,679	96	6,232	0	6,232	170
West Dunbartonshire	34,080	78	3,998	0	3,998	117
West Lothian	65,541	92	8,938	1,297	7,640	117
Total	1,719,226	71	243,608	31,478	212,130	123

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

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

† Consists of co-mingled materials (23,120 tonnes), bulky uplifts (7,649 tonnes) and individually collected materials (709 tonnes).

Waste Recovery

Local authority composting

Composting can involve a weight loss. The tonnages in this section refer to the weight of the waste sent for composting rather than the weight of material resulting from the composting process.

In 2005/2006, a total of 286,450 tonnes of waste collected by, or on behalf of, Scottish local authorities was composted. In addition, 26,196 tonnes collected for composting were disposed of before composting and 6,776 tonnes of composted materials were used as daily cover for landfill sites. The majority of the waste sent for composting was green waste (248,844 tonnes), with the remainder being mixed municipal waste (28,687 tonnes) and mixed organic waste (8,919 tonnes). Most of the waste sent for composting originated from kerbside collection of green waste (179,379 tonnes), local authority recycling centres (67,101 tonnes), and local authority parks and gardens (33,191 tonnes).

Table 19 details the tonnages of waste composted by, or on behalf of, local authorities. Certain local authorities used some of the material resulting from composting as daily cover for landfill. Because this is considered to be disposal, the weight of this material has been subtracted from the figure for waste composted for these authorities.

Table 19 – Waste composted by, or on behalf of, Scottish local authorities 2005/2006

Local authority	Tonnes			
	Household	Commercial	Industrial	Total*
Aberdeen	8,825	0	0	8,825
Aberdeenshire	6,816	0	0	6,816
Angus	6,341	0	0	6,341
Argyll and Bute	6,032	1,398	67	7,497
Clackmannanshire	4,101	0	0	4,101
Dumfries and Galloway	0	97	0	97
Dundee	5,336	1,143	0	6,479
East Ayrshire	8,128	0	0	8,128
East Dunbartonshire	7,441	641	0	8,082
East Lothian	5,181	937	0	6,118
East Renfrewshire	7,037	0	0	7,037
Edinburgh	18,302	777	0	19,079
Eilean Siar	71	0	0	71
Falkirk	10,343	0	0	10,343
Fife	19,374	0	0	19,374
Glasgow	12,266	19,403	0	31,669
Highland	11,076	355	0	11,431
Inverclyde	2,812	0	0	2,812
Midlothian	5,563	0	0	5,563
Moray	4,501	1,125	0	5,626
North Ayrshire	9,298	0	0	9,298
North Lanarkshire	13,078	10,044	0	23,122
Orkney Islands	856	129	0	985
Perth and Kinross	11,014	1,744	0	12,758
Renfrewshire	6,385	0	0	6,385
Scottish Borders	1,551	569	0	2,121
Shetland Islands	0	0	0	0
South Ayrshire	5,956	3,291	0	9,247
South Lanarkshire	18,680	1,298	0	19,978
Stirling	6,635	1,663	0	8,298
West Dunbartonshire	3,370	0	0	3,370
West Lothian	10,159	5,150	90	15,400
Total	236,529	49,764	157	286,450

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

* Excluding waste disposed of before composting and composted material used as daily cover.

Waste Recovery

Local authority composting initiatives

In 2005/2006, 31 of the 32 Scottish local authorities used centralised composting schemes. Twenty-eight authorities had a bring (drop-off) collection scheme operating in their area and 28 had a kerbside collection scheme for waste for composting. Table 20 gives details of the composting initiatives in each Scottish local authority in 2005/2006.

Table 20 – Local authority composting initiatives in Scotland 2005/2006

Local authority	Centralised composting	Home composting containers distributed to households	Kerbside collection of household waste for composting	Bring (drop-off) composting collection
Aberdeen	Yes	Yes	Yes	Yes
Aberdeenshire	Yes	Yes	No [†]	Yes
Angus	Yes	No [†]	Yes	Yes
Argyll and Bute	Yes	Yes	Yes	Yes
Clackmannanshire	Yes	Yes	Yes	Yes
Dumfries and Galloway	Yes	Yes	No	No [†]
Dundee	Yes	No	Yes	Yes
East Ayrshire	Yes	No [†]	Yes	Yes
East Dunbartonshire	Yes	Yes	Yes	Yes
East Lothian	Yes	Yes	Yes	Yes
East Renfrewshire	Yes	Yes	Yes	Yes
Edinburgh	Yes	Yes	Yes	Yes
Eilean Siar	Yes	No	No	Yes
Falkirk	Yes	Yes	Yes*	Yes
Fife	Yes	Yes	Yes	Yes
Glasgow	Yes	No	Yes	No [†]
Highland	Yes	Yes	Yes	Yes
Inverclyde	Yes	Yes	Yes	Yes*
Midlothian	Yes*	Yes*	Yes*	Yes*
Moray	Yes	Yes	Yes	Yes
North Ayrshire	Yes	Yes*	Yes	Yes
North Lanarkshire	Yes	No	Yes	Yes*
Orkney Islands	Yes	Yes	Yes	Yes
Perth & Kinross	Yes	Yes	Yes	Yes
Renfrewshire	Yes	No	Yes	Yes
Scottish Borders	Yes*	Yes*	Yes*	Yes*
Shetland Islands	No	Yes	No	No
South Ayrshire	Yes	Yes	Yes	Yes
South Lanarkshire	Yes	Yes	Yes	Yes
Stirling	Yes	Yes	Yes	Yes
West Dunbartonshire	Yes	Yes	Yes	No
West Lothian	Yes	Yes*	Yes	Yes
Total yes	31	25	28	28

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

* New scheme in 2005/2006.

† Scheme ceased in 2005/2006.

Waste Recovery

In the Local Authority Waste Arising Survey 2005/2006, SEPA asked local authorities what the compost produced was used for. Table 21 gives a breakdown of the uses. The tonnages given are for the materials after composting.

Table 21 – Use of composted materials by Scottish local authorities during 2005/2006

Use of compost	Composted material			Total
	Household	Commercial	Industrial	
Meeting BSI PAS 100*	36,089	6,540	0	42,628
Used for landfill restoration	15,298	2,014	0	17,312
Used as soil conditioner or for landscaping	51,771	4,226	0	55,997
Unused	16,327	4,019	87	20,433
Other†	13,844	9,701	0	23,545
Total	133,328	26,499	87	159,914

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

* 'Publicly Available Specification for Composted Materials' published by the Waste and Resources Action Programme (WRAP) and BSI in 2005, and administered by the Composting Association.

† Includes compost used in parks (9,701 tonnes), sold to a third party (9,248 tonnes) and on-farm composting (4,133 tonnes).

Home composting

Twenty five local authorities reported that they had distributed containers for home composting to the public during 2005/2006 (59,262 composters, 2,591 digesters and 251 wormeries). Most were provided either free of charge or on a subsidised basis. Local authorities have now distributed around 210,000 composters since council reorganisation in 1996.

Home composting is an important activity for waste prevention but it is difficult to quantify the tonnage of waste diverted from the waste stream.

Waste Treatment

Waste can be treated by physical, chemical or biological processes in order to produce a material that is suitable for reuse, recycling, further processing or safe disposal. Treatment processes may reduce the hazardous nature, biodegradability or volume of a waste, or simply involve the physical separation of materials.

Physical treatment of waste may involve the sorting, baling, crushing or shredding of material, as well as the separation and filtration of liquid wastes such as oil/water mixtures. Processes used to treat wastes by chemical means include neutralisation, oxidation, precipitation and solidification. Composting and anaerobic digestion are biological processes used to treat biodegradable wastes such as food and garden waste.

The treatment of waste is becoming increasingly important as it can reduce the volume and biodegradability of waste sent to landfill, helping to meet Landfill Directive targets for municipal solid waste (MSW) and reduce disposal costs for industry.

Approximately 4.37 million tonnes of waste were treated at licensed and permitted waste management facilities in Scotland in 2005.

A breakdown of the waste by EWC-STAT short code and Waste Strategy Area (WSA) is given in Table 22. More information about EWC-STAT codes is given in Appendix IV.

Waste Recovery

Table 22 – Controlled waste treated at licensed waste management sites in Scotland 2005

Waste Strategy Area*	Waste type by EWC-STAT code (tonnes)							
	1 Chemical compound wastes	2 Chemical preparation wastes	3 Other chemical wastes	4 Radio-active wastes	5 Health care and biological wastes	6 Metallic wastes	7 Non-metallic wastes	8 Discarded equipment
Orkney and Shetland	206	0	1,278	0	0	1	506	66
Western Isles	0	0	0	0	0	268	172	54
Highland	696	0	136	0	0	1,601	554	62
North East	14,664	1,821	56,204	0	0	14,503	15,821	5,488
Tayside	0	70	8	0	47	64,614	23,969	20,034
Forth Valley	1,316	546	25,434	0	0	955	73,796	2,160
Fife	0	0	0	0	0	2,843	23,938	11,277
Lothians and Borders	0	1,168	2,052	0	0	0	28,204	614
Ayrshire, Dumfries and Galloway	225	234	10,043	0	298	10,205	15,360	15,140
Glasgow and Clyde Valley	21,773	3,584	55,642	0	1	83,246	129,432	35,853
Argyll and Bute	0	0	0	0	0	0	0	0
Scotland	38,880	7,423	150,797	0	345	178,236	311,753	90,748

Waste Strategy Area*	Waste type by EWC-STAT code (tonnes)						
	9 Animal and vegetal wastes	10 Mixed ordinary wastes	11 Common sludges	12 Mineral wastes	13 Solidified stabilised or vitrified waste	Uncoded	Total
Orkney and Shetland	2,468	10,034	2,775	150	0	0	17,483
Western Isles	146	78	2,676	0	0	0	3,394
Highland	8,456	3,581	1,077	8,917	0	0	25,079
North East	25,564	23,096	56,192	136,548	0	0	349,900
Tayside	57,909	11,656	182,619	87,719	0	0	448,644
Forth Valley	13,400	6,794	34,912	457,699	0	0	617,014
Fife	12,337	2,583	169,979	64,943	0	0	287,900
Lothians and Borders	40,404	98,987	132,891	262,426	0	0	566,747
Ayrshire, Dumfries and Galloway	50,211	60,575	366,693	309,811	0	0	838,796
Glasgow and Clyde Valley	28,580	369,171	1,504	467,308	0	0	1,196,093
Argyll and Bute	389	15,602	0	4	0	0	15,995
Scotland	239,864	602,155	951,318	1,795,526	0	0	4,367,045

Source: SEPA Licensed/Permitted Waste Management Site Returns

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

Waste Recovery

Exempt Activities

Lower risk waste management activities (e.g. some reclamation and recycling activities) are not usually seen as a threat to the environment or human health. They are, therefore, exempt from the need to obtain a waste management licence and instead require the activity to be registered with SEPA. There are 48 categories of exemption, most of which are subject to specific constraints on waste types, quantities, capacities and duration of storage. Further information can be found at www.sepa.org.uk/regulation/waste/exemptions.htm

Registration of certain exempt activities is required annually along with the payment of a fee. The operators of these activities are also required to keep records for a period of at least two years of the quantity, nature, origin, destination and method of recovery or disposal of all waste used in connection with an exempt activity. These records have either to be submitted to SEPA or made available on request. The activities covered by these requirements are defined in the following paragraphs of Schedule 3 of the Waste Management Licensing Regulations 1994 (as amended):

- paragraphs 7, 8(2), 10 and 46;
- paragraphs 9 and 19 where the volume of waste used exceeds 2,500 m³; and
- paragraph 12 where the volume of waste used exceeds 10 tonnes per year.

In October 2004, SEPA introduced a procedure to gather information on exempt activities registered under paragraphs 7, 9 and 19. This procedure was extended to include activities registered under paragraphs 8(2), 10, 12 and 46 in January 2006. Data are gathered annually from the site operators and include the waste type, quantity and geographical origin of the waste.

The quantities of wastes handled by sites exempt under the relevant paragraphs are shown in Table 23. There were no registrations under paragraph 46 in 2005.

Table 23 – Waste handled by relevant exempt activities registered in 2005

Waste type	Waste handled by exemption paragraph (tonnes)						Total
	Paragraph 7	Paragraph 8	Paragraph 9	Paragraph 10	Paragraph 12	Paragraph 19	
Common Sludges	11,185	101,509	75,323	49,348	0	83	237,449
Screenings from waste water treatment	0	0	0	281	0	0	281
Spent filtration and absorbent materials	0	0	0	3,292	0	0	3,292
Food preparation wastes	175,647	0	0	0	11,997	0	187,644
Green wastes	22	0	0	0	25,944	0	25,966
Paper and card packaging	4,030	0	0	0	2	0	4,032
Slurry and manure	0	0	0	0	133	0	133
Wood wastes	32,925	0	0	0	242	0	33,167
Mineral wastes	12,842	0	670,967	0	0	2,441,018	3,124,827
Industrial effluent sludges	448	0	27,843	0	0	0	28,291
Dredging spoils	1,078	0	8,910	0	0	0	9,988
Off specification compost	40,725	0	5,556	0	0	0	46,281
Lime and mud waste	5,245	0	0	0	0	0	5,245
Combustion wastes	0	0	0	0	0	58,800	58,800
Unclassified	80,822	34,108	233,699	74,887	23,171	1,166,657	1,613,345
Total	364,968	135,618	1,022,296	127,808	61,489	3,666,558	5,378,738
Number of sites	310	163	157	18	95	747	1,490

Source: SEPA Exempt Site Returns

Waste Recovery

The total amount of waste handled by exempt activities registered under paragraphs 7, 8, 9, 10, 12 and 19 in 2005 was 5.38 million tonnes. Around 43% of these data were obtained from annual returns from operators and 30% were estimates taken from the application form completed by operators when applying for the exemption. The remaining 27% of the data were calculated based on an average weight per site obtained from actual annual returns. The waste quantities obtained using these calculations could not be broken down by waste type and they have therefore been identified in Table 23 as 'Unclassified'.

The waste handled by activities registered under paragraphs 7, 9 and 19 has increased by around 89%, from 2.69 million tonnes in 2004 to 5.05 million tonnes in 2005. This increase was mainly due to the registration of more paragraph 7, 9 and 19 exemptions in 2005. Over 93% of waste was handled by exempt activities registered under paragraph 7, 9 and 19. The type of waste most commonly handled under these exemptions is mineral wastes including soils, stones and gravel.

Packaging and Packaging Waste

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

By 31 December 2008, all Member States should achieve:

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

The recovery and recycling elements of the Directive are implemented in the UK through the Producer Responsibility Obligations (Packaging Waste) Regulations 2005. These consolidate and supersede the previous 1997 Regulations and their amendments. The Regulations are enforced in Scotland by SEPA, in England and Wales by the Environment Agency and, in Northern Ireland, by the Environment and Heritage Service. The Regulations place recovery and recycling obligations on companies that have a turnover exceeding £2 million and that handle more than 50 tonnes of packaging and packaging materials per year. Table 24 gives a breakdown of organisations registered with SEPA.

Table 24 – Registrations with SEPA 2005

Organisation	Number of registrations
Companies registered with SEPA	93
Members of SEPA registered schemes	990
Total registration	1,083

Source: SEPA Producer Responsibility Unit

All data submitted by producers and schemes on the amounts of packaging they have handled are aggregated to give total business recovery and recycling obligations for the UK. The UK has to establish the amount of recovery that needs to take place to meet Directive targets and to ensure that the aggregate recovery and recycling obligation placed on producers and schemes is at least equal to that figure.

Waste Recovery

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

The 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, Wales and Northern Ireland is often the subject of a single data report that cannot be disaggregated into totals for the individual countries. Similarly, data on packaging waste reprocessed in Scotland may include packaging waste that has arisen in England, Wales and Northern Ireland. Much of the data given below relates to UK figures. Scottish figures are provided with respect to packaging waste reprocessed in Scotland or exported by Scottish accredited exporters for reprocessing overseas.

Table 25 details the recovery and recycling actually achieved in the UK in 2005. The results show that the UK met its recovery and recycling target for 2005: there are no individual targets for Scotland. Table 26 shows the amounts of packaging waste reprocessed by SEPA accredited companies in 2005.

Table 25 – UK recovery and recycling achieved 2005

Material	Tonnes
Paper	2,762,612
Glass	1,259,450
Aluminium	39,956
Steel	352,358
Plastic	414,225
Wood	766,747
Total recycling	5,595,348
Energy from waste	564,204
Total recovery	6,159,552
Specific waste stream	10,280,196
Recovery %	59.92%
Recycling %	54.43%

Source: SEPA Producer Responsibility Team

Waste Recovery

Table 26 – Packaging waste reprocessed by SEPA accredited reprocessors and exporters in Scotland 2005

Material	Tonnes		Total PRN/PERNs issued
	Accepted	Reprocessed/exported	
Reprocessed			
Paper	125,041	125,041	121,704
Plastic	5,994	5,994	5,960
Glass	144,724	148,054	142,016
Wood	106,372	106,372	104,770
Energy from waste (MSW)	19,360	19,360	16,866
Total reprocessed	401,491	404,821	391,316
Exported			
Paper	108,697	108,697	108,697
Plastic	792	792	785
Steel	20,586	20,586	20,481
Aluminium	264	264	233
Total exported	130,339	130,339	130,196
Total reprocessed/exported	531,829	535,160	521,512

Source: SEPA Producer Responsibility Team

Further information on packaging and packaging waste can be found on the SEPA website at www.sepa.org.uk/producer/packaging/index.htm

Hazardous and Special Waste

In 2005/2006, 55 waste management sites were licensed to treat special waste in Scotland. This figure includes scrap yards handling special waste that forms part of, or is contained in, a waste motor vehicle and was necessary for the normal operation of the vehicle. In addition, 10 other sites authorised under Integrated Pollution Control (IPC) or permitted under the PPC Regulations treated special waste during 2005.

A total of 255,214 tonnes of special waste was consigned to treatment plants in Scotland in 2005; this represents approximately 58% of all special waste consigned within Scotland. There was an increase of approximately 50,000 tonnes (19%) over that consigned in 2004. The main increases were in EWC 2002 chapters 01, 05, 07, 13 and 19. This may be due to the opening of new plant and the need to treat waste before disposal. A breakdown of the waste by EWC 2002 chapter code and Waste Strategy Area is given in Table 27.

Waste Recovery

Table 27 – Special waste consigned to treatment plants in Scotland 2005

Waste Strategy Area*	Waste type by EWC 2002 chapter code [†] (tonnes)										
	01	02	03	04	05	06	07	08	09	10	11
Orkney and Shetland	10,661	0	0	0	297	0	0	0	0	4	0
Western Isles	0	0	0	0	0	0	0	0	0	0	0
Highland	0	0	0	0	0	0	0	0	0	0	0
North East	76,460	23	22	2	198	532	1,998	711	37	1	288
Tayside	0	0	0	0	0	0	0	8	0	0	0
Forth Valley	0	0	0	0	2,177	0	4,856	0	0	0	0
Fife	0	0	0	0	0	0	0	0	0	0	0
Lothians and Borders	0	0	0	0	0	0	9,474	252	0	0	0
Ayrshire, Dumfries and Galloway	0	0	0	0	0	0	0	0	0	0	0
Glasgow and Clyde Valley	0	5	16	1	2,074	1,231	4,521	547	27	43	1,289
Argyll and Bute	0	0	0	0	0	0	0	0	0	0	0
Scotland	87,122	28	38	2	4,746	1,763	20,849	1,518	64	48	1,577

Waste Strategy Area*	Waste type by EWC 2002 chapter code [†] (tonnes)										
	12	13	14	15	16	17	18	19	20	Un-known	Total
Orkney and Shetland	0	1,361	0	19	17	35	0	0	0	0	12,396
Western Isles	0	0	0	0	0	0	0	0	0	0	0
Highland	0	0	0	0	25	0	0	0	0	0	25
North East	370	44,619	110	4,231	5,170	243	45	635	824	0	136,519
Tayside	0	3,574	0	3	7,440	0	55	0	1,552	0	12,632
Forth Valley	0	0	0	0	0	0	0	16,838	0	4,238	28,109
Fife	0	0	0	0	0	0	0	0	0	0	0
Lothians and Borders	0	12	552	1	1	0	0	13	0	0	10,304
Ayrshire, Dumfries and Galloway	0	0	0	0	105	0	0	0	182	0	287
Glasgow and Clyde Valley	1,895	31,405	768	1,604	3,616	249	43	4,896	713	0	54,943
Argyll and Bute	0	0	0	0	0	0	0	0	0	0	0
Scotland	2,265	80,971	1,429	5,959	16,373	528	144	22,382	3,271	4,238	255,214

Source: SEPA Special Waste Database

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

† EWC 2002 chapters (see Appendix III).

01 Mining and minerals

02 Agricultural and food production

03 Wood and paper production

04 Leather and textile production

05 Petrol, gas and coal refining/treatment

06 Inorganic chemical processes

07 Organic chemical processes

08 Paints, varnish, adhesive and inks

09 Photographic industry

10 Thermal process waste (inorganic)

11 Metal treatment and coating processes

12 Shaping/treatment of metals and plastics

13 Oil and oil/water mixtures

14 Solvents

15 Packaging, cloths

16 Not otherwise specified

17 Construction and demolition waste and asbestos

18 Health care

19 Waste/water treatment and water industry

20 Municipal and similar commercial wastes

Waste Recovery

Imports and Exports of Wastes Covered by the Waste Shipments Regulations

Council Regulation (EEC) No. 259/93, the Waste Shipments Regulation (WSR), governs the supervision and control of shipments of waste within the European Union, imports to and exports from the EU, and transit shipments through the EU. SEPA is the competent authority for transfrontier shipments of waste into and out of Scotland. The WSR does not cover waste transferred within the UK.

Different control procedures apply in relation to the waste type, the destination of the waste shipment and whether the waste is destined for recovery or disposal. The UK Government's general policy is that wastes should not be imported or exported for disposal.

Green list wastes (Annex II) are considered non-hazardous and are subject to a general information requirement for shipment in terms of Article 11 and are not notifiable for the purposes of the Regulation. Where such waste is exported to non-OECD countries, then the requirement to notify them will depend on the wishes of the country of destination as represented in Council Regulation (EC) No. 1420/1999 and Commission Regulation (EC) No. 1547/1999. The information regarding non-notifiable green listed waste does not form part of these statistics since there is no requirement to notify the competent authority.

The data presented in this section relate to the transfrontier shipment of wastes notified in terms of the WSR that were imported into and exported from Scotland for recovery. From transfrontier shipment movements notified to SEPA in 2005, 1,878.2 tonnes of wastes were imported into Scotland for recovery and 501.6 tonnes were exported from Scotland for recovery. No red list waste transfrontier shipment movements were notified to SEPA during 2005.

Breakdowns of the total quantity of wastes imported into Scotland in 2005 by waste type and recovery code are presented in Tables 28 and 29 respectively. The corresponding data wastes exported from Scotland in 2005 are presented in Tables 30 and 31.

Table 28 – Wastes notified in terms of the WSR imported into Scotland for recovery 2005

Waste type	Tonnes	%
Non-halogenated solvents	1,207.0	64.3
Halogenated solvents	503.2	26.8
Halogenated/non-halogenated solvents	164.5	8.7
Used batteries	3.5	0.2
Total	1,878.2	100.0

Source: SEPA Central Regulatory Unit

Waste Recovery

Table 29 – Recovery codes for wastes notified in terms of the WSR imported into Scotland 2005

Recovery code*	Tonnes	%
R2 [†]	777.9	41.4
R13 [§] , R1 [†] , R2 [‡]	467.8	24.9
R13 [§]	629.0	33.5
R4 [¶]	3.5	0.2
Total	1,878.2	100.0

Source: SEPA Central Regulatory Unit

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

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

‡ R2 = Solvent reclamation/regeneration

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

¶ R4 = Recycling/reclamation of metals and metal compounds

Table 30 – Wastes notified in terms of the WSR exported from Scotland for recovery 2005

Waste type	Tonnes	%
Spent catalyst	121.7	24.3
IT and mobile phones	88.6	17.7
Cathode ray tubes	291.3	58.0
Total	501.6	100.0

Source: SEPA Central Regulatory Unit

Table 31 – Recovery codes for wastes notified in terms of the WSR exported from Scotland for recovery 2005

Recovery code*	Tonnes	%
R4 [†]	121.7	24.3
R5 [‡]	379.9	75.7
Total	501.6	100.0

Source: SEPA Central Regulatory Unit

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

† R4 = Recycling/reclamation of metal and metal compounds

‡ R5 = Recycling/reclamation of other inorganic materials

Waste Recovery

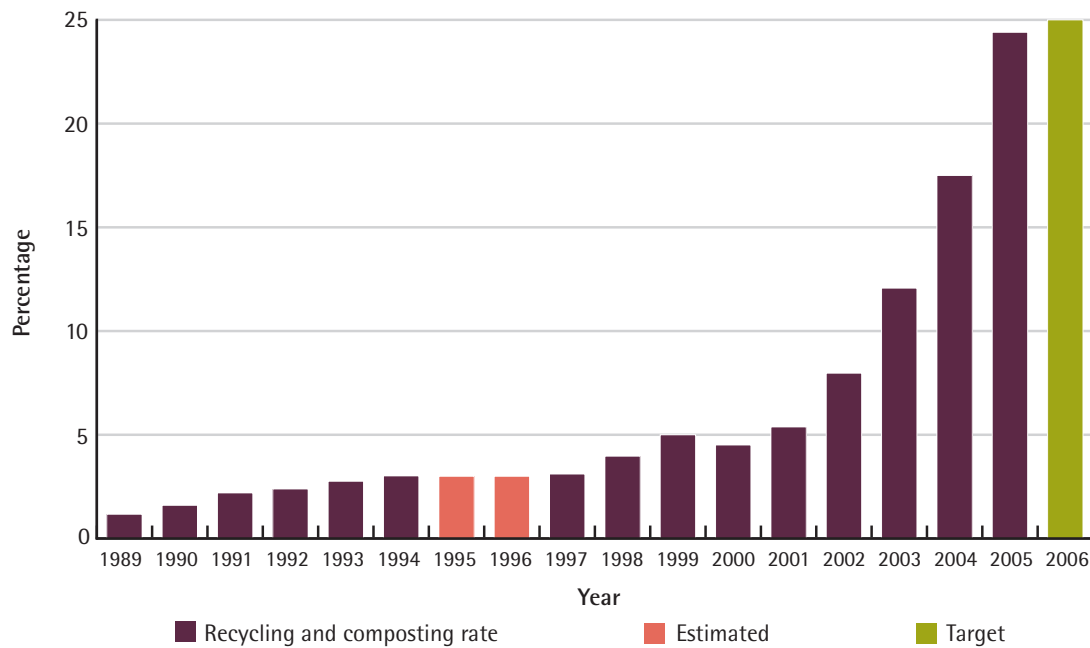
Trends and Conclusions

In Building a Better Scotland (2002), the Scottish Executive set an overall objective of ensuring progress towards sustainable management of Scotland's waste and achievement of European Union landfill reduction targets by 2010, 2013 and 2020. It also established an interim target for the recycling and composting of municipal waste to increase the amount of municipal waste collected annually by local authorities that is recycled or composted to 25% by the end of 2006. The National Waste Plan 2003 sets out how this target will be achieved.

The recycling and composting rate for Scottish local authorities was 24.4% in 2005/2006. This rate has risen significantly in the last four years; in 2001/2002 it was 5.4%. It is now probable that Scotland will achieve the target of 25% by the end of 2006. The recycling rate has been calculated in accordance with the methodology set down in the Landfill Allowance Scheme (Scotland) Regulations 2005: Interim Guidance.

Figure 5 shows the annual recycling and composting rate for the period from 1990 to 2005/2006 compared with the Scottish Executive's target for 2006.

Figure 5 – Annual average recycling and composting rate for Scottish local authorities 1989–2005



Source: SEPA Local Authority Waste Arisings Survey

Waste Disposal

Local Authority Waste Disposal

Local authority disposal to landfill

Local authority energy recovery

Incineration and Thermal Treatment Plants

Waste Management Licence Facility Disposals

Trends and Conclusions

Disposal of waste to landfill



CHP04



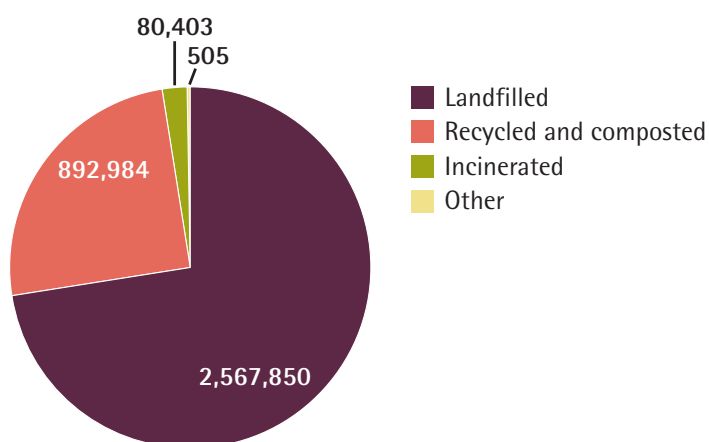
Waste Disposal

Local Authority Waste Disposal

In 2005/2006, a total of 2.65 million tonnes of waste collected by, or on behalf of, local authorities was disposed of. This is approximately 234,000 tonnes less than in 2004/2005. All this decrease is made up by a reduction in the amount of waste landfilled.

Of the waste sent for disposal in 2005/2006, 2.57 million tonnes were disposed of to landfill, approximately 80,000 tonnes were sent for incineration with energy recovery and about 500 tonnes were disposed of by other means. Figure 6 shows the relative proportions of waste handled by different waste management methods.

Figure 6 – Waste management methods used for waste collected by, or on behalf of, Scottish local authorities in 2005/2006 (tonnes)



Source: SEPA Local Authority Waste Arisings Survey 2005/2006

Table 32 shows the total amount of controlled waste disposed of by each local authority and the disposal methods used in 2005/2006.

Waste Disposal

Table 32 – Total controlled waste disposed of by, or on behalf of, Scottish local authorities 2005/2006

Local authority	Landfill with methane recovery (tonnes)			Landfill without methane recovery (tonnes)			Incineration with energy recovery (tonnes)		Other methods	Total waste disposed (tonnes)
	Within	Outwith	Unknown	Within	Outwith	Unknown	Within	Outwith		
Aberdeen	0	108,159	0	0	0	0	0	0	0	108,159
Aberdeenshire	0	0	0	129,858	0	0	0	0	0	129,858
Angus	31,947	0	0	0	0	0	0	17,404	0	49,351
Argyll and Bute	0	14,227	0	36,121	0	0	0	0	0	50,348
Clackmannanshire	0	22,141	0	0	0	0	0	0	32	22,173
Dumfries and Galloway	0	0	0	91,741	0	618	0	0	13	92,372
Dundee	0	21,687	0	0	0	0	44,250	0	0	65,937
East Ayrshire	48,356	0	0	0	0	0	0	0	0	48,356
East Dunbartonshire	0	54,254	0	0	0	0	0	0	439	54,693
East Lothian	42,950	3,684	0	0	0	0	0	0	0	46,634
East Renfrewshire	0	40,587	0	0	0	0	0	0	0	40,587
Edinburgh	0	0	0	0	204,982	0	0	6	0	204,988
Eilean Siar	0	0	0	20,273	0	0	0	0	0	20,273
Falkirk	76,693	0	0	3,177	592	6,198	0	0	0	86,660
Fife	179,728	0	6,080	0	0	0	0	0	0	185,808
Glasgow	0	340,245	0	0	0	0	0	0	0	340,245
Highland	0	75,901	0	53,095	0	0	0	0	0	128,997
Inverclyde	0	42,314	0	0	0	0	0	0	0	42,314
Midlothian	39,770	1,571	0	0	0	0	0	0	0	41,341
Moray	0	0	0	42,701	0	0	0	0	0	42,701
North Ayrshire	62,528	32	0	2,301	0	0	0	0	0	64,861
North Lanarkshire	145,936	20,706	0	0	0	0	0	0	0	166,642
Orkney Islands	0	1,394	0	861	0	0	0	8,538	0	10,793
Perth and Kinross	67,098	210	0	0	0	0	0	1,461	0	68,768
Renfrewshire	0	67,708	15,969	0	9,781	0	0	0	21	93,479
Scottish Borders	0	13,478	0	38,828	9,228	10,388	0	0	0	71,922
Shetland Islands	0	0	0	3,090	0	0	8,744	0	0	11,834
South Ayrshire	0	41,498	0	10,140	0	0	0	0	0	51,638
South Lanarkshire	0	38,613	0	0	96,624	0	0	0	0	135,237
Stirling	0	0	0	0	39,563	1,301	0	0	0	40,864
West Dunbartonshire	49,589	0	0	0	0	0	0	0	0	49,589
West Lothian	3,878	77,365	93	0	0	0	0	15	0	81,351
Total	748,473	985,774	22,143	432,186	360,769	18,505	52,994	27,424	505	2,648,773

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

Waste Disposal

Local authority disposal to landfill

In 2005/2006, a total of 2,567,850 tonnes of waste collected by, or on behalf of, Scottish local authorities was disposed of to landfill (excluding road maintenance waste for consistency of reporting with previous Digests). This figure is about 240,000 tonnes (8.5%) less than the amount landfilled in 2004/2005. This is a considerable decrease and shows the effect of the increase in recycling and composting achieved by local authorities.

Of the waste sent to landfill, 1,756,390 tonnes were landfilled at sites having methane recovery and 811,460 tonnes at sites with no methane recovery. Approximately half the waste landfilled by local authorities was landfilled within the area where it was produced; the rest was exported to other local authority areas for disposal ('within' and 'outwith' respectively in Table 32).

The Landfill Directive (Council Directive 99/31/EC) aims to reduce as far as possible the negative effects of landfilling waste. The Directive sets targets and timescales for reducing the amount of biodegradable municipal waste (BMW) sent to landfill in the UK. Scotland also has a domestic target to reduce the landfilling of BMW collected by local authorities to 1.8 million tonnes by 2005/2006 and 1.5 million tonnes by 2006/2007.

Under the Landfill Allowances Scheme, which began in April 2005, each local authority is allocated allowances that convey the right to landfill a certain amount of BMW in a specified scheme year. SEPA is the monitoring authority for the scheme. The Landfill Allowance Trading Scheme (LATS) Register is used to keep a record of landfill allowances used, banked, borrowed and, in the future, traded by a local authority. A mass balance calculation is used to determine the amount of BMW landfilled using a figure of 63% for the biodegradable content of collected municipal waste. Details of the methodology used for the calculation are given in the Landfill Allowance Scheme (Scotland) Regulations 2005: Interim Guidance.

The amount of BMW sent to landfill by Scottish local authorities in 2005/2006 was 1,541,555 tonnes calculated using this mass balance approach to give an indication of Scotland's current position with regard to the 2006/2007 target. The quantities disposed of by individual local authorities are shown in Table 33 along with their allowances for 2005/2006 and 2006/2007. The trends in the disposal of BMW to landfills by local authorities are discussed at the end of this chapter.

Waste Disposal

Table 33 – Total amount of BMW landfilled by Scottish local authorities in 2005/2006

Local authority	Total BMW landfilled* ¹ (tonnes)	Allowance 2005/2006 ²	Allowance 2006/2007 ²
Aberdeen	68,936	73,076	60,619
Aberdeenshire [†]	81,092	74,496	62,045
Angus	20,177	26,968	24,788
Argyll and Bute	32,759	37,009	30,901
Clackmannanshire	16,017	18,842	15,604
Dumfries and Galloway [†]	58,309	50,251	41,487
Dundee	9,882	31,686	29,838
East Ayrshire	36,145	40,876	33,775
East Dunbartonshire	32,762	37,485	31,203
East Lothian	29,231	32,327	26,900
East Renfrewshire	24,160	29,395	24,582
Edinburgh	125,859	144,511	119,815
Eilean Siar	13,016	14,310	11,799
Falkirk	51,612	66,506	55,142
Fife	110,542	147,030	121,339
Glasgow	185,029	213,142	175,980
Highland	81,997	86,216	71,037
Inverclyde	25,691	26,940	22,233
Midlothian	25,202	30,770	25,411
Moray	26,326	33,881	28,347
North Ayrshire	37,519	45,619	38,049
North Lanarkshire	100,690	111,756	92,271
Orkney Islands	871	1,487	1,400
Perth and Kinross	43,167	48,252	41,148
Renfrewshire	50,012	59,600	49,421
Scottish Borders [†]	38,114	37,051	30,953
Shetland Islands [‡]	2,082	2,694	2,537
South Ayrshire	28,622	44,356	36,833
South Lanarkshire	84,811	103,728	86,776
Stirling	24,264	41,305	34,383
West Dunbartonshire	30,901	32,772	27,203
West Lothian	45,758	55,664	46,184
Total	1,541,555	1,800,000	1,500,000

Source: 1 SEPA Landfill Allowance Scheme Quarterly Monitoring Returns 2005/2006

2 Landfill Allowance Scheme (Scotland) Regulations 2005: Interim Guidance (Scottish Executive, May 2005)

* The method used to calculate BMW landfilled is set out in Landfill Allowance Scheme (Scotland) Regulations 2005: Interim Guidance.

† Exceeds the 2005/2006 allowance.

‡ Shetland Islands data do not include bottom ash.

Waste Disposal

Local authority energy recovery

There were two municipal waste incinerators recovering energy from waste operating in Scotland in 2005: one in Dundee and the other on the Shetland Islands. The Dundee facility was licensed to accept 150,000 tonnes of waste per year including clinical waste. Energy in the form of electricity was produced by the plant and sold into the National Grid.

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

Five local authorities reported that they had incinerated a total of 80,357 tonnes of waste at these facilities in 2005/2006. After remaining stable for the previous three years, the quantity of municipal waste incinerated increased by 8.4% between 2004/2005 and 2005/2006. This is thought to be due to increased use of existing capacity. A breakdown of the 2005/2006 total is provided in Table 34.

Table 34 – Scottish local authority waste sent for incineration with energy recovery 2005/2006

Local authority	Incinerated with energy recovery (tonnes)*	
	Within authority	Outside authority
Angus	0	17,404
Dundee	44,250	0
Orkney Islands	0	8,538
Perth and Kinross	0	1,461
Shetland Islands	8,744	0
Total	52,994	27,403

Source: SEPA Local Authority Waste Arisings Survey 2005/2006

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

Incineration and Thermal Treatment Plants

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

In addition to the two municipal waste incinerators, 11 other operational incinerators and thermal treatment plants dealt with commercial and industrial wastes in Scotland during 2005. Many handled only waste arising on-site and were designed to handle specific waste streams such as clinical waste, animal carcasses and other industrial wastes. In 2004 there were 18 operational incinerators and thermal treatment plants.

The quantity of commercial and industrial wastes handled by incinerators and thermal treatment plants (excluding commercial and industrial waste collected by, or on behalf of, local authorities) increased by 14% from 174,507 tonnes in 2004 to 199,528 tonnes in 2005.

Table 35 shows the quantity of commercial and industrial wastes handled by incinerators and thermal treatment plants in 2005.

Waste Disposal

Table 35 – Commercial and industrial waste handled by incinerators and thermal treatment plants in Scotland in 2005

Waste type	Tonnes*
Chemical wastes excluding used oils	27,000
Clinical wastes	3,479
Animal remains/litter	136,677
Shredded tyres	8,000
Other commercial and industrial	24,372
Total	199,528

Source: SEPA returns and information from operators

* The quantity of waste incinerated does not include any commercial and industrial wastes collected by, or on behalf of, local authorities but does include other commercial and industrial waste handled at the two municipal waste incinerators.

Waste Management Facility Disposals

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

The total amount of controlled waste sent to Scottish landfills in 2005 was 7,316,717 tonnes. This is approximately 6% less than the 2004 total of 7.81 million tonnes. Waste disposal trends are considered at the end of this chapter.

Of the waste disposed of to landfill in 2005, 50% was classified as mixed ordinary wastes and 46% as mineral wastes. A breakdown of the total amount of waste disposed of to landfill in 2005 for each WSA is given in Table 36.

Information on the types and quantities of special waste disposed of to landfill in Scotland in 2005 is given in Table 37.

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

Operators of landfill sites are required to make returns to SEPA detailing the types and quantities of waste handled at their site. The data are reported to SEPA on a quarterly basis using the licensed/permitted site return form.

Until April 2004, licence holders were required to describe wastes on the site return form using the EWC-STAT coding system (see Appendix IV). This system originates from Regulation (EC) No. 2150/2002 on Waste Statistics and is an aggregation of the European List of Wastes (commonly referred to in the UK as the European Waste Catalogue (EWC 2002)). The EWC-STAT system was designed for ease of reporting to the European Commission by grouping waste of a similar nature under generic headings. This is the system used to report the data in Table 38, which relates to 2005.

In April 2004, the use of the EWC-STAT coding system was replaced by a requirement for licence holders to use the six-digit EWC 2002 code to describe waste on licensed site returns to SEPA. This follows an amendment to the Environmental Protection (Duty of Care) Regulations 1991 by the Landfill (Scotland) Regulations 2003 which required the use of the six-digit EWC 2002 code to be used to describe waste on waste transfer notes from April 2003. Further information on the European Waste Catalogue is given in Appendices III and IV.

Waste recorded on special waste consignment notes is classified using EWC 2002 codes and special waste data in this section are therefore reported by EWC 2002 chapter codes.

Waste Disposal

Table 36 – Controlled waste disposed of to landfill in Scotland 2005

Waste Strategy Area*	Waste type by EWC-STAT code (tonnes)							
	1 Chemical compound wastes	2 Chemical preparation wastes	3 Other chemical wastes	4 Radio-active wastes	5 Health care and biological wastes	6 Metallic wastes	7 Non-metallic wastes	8 Discarded equipment
Orkney and Shetland	23	0	20	0	0	671	213	0
Western Isles	0	0	157	0	0	0	40	0
Highland	1	0	0	0	0	0	19	0
North East	30,955	11	7	0	0	42	771	0
Tayside	22,928	0	64	0	0	129	1,004	0
Forth Valley	5	14	2,185	0	0	0	9,826	34
Fife	0	0	0	0	0	0	498	0
Lothians and Borders	0	1,326	206	0	0	0	3,052	212
Ayrshire, Dumfries and Galloway	0	4,431	2,548	0	0	68	10,970	326
Glasgow and Clyde Valley	0	214	15,141	0	0	46	2,735	0
Argyll and Bute	0	0	0	0	0	0	149	1
Scotland	53,913	5,996	20,328	0	0	957	29,275	574

Waste Strategy Area*	Waste type by EWC-STAT code (tonnes)						
	9 Animal and vegetal wastes	10 Mixed ordinary wastes	11 Common sludges	12 Mineral wastes	13 Solidified stabilised or vitrified waste	Uncoded	Total
Orkney and Shetland	2,454	20,491	1,240	42,129	21	11	67,273
Western Isles	1,944	20,109	1,371	23,585	0	0	47,206
Highland	35	54,586	166	21,799	0	0	76,605
North East	2,674	479,337	5,372	191,848	41,300	0	752,318
Tayside	1,455	229,122	1,909	168,943	0	0	425,554
Forth Valley	6,188	310,571	12,575	190,130	191	0	531,720
Fife	125	257,169	14,480	400,562	0	770	673,603
Lothians and Borders	3,593	499,677	8,864	386,027	0	0	902,957
Ayrshire, Dumfries and Galloway	14,894	310,497	2,986	460,614	1,944	0	809,277
Glasgow and Clyde Valley	9,888	1,441,535	46,015	1,398,349	6,127	0	2,920,050
Argyll and Bute	925	58,805	582	49,602	0	90	110,155
Scotland	44,174	3,681,899	95,560	3,333,588	49,583	871	7,316,717

Source: SEPA Licensed/Permitted Waste Management Site Returns

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

Waste Disposal

In 2005, a total of 44,425 tonnes of special waste was consigned to landfill sites in Scotland. This is a decrease of approximately 128,000 tonnes over the figure for 2004. Almost all (98%) of the hazardous waste sent to landfill is construction and demolition wastes. Table 37 gives a breakdown of the special waste landfilled by EWC 2002 chapter code for each WSA.

Table 37 – Special waste consigned to landfill in Scotland 2005

Waste Strategy Area*	Waste type by EWC 2002 chapter code (tonnes)										
	01	02	03	04	05	06	07	08	09	10	11
Orkney and Shetland	0	0	0	0	0	0	0	0	0	0	0
Western Isles	0	0	0	0	0	0	0	0	0	0	0
Highland	20	0	0	0	0	0	0	0	0	0	0
North East	8	0	0	0	0	0	1	0	0	0	0
Tayside	0	0	0	0	0	0	0	0	0	0	0
Forth Valley	0	0	0	0	170	0	0	0	0	0	0
Fife	0	0	0	0	0	0	0	0	0	0	0
Lothians and Borders	0	0	0	0	0	0	0	0	0	0	0
Ayrshire, Dumfries and Galloway	0	0	0	0	0	0	0	0	0	0	0
Glasgow and Clyde Valley	0	0	0	0	0	0	0	0	0	5	0
Argyll and Bute	0	0	0	0	0	0	0	0	0	0	0
Scotland	28	0	0	0	170	0	1	0	0	5	0

Waste Strategy Area*	Waste type by EWC 2002 chapter code (tonnes)									
	12	13	14	15	16	17	18	19	20	Total
Orkney and Shetland	0	7	0	5	6	72	0	0	32	123
Western Isles	0	98	0	3	18	231	0	0	1	352
Highland	0	0	0	0	0	0	0	0	1	21
North East	0	22	0	217	0	1,093	0	0	0	1,340
Tayside	0	0	0	0	0	4,995	0	0	0	4,995
Forth Valley	0	0	0	0	0	27,417	0	51	0	27,637
Fife	0	0	0	0	0	70	0	0	0	70
Lothians and Borders	0	0	0	0	0	107	6	0	0	113
Ayrshire, Dumfries and Galloway	0	0	0	0	3	3,899	0	0	0	3,901
Glasgow and Clyde Valley	0	24	0	0	1	5,843	0	0	0	5,873
Argyll and Bute	0	0	0	0	0	0	0	0	0	0
Scotland	0	151	0	226	28	43,724	6	51	41	44,425

Source: SEPA Special Waste Database

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

EWC 2002 chapters (see Appendix III)

- | | | |
|--|---|---|
| 01 Mining and minerals | 09 Photographic industry | 17 Construction and demolition waste and asbestos |
| 02 Agricultural and food production | 10 Thermal process waste (inorganic) | 18 Health care |
| 03 Wood and paper production | 11 Metal treatment and coating processes | 19 Waste/water treatment and water industry |
| 04 Leather and textile production | 12 Shaping/treatment of metals and plastics | 20 Municipal and similar commercial wastes |
| 05 Petrol, gas and coal refining/treatment | 13 Oil and oil/water mixtures | |
| 06 Inorganic chemical processes | 14 Solvents | |
| 07 Organic chemical processes | 15 Packaging, cloths | |
| 08 Paints, varnish, adhesive and inks | 16 Not otherwise specified | |

Waste Disposal

Trends and Conclusions

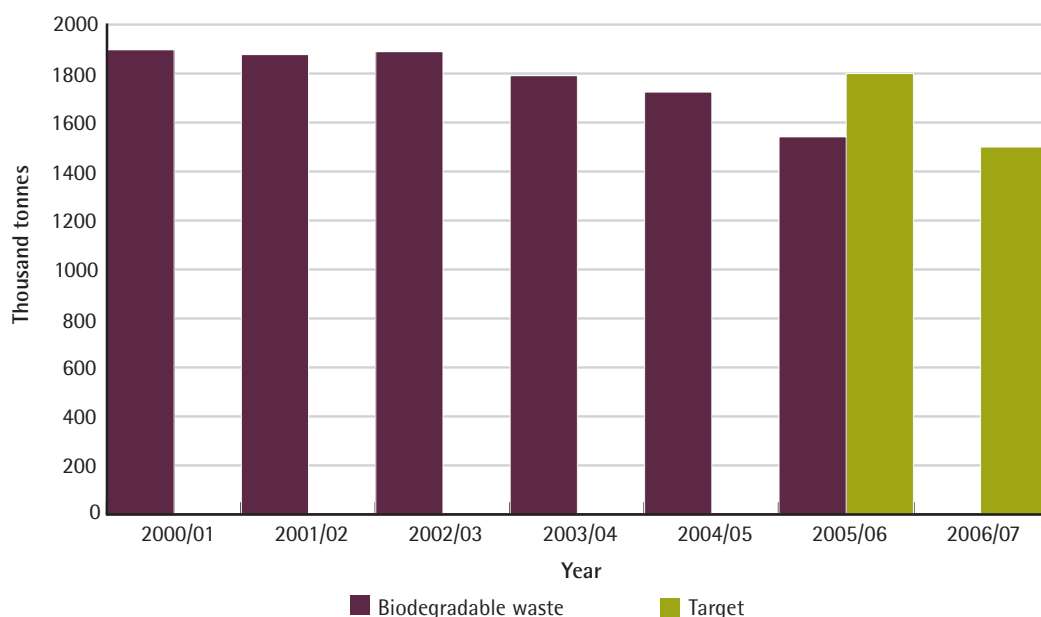
In Building a Better Scotland (2002), the Scottish Executive set an overall objective of ensuring progress towards sustainable management of Scotland's waste and achievement of European Union landfill reduction targets by 2010, 2013 and 2020. The Landfill (Scheme Year and Maximum Landfill Amount) Regulations 2004 set annual targets for Scotland for the landfilling of biodegradable municipal waste of 1.32 million tonnes by 2010, 0.88 million tonnes by 2013 and 0.62 million tonnes by 2020.

The Scottish Executive established an interim target for municipal waste to reduce landfilling of biodegradable municipal waste collected by local authorities to 1.5 million tonnes per year for the financial year 2006/2007. The National Waste Plan 2003 sets out how this target will be achieved. To calculate the amount of BMW in the years prior to 2003/2004, it was assumed that 63% of the waste landfilled was biodegradable. A more accurate mass balance calculation has been used to provide the data for subsequent years.

Scotland achieved the target for 2005/2006 with only three local authorities exceeding their individual allowances. The quantity of BMW landfilled by local authorities has fallen by nearly 20% over the last four years from 1.90 million tonnes in 2000/2001 to 1.54 million tonnes in 2005/2006. Based on the 2005/2006 returns, the current BMW landfilled exceeds the 2006/2007 Scottish target by approximately 40,000 tonnes.

Figure 7 shows the quantity of biodegradable waste landfilled by Scottish local authorities compared with the Scottish Executive's targets for 2005/2006 and 2006/2007.

Figure 7 – Biodegradable waste landfilled by Scottish local authorities 2000/2001 to 2005/2006



Source: SEPA Local Authority Waste Arisings Survey, SEPA Landfill Allowance Scheme Quarterly Monitoring Returns and Landfill Allowance Scheme (Scotland) Regulations 2005: Interim Guidance (Scottish Executive, May 2005)

Waste Disposal

Disposal of waste to landfill

The total amount of controlled waste sent to Scottish landfills in 2005 was 7.32 million tonnes. Since 1994 there has been a clear downward trend in the quantity of waste being disposed of to landfill; the disposal tonnage for 2005 is less than half that for 1994, when 15.88 million tonnes of controlled waste were disposed of (Figure 8). There was a drop of approximately 500,000 tonnes between 2004 and 2005. Almost 75% of this reduction can be explained by 240,000 tonnes less municipal waste and 128,000 tonnes less special waste being landfilled.

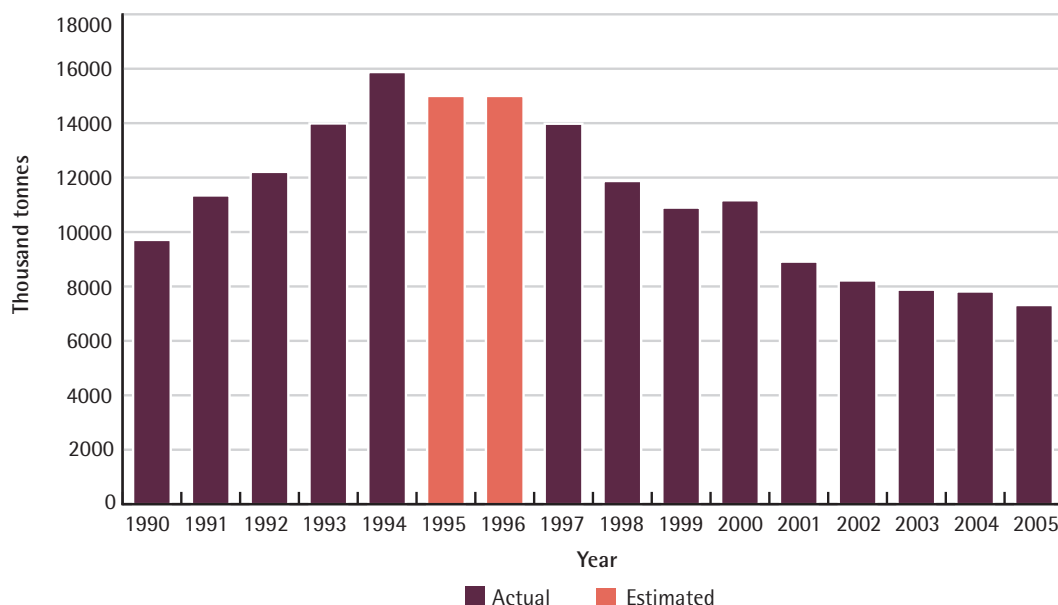
The long-term fall can be partially explained by less construction and demolition waste being disposed of over this period. A decline in the amounts of C&D waste going to landfill could reflect a reduction in the amount of C&D waste generated, an increase in the percentage of waste reused or recycled, or an increase in unauthorised landfilling or fly-tipping.

For example, the landfill tax of £2 per tonne for inactive waste, introduced in October 1996, has encouraged producers to look for alternative uses for C&D waste. In addition, the Aggregates Levy, which began in April 2002, seeks to incorporate a range of environmental costs into the price of virgin aggregate and to encourage the use of alternative materials. The Levy, which was set at a rate of £1.60 per tonne on virgin aggregate commercially exploited in the UK, encourages the recycling of C&D wastes. From April 2008, the landfill tax for inactive waste will rise to £2.50 per tonne and the Aggregates Levy to £1.95 per tonne.

The landfill tax for active materials in 2006/2007 was £21 per tonne and is £24 per tonne in 2007/2008. From April 2008, it will rise by £8 per year until at least 2010/2011. This will encourage alternatives routes to disposal for wastes.

The system for classifying the waste disposed changed in 2001 when operators were asked to use the EWC-STAT coding system. This is a more comprehensive system than the one used previously and gives a better breakdown of wastes deposited. However, the change means that it is not possible to make a direct comparison of individual categories of waste disposed of before and after 2001 (Table 38).

Figure 8 – Controlled waste landfilled in Scotland 1990–2005



Source: 1990–1994 figures extracted from Table A1.2 of Scottish Office Bulletin 1994 (refers to 1990–1994 inclusive).
 1995–1996 values are estimates. No specific data were available for these years.
 1997–1998 figures are taken from the Databridge study by Environmental Resource Management (ERM) for SEPA and the Scottish Executive.
 1999–2005 figures are taken from SEPA Licensed/Permitted Waste Management Site Returns.

Waste Disposal

Table 38 – Controlled waste landfilled in Scotland 1990–2005 (thousand tonnes)

Waste type	1990	1991	1992	1993	1994	1995
Household	2,213.8	2,291.3	2,246.6	2,336.1	2,381.6	n/k*
Commercial	1,437.0	1,667.5	1,733.8	1,790.6	1,873.5	n/k*
Industrial (total)	6,058.8	7,384.5	8,229.4	9,862.1	11,622.3	n/k*
Other	–	–	–	–	–	n/k*
EWC-STAT	–	–	–	–	–	n/k*
Total	9,709.6	11,343.3	12,209.8	13,998.8	15,877.4	15,000.0[†]
Industrial (C&D)	3,709.0	5,217.9	4,847.3	6,714.6	7,716.4	n/k*
Industrial (other)	2,349.7	2,166.6	3,382.1	3,147.5	3,905.9	n/k*
Industrial (total)	6,058.8	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-STAT	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

Waste type	2002	2003	2004	2005
Household	n/a [‡]	n/a [‡]	n/a [‡]	n/a [‡]
Commercial	n/a [‡]	n/a [‡]	n/a [‡]	n/a [‡]
Industrial (total)	n/a [‡]	n/a [‡]	n/a [‡]	n/a [‡]
Other	n/a [‡]	n/a [‡]	n/a [‡]	n/a [‡]
EWC-STAT	n/a [‡]	n/a [‡]	n/a [‡]	n/a [‡]
Total	8,219.8	7,880.0	7,814.0	7,316.7
Industrial (C&D)	n/a [‡]	n/a [‡]	n/a [‡]	n/a [‡]
Industrial (other)	n/a [‡]	n/a [‡]	n/a [‡]	n/a [‡]
Industrial (total)	n/a [‡]	n/a [‡]	n/a [‡]	n/a [‡]

Source: 1990–1994 figures extracted from Table A1.2 of Scottish Office Bulletin 1994 (refers to 1990–1994 inclusive).

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

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

1999–2005 figures are taken from SEPA Licensed/Permitted Waste Management Site Returns.

* Figures are not known (n/k).

† Values are estimates.

‡ Not available (n/a). Cannot be derived from new coding system.

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 2005/2006, the total number of waste carriers registered in Scotland/Northern Ireland was 7,334.

Lists of registered carriers, brokers and professional collectors and transporters can be found on SEPA's website at www.sepa.org.uk/regulation/rocas/index.htm

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.

A total of 1,165 licences were in force during 2005/2006. A breakdown of these licences is given in Table 39 and Figure 9. This information was obtained from the SEPA Waste Management Charging Scheme for the financial year 2005/2006. Details of the charging scheme can be found on SEPA's website at www.sepa.org.uk/charging/index.htm

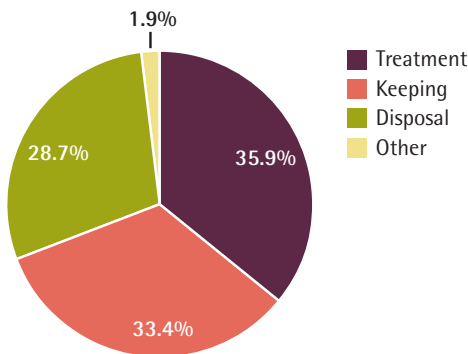
Table 39 – Number of waste management licences by activity 2005/2006

Activity	Number of licences
Treatment	
Recycling	327
Other	92
Keeping	
At civic amenity sites	132
At site where it is produced	3
For recycling	53
Other	202
Disposal	
Disposal – operational	161
Post-closure sites	166
Pet cemeteries	7
Other	
Incinerators	7
Mobile plants	15
Total	1,165

Source: SEPA Waste Management Charging Scheme 2005/2006

Waste Related Operational Activities

Figure 9 – Waste management licences by activity 2005/2006



Waste management licences related to special waste

There were 127 sites licensed to handle special waste in Scotland in 2005/2006. Table 40 provides a breakdown of this total by activity.

Table 40 – Number of waste management licences authorising the handling of special wastes 2005/2006

Activity	Number of licences
Treating	53
Keeping	62
Disposal – operational	4
Disposal – post-closure	8
Total	127

Source: SEPA Waste Management Charging Scheme 2005/2006

Waste management licences related to recycling activity

In 2005/2006, there were 327 sites licensed to carry out recycling activities (see Table 41). The licensed capacity is the amount of waste that the site is licensed to handle annually.

Table 41 – Number of licensed recycling operations by licensed capacity 2005/2006

Licensed capacity (tonnes)	Number of licences
75,000 and above	26
25,000 to <75,000	32
5,000 to <25,000	56
0 to <5,000	213
Total	327

Source: SEPA Waste Management Charging Scheme 2005/2006

Waste management licences related to disposal activity

Landfill is by far the most common, though decreasing, management method for municipal waste in Scotland, accounting for approximately 73% of the total waste arisings in 2005/2006. The 161 landfills sites in operation during 2005/2006 form the principal network of disposal facilities and are shown on the map in Figure 10. Table 42 provides a breakdown of these sites by licensed capacity.

Waste Related Operational Activities

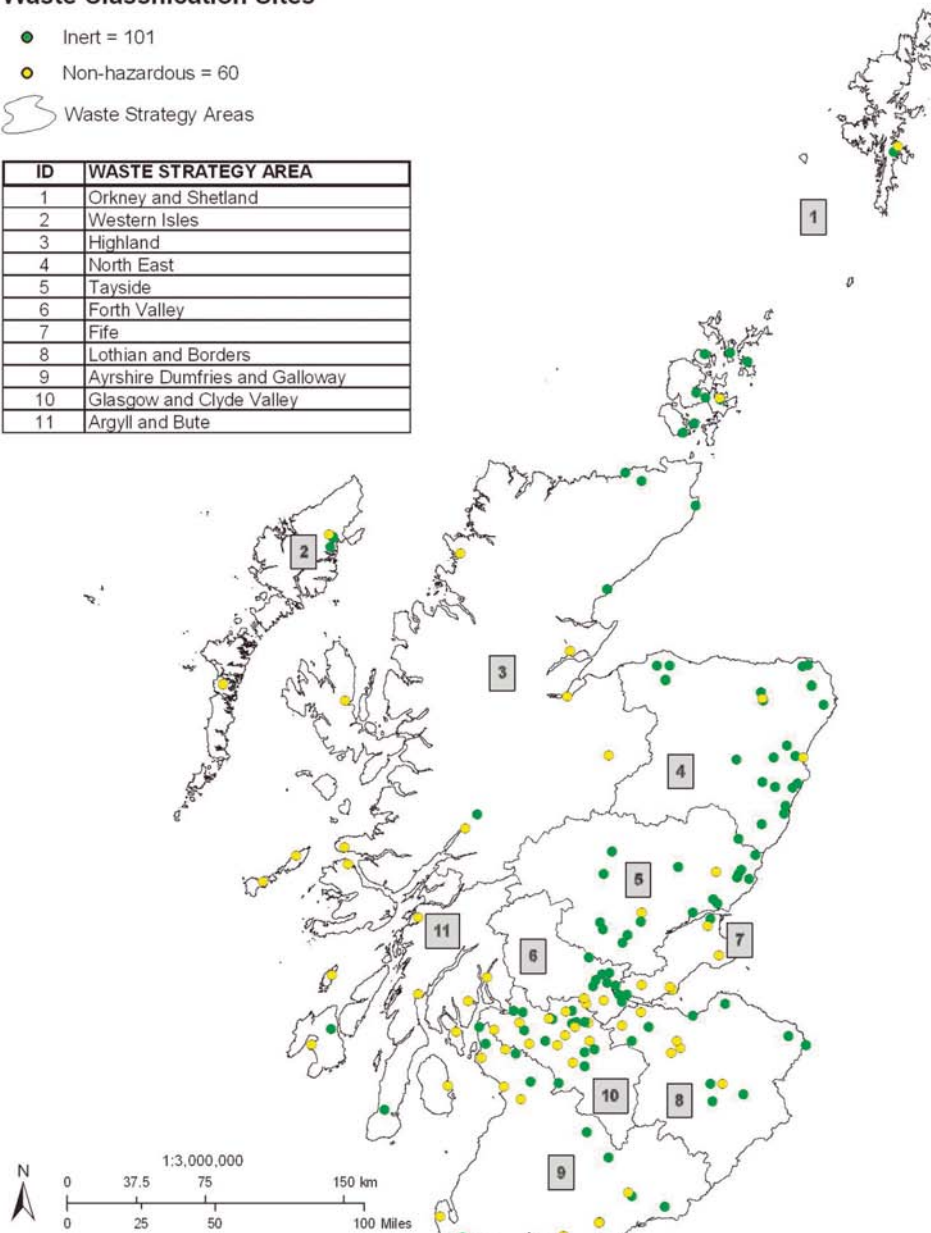
Figure 10 – Landfill sites in Scotland 2005/2006

Waste Classification Sites

- Inert = 101
- Non-hazardous = 60

 Waste Strategy Areas

ID	WASTE STRATEGY AREA
1	Orkney and Shetland
2	Western Isles
3	Highland
4	North East
5	Tayside
6	Forth Valley
7	Fife
8	Lothian and Borders
9	Ayrshire Dumfries and Galloway
10	Glasgow and Clyde Valley
11	Argyll and Bute



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Waste Related Operational Activities

Table 42 – Waste management licences for operational landfills by licensed capacity 2005/2006

Licensed capacity (tonnes)	Number of licences
150,000 and above	2
75,000 to <150,000	34
25,000 to <75,000	22
0 to <25,000	103
Total	161

Source: SEPA Waste Management Charging Scheme 2005/2006

Post-closure landfill sites

Table 43 shows that 166 licensed sites had ceased landfilling waste and, in 2005/2006, were in their period of aftercare. Post-closure landfill sites are categorised in SEPA's waste management licence charging scheme according to the total weight of waste deposited at the site during its lifetime.

Table 43 – Number of waste management licences for post-closure landfill sites by total waste deposited 2005/2006

Total waste deposited (million tonnes)	Number of licences
2.5 and above	0
1 to <2.5	22
0.25 to <1	22
0 to <0.25	122
Total	166

Source: SEPA Waste Management Charging Scheme 2005/2006

Landfill site gas and leachate operational controls

Landfill gas and/or leachate management is carried out at some of the larger landfill sites in Scotland. Some sites carry out more than one method of control. During 2005, 68 sites undertook some form of gas management; the most common method was venting. Flaring or energy production took place at 25 sites. Leachate management was carried out at 56 sites. Methods of leachate management included recirculation, aerobic treatment, waste stabilisation and other methods such as discharge to sewer. Table 44 gives a breakdown of the operational controls in place.

Table 44 – Gas and leachate operational controls at landfill sites 2005

Operational controls*	Number of landfill sites
Gas operational controls	
Energy production	15
Flaring	20
Venting	44
Leachate operational controls	
Recirculation	23
Aerobic treatment	17
Waste stabilisation	1
Other	28

Source: SEPA Environmental Protection and Improvement (EPI) Directorate

* 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. During 2005/2006, SEPA staff made 6,100 planned inspections of waste management facilities.

Enforcement

Enforcement tools are available under the various regulatory regimes that SEPA operates. These range from warning letters to referrals to the Procurator Fiscal. Table 45 records the formal enforcement proceedings with respect to waste instigated by SEPA during 2005/2006.

Table 45 – Waste related enforcement activities 2005/2006

Nature of enforcement	Number
Final warning letters	44
Enforcement notices issued	50
Referrals to Procurator Fiscal	33
Convictions secured	20
Total	147

Source: SEPA Annual Report 2005/2006

Fly-tipping

The Scottish Fly Tipping Forum was established as a result of a litter and fly-tipping review by the Scottish Executive. The Forum's members include SEPA, local authorities, Keep Scotland Beautiful, landowners, the Scottish Executive and other interested bodies. It aims to develop a strategy to reduce fly-tipping across Scotland.

The Scottish Fly Tipping Forum has set up two new systems to address fly-tipping:

- Dumb Dumpers Stop-line (0845 2 30 40 90) – a single point of contact to report a fly-tipping incident;
- Flycapture – a database for recording information on fly-tipping incidents.

Flycapture is currently used by local authorities and SEPA, but may be extended to gather data from large landowners in the future.

Results from Flycapture indicate that over 34,000 incidents of fly-tipping were reported in 2005/2006 by the 18 Scottish local authorities that provided data. The clean-up and investigation costs for these incidents amounted to £2 million. This is, however, an underestimate of the true situation and a more complete picture will emerge once all Scottish local authorities are signed up to use the system.

Information from Flycapture for Scotland reveals that most fly-tipped waste originates from householders. This waste can include black bags, white goods, other electrical equipment and garden waste. Recent legislative changes have placed more responsibility on householders to ensure that their waste is removed only by appropriately authorised people (see www.sepa.org.uk/regulation/rocas/).

Local authorities were asked by SEPA in the LAWAS 2005/2006 to provide separate tonnages (if known) for the clearance of fly-tipped material. Five of the 32 local authorities provided this information, which showed that a total of 14,479 tonnes of fly-tipped material was cleared separately. Because so few local authorities provided this information, it was not possible to obtain an accurate picture of the level of the fly-tipping problem in Scotland from these data.

Appendices

Appendix I – Glossary

Appendix II – Acronyms and Abbreviations

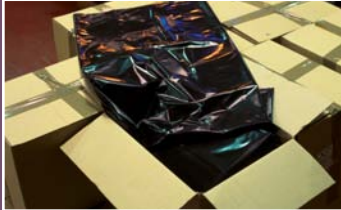
Appendix III – European Waste Catalogue List of Waste (EWC 2002)

Appendix IV – European Waste Catalogue – STAT (EWC-STAT)

Appendix V – Waste Strategy Area Map

Appendix VI – Accredited Reprocessors and Exporters of Packaging Waste 2005

Appendix VII – Licensed Sites in Scotland in 2005



CHP06



Appendix I

Glossary

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

Appendix I

Mixed organic waste	Household waste and any other waste under the control of local authorities or their agents acting on their behalf
Municipal waste	Collected municipal waste is all waste for which the councils make arrangements, with the exclusion of: abandoned vehicles; road maintenance waste; commercial waste that is delivered to local authority owned or run landfill sites where the local authority has no part in the collection or disposal arrangements that have led to this delivery; industrial waste collected from industrial premises and taken for disposal or treatment separately from any other waste; and construction and demolition waste that is collected and taken for disposal or treatment separately from any other waste. Bricks and rubble taken to civic amenity sites must be included in collected municipal waste
National Waste Strategy	This established 11 Waste Strategy Areas across Scotland. These 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
Pollution Prevention and Control (PPC)	A system set up in the UK to implement the Integrated Pollution Prevention and Control Directive (96/61/EC) to prevent and control pollution from certain types of business. The PPC regime is replacing the IPC regime. In Scotland, both regimes are regulated by SEPA
Recovery	Generating value from wastes from a wide variety of activities such as recycling, composting and energy recovery
Recyclables	Materials that are capable of being recycled
Recycling	Using waste materials in manufacturing other products of an identical or similar nature, as defined by the Organisation for Economic Co-operation and Development in Strategic Waste Prevention published in 2000
Registered waste broker	Someone registered who makes arrangements on behalf of others to handle, transport, dispose or recover controlled waste but does not handle, transport, dispose or recover the waste themselves
Registered waste carrier	Someone registered to transport controlled waste by road, rail, air, sea or inland waterways
Reprocessor	A company that recycles materials. Only 'accredited reprocessors' can issue PRNs
Thermal treatment	A broad generic term covering processes that involve the use of heat to treat waste. Incineration is the most common thermal treatment process. Pyrolysis and gasification are other high temperature processes but there are also low temperature processes used, for example, in technologies producing refuse-derived fuel (RDF)
Transfer station	A site to which waste is delivered for sorting and compacting prior to transfer to another place for recycling, treatment or disposal
Waste	Any substance or object in the categories set out in Annex 1 of the Waste Framework Directive (91/156/EEC), which the holder discards or intends or is required to discard
Waste arisings	The amount of waste generated in a given locality over a given period of time

Appendix II

Acronyms and Abbreviations

BMW	biodegradable municipal waste
C&D	construction and demolition waste
Defra	Department for Environment, Food and Rural Affairs
EC	European Commission
EEC	European Economic Community
ELVs	end-of-life vehicles
EU	European Union
EWC	European Waste Catalogue
IPC	Integrated Pollution Control
LASQM	Landfill Allowance Scheme Quarterly Monitoring Return
LATS	Landfill Allowance Trading Scheme
LAWAS	Local Authority Waste Arisings Survey
MSW	municipal solid waste
NGR	National Grid Reference
PERN	Packaging Waste Export Recovery Note
PRN	Packaging Waste Recovery Note
PPC	Pollution Prevention and Control
SEPA	Scottish Environment Protection Agency
UK	United Kingdom
WEEE	waste electrical and electronic equipment
WML	Waste Management Licence
WSA	Waste Strategy Area
WSR	Waste Shipment Regulation

Appendix III

European Waste Catalogue List of Waste (EWC 2002)

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

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

Hazardous wastes are signified by entries where the EWC code is marked by an asterisk (*). Hazardous waste entries can also have a non-hazardous 'mirror entry'; these will appear consecutively but with one marked with an asterisk (*), normally with reference to 'containing dangerous substances', for example:

17 05 03* Soil and stones containing dangerous substances

17 05 04 Soil and stones other than those mentioned in 17 05 03

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

Appendix IV

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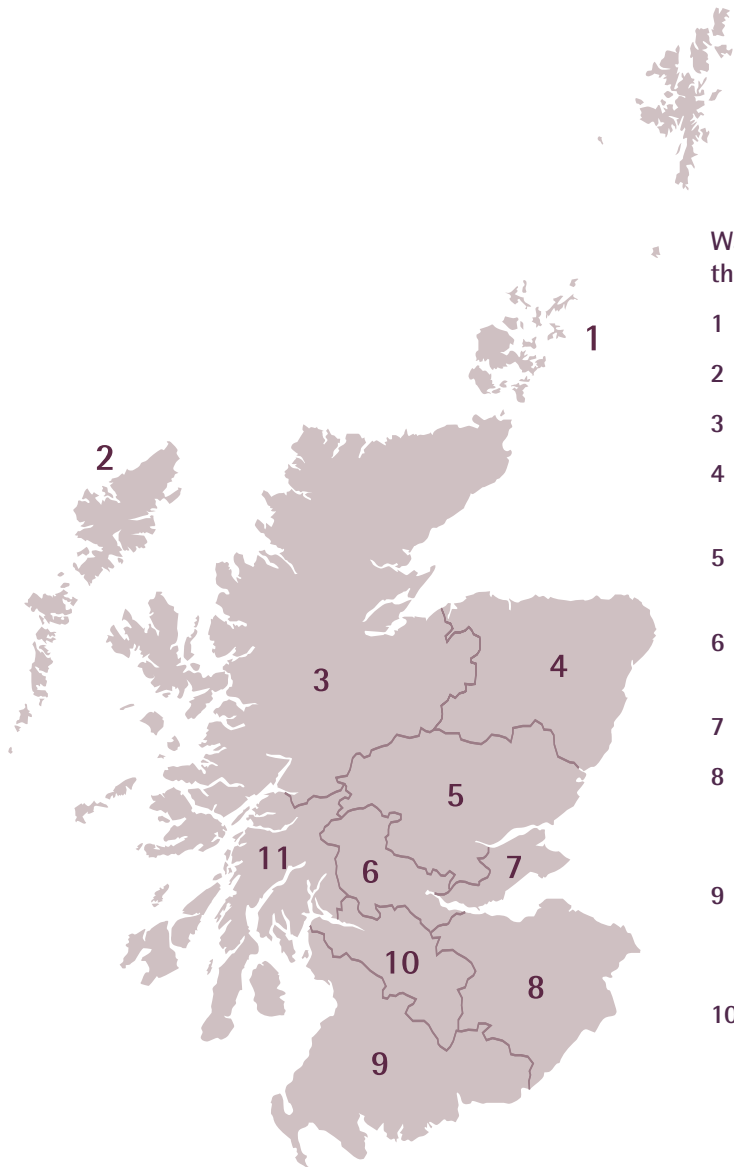
European Waste Catalogue - STAT (EWC-STAT)

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

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

Appendix V

Waste Strategy Area Map



Waste Strategy Areas and their Constituent Local Authorities

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

Appendix VI

Accredited Reprocessors and Exporters of Packaging Waste 2005

Reprocessors accredited in 2005

Name of company	Site	Registration number	Principal operation
A W Jenkinson Woodwaste Ltd	Carriden Industrial Estate, Bo'ness	SR2001327	Wood
Allglass Reprocessors Ltd	49 Burnbrae Road, Linwood	SR2002387	Glass
BPB Paperboard	Davidson Mill, Bucksburn, Aberdeen	SR199831	Paper
bpi.recycled products - Greenock	96 Port Glasgow Road, Greenock	SR1998111	Plastic
bpi. recycled products - Dumfries	College Road, Dumfries	SR2005553	Plastic
C K Polymers	Unit 20, Charlesfield Industrial Estate, St Boswells	SR2002357	Plastic
CEMEX UK Materials Limited	Kilbarchan Road Coating Plant, Kilbarchan	SR2006405	Glass
Comhairle Nan Eilean Siar	Bennadrove Landfill Site, Isle of Lewis	SR2001339	Glass
Comhairle Nan Eilean Siar	Rueval Landfill Site, Isle of Lewis	SR2003403	Glass
Dundee Energy Recycling Ltd	Forties Road, Dundee	SR2005550	Energy from waste
Egger (Barony) Ltd	Barony Road, Auchinleck	SR2002380	Wood
John W Hannay & Co Ltd	Linwood Avenue, East Kilbride	SR199821	Paper
Mac-Glass Recycling	Dalhousie Business Park, Bonnyrigg	SR1998112	Glass
Mainetti (UK) Ltd	Annfield Estate, Jedburgh	SR2005551	Plastic
Norbord Limited	Station Road, Cowie, Stirling	SR1998238	Wood
North East Pallet Services Ltd	East Tullos Industrial Estate, Aberdeen	SR2002390	Wood
Plastic Technology Services Limited	Garroch Business Park, Dumfries	SR1998284	Plastic
Rockware Glass Ltd	Portland Road, Irvine, Ayrshire	SR1998126	Glass
Shetland Amenity Trust	Cunningsburgh Industrial Estate, Shetland	SR2003407	Glass
Shetlands Islands Council	Greenhead, Lerwick, Shetland	SR1998261	Energy from waste
Smith, Anderson & Company Ltd	Fettykil Mills, Leslie, Fife	SR1998113	Paper
Solway Recycling Ltd	Rigghead Farm, Dumfries	SR2003406	Plastic
Superglass Insulation Limited	Thistle Industrial Estate, Stirling	SR2005552	Glass
Tracey Timber Recycling Limited	Burnbrae Road, Linwood	SR1998244	Wood
United Glass Ltd	Glasshouse Loan, Alloa	SR1998114	Glass
Vencel Resil Ltd	160 East Wellington Street, Glasgow	SR199894	Plastic
Viridor EnviroScot Limited	Langmuir Way, Bargeddie, Glasgow	SR2002400	Wood

Exporters accredited in 2005

Christie & Son (Metal Merchants) Ltd	Lobnitz Dock, Renfrew	SX 199926	Steel export
Christie & Son (Metal Merchants) Ltd	Lobnitz Dock, Renfrew	SX 2005130	Aluminium export
FBI Glasgow	P O Box 8, Troon, Ayrshire	SX 199933	Paper export
FBI Glasgow	P O Box 8, Troon, Ayrshire	SX 200314	Plastic export
John Lawrie (Aberdeen) Limited	Forties Road, Montrose	SX 199934	Steel export
John R Adam & Sons Limited	Renfrew Road, Glasgow	SX 199940	Aluminium export
John R Adam & Sons Limited	Renfrew Road, Glasgow	SX 199927	Steel export
RM Supplies	The Bay, Inverkeithing	SX 2005131	Steel export
Solway Recycling Ltd	Rigghead Farm, Dumfries	SX 200113	Plastic export

Appendix VII

Licensed Sites in Scotland in 2005

Landfill Sites

Licence holder	Site	WML number	NGR
A & M Smith	Bankhead, Duffshill, Portlethen	WML/N/20143	NO928996
Aberdeenshire Council	Millmoss Landfill, Little Turriff, Turriff	WML/N/20036	NJ728493
Alcan	Alcan, Lochaber Works	WML/N/50084	NN125753
Alcan Chemicals Europe	Whinneyhall Landfill, Burntisland	WML/E/00261	NT248874
Andrew Cook (Containers) Ltd	Belliston Quarry, Arncroach	WML/E/00291	NO498063
Angus Council	Restenneth Landfill Site, Montrose Road, Forfar	WML/E/20140	NO483515
Argyll and Bute Council	Ballygrant Quarry, Ballygrant	WML/W/22027	NR395662
Argyll and Bute Council	Glengorm Landfill Site, Tobermory, Isle of Mull	WML/W/20045(a)	NM488558
Argyll and Bute Council	Claid Landfill Site, Isle of Coll	WML/W/20046	NM204602
Argyll and Bute Council	Gott Bay Landfill Site, Isle of Tiree	WML/W/20047	NM028462
Argyll and Bute Council	Bonaveh Landfill Site, Isle of Colonsay	WML/W/20048	NR398955
Argyll and Bute Council	Garetbreck Landfill Site, Bowmore, Isle of Islay	WML/W/20049	NR291579
Armstrong Waste Management Ltd	Auchenlosh Quarry, Dalbeattie (Phase II)	WML/W/00272	NX853614
Banchory Contractions Ltd	South Hirn, Crathes, Banchory	WML/N/20179	NJ737002
Barr Ltd	Clayshant, Sandhead	WML/W/00251	NX110525
Borderland Reclamation Ltd	Meigle Potts, Clovenfords, by Galashiels	WML/E/20153	NT453365
Burnthills Demolition	Summerston Farm, Balmore Road, Glasgow	WML/W/00029	NS581725
C & S Smith	Drumsleed, Fordoun	WML/E/00226	NO733777
C A Duguid & Sons	Knapps of Thernie, Turriff	WML/N/20126	NJ738446
Cairnmoss (Aberdeen) Ltd	Arnhall Quarry, Edzell	WML/E/00225	NO608697
Cairnmoss (Aberdeen) Ltd	Lochburn Quarry, Stonehaven	WML/N/20146	NO854832
Cairnmoss (Aberdeen) Ltd	Ury Quarry, Stonehaven	WML/N/20148	NO860874
Cairnmoss (Aberdeen) Ltd	Bedentoy Landfill, Portlethen, Aberdeen	WML/N/20190	NO900974
Chap Quarries (Aberdeen) Ltd	Park Quarry, Durriss	WML/N/20044	NO804979
Clackmannanshire Council	Black Devon Landfill Site, Bowhouse Road, Alloa	WML/E/20023	NS895913
Comhairle nan Eilean Siar	The Old Burgh Tip, Marybank, Isle of Lewis	WML/N/50105	NB403332
Comhairle nan Eilean Siar	Rueval, Isle of Benbecula	WML/N/0050029(a)	NF811535
Comhairle nan Eilean Siar	Bennadrove, Stornoway, Isle of Lewis	WML/N/0050028(a)	NB386345
D Geddes (Contractors) Ltd	Border Quarry, Leysmill, Friockheim	WML/E/0000216	NO600485
D Geddes (Contractors) Ltd	Kinnell, Friockheim	WML/E/00218	NO607503
D Geddes (Contractors) Ltd	Ardownie Quarry, Monifieth	WML/E/00231	NO493345
D Geddes (Contractors) Ltd	Prettycur, Hillside, Montrose	WML/E/00217	NO698608
Dumfries & Galloway Council	Corsehill Waste Disposal Site, Eaglesfield Road, Annan	WML/W/20008	NY206697
Dumfries & Galloway Council	St Mary's Street Disposal Site, Sanquhar	WML/W/20016	NS782104
Dumfries & Galloway Council	Gatelawbridge Waste Disposal Site, Thornhill	WML/W/20018	NX902965
Dumfries & Galloway Council	Blacks Plantation Landfill Site, Whithorn	WML/W/20024	NX428406
Dumfries & Galloway Council	Aucheninnes Landfill Site, Dalbeattie	WML/W/20020	NX848609
Dumfries & Galloway Council	Galdenoch, Leswalt, Stranraer	WML/W/20022(a)	NW988644
Dumfries & Galloway Council	Locharmoss Waste Disposal Site, Dumfries	WML/W/0020013	NY007774

Appendix VII

Licence holder	Site	WML number	NGR
Dundee City Council	Riverside Landfill, Wright Avenue, Dundee	WML/E/0020079(b)	NO360295
E W G Dickey & Co	Kingsdale, Firth, Orkney	WML/N/0050070	HY378115
East Ayrshire Council	Milton Landfill Site, Crookedholm, Kilmarnock	WML/W/0020144	NS480376
Edgar Allan Ltd	Balbarnie Works, Whitburn Road, Bathgate	WML/E/0000026	NS974682
Falkirk Council	Kinneil Kerse Landfill Site, Grangemouth Road, Bo'ness	WML/E/20012	NS975810
Fife Council	Lochhead Landfill Site, by Wellwood, Fife	WML/E/20087	NT080903
G & F Milne	Bodychell Landfill, Memsie, Fraserburgh	WML/N/20118	NJ954629
Glasgow City Council	Summerston Landfill, Balmore Road, Glasgow	WML/W/20035	NS579718
Glasgow City Council	Kilgarth, Gartgill Road, Coatbridge	WML/W/00071	NS719675
Glasgow City Council	South Cathkin Landfill, Cairnmuir Road, East Kilbride	WML/W/20147	NS624574
GR Service Company	West Carron, Carron, Falkirk	WML/E/00015	NS875820
Highland Council	South Head, Wick Harbour, Wick	WML/N/50107	ND372501
Highland Council	Ardachu Landfill Site, Ardachu, Brora	WML/N/50044	NC893047
Highland Council	Brackletter	WML/N/50027(b)	NN190828
Highland Council	Torbreck, Lochinver, Sutherland	WML/N/50047	NC097241
Highland Council	Granish Landfill, Aviemore	WML/N/20098	NH900148
Highland Council	Portree	WML/N/50051(b)	NG471447
Highland Council	Kilchoan Landfill Site, Kilchoan, Argyll	WML/N/50026	NM469649
Highland Council	Stoneyfield, Invergordon	WML/N/50003	NH690713
Highland Council	Longman, Inverness	WML/N/0050036	NH675469
Holt Drainage	Achscrabster Quarry, Thurso	WML/N/50086	ND080633
Howegarden Ltd	Hospital Wood, Auchterless, Turriff	WML/N/20120	NJ735458
I & H Brown (Plant) Ltd	Battleby, Redgorton, Perth	WML/E/20131	NO082295
J & A Plant Services in liquidation	Beithglass Quarry, Skelmorlie	WML/W/00073	NS200672
J & S Mackie	South House, Tankerness, Orkney	WML/N/50069	HY507076
J H Connon Ltd	Greendams, Newmachar, Aberdeenshire	WML/N/20068	NJ868202
J Haig Hamilton and Sons	West Fortune Landfill, North Berwick	WML/E/20152	NT534801
J M Kennie (Demolitions) Ltd	Auldcaithie, Winchburgh	WML/E/00051	NT075755
J M Murdoch & Sons Ltd	East Capellie Farm Landfill, Ferenze Road, Neilston	WML/W/00126	NS472583
James Fairbairn	Lamberton Landfill, Berwick upon Tweed	WML/E/20197	NT973575
John Fyfe Ltd	Marybank Quarry, Stornoway	WML/N/50078	NB408328
John Marshall & Son	Dalreoch Farm, Dunning	WML/E/00301	NO003173
Joss (Aberdeen) Ltd	Loch-hills Quarry, Parkhill, Dyce	WML/N/20062	NJ914144
King Contractors (Perth) Ltd	Huntingtower Quarry, Perth	WML/E/00304	NO076247
Kirkton Barns Reclamation Account	Kirktonbarns Landfill, Tayport	WML/E/00295	NO452261
L H Spence & Sons	Brackmont Mill, St Michaels, Leuchars	WML/E/00286	NO437224
Les Taylor Contractors Ltd	Boghead Farm, Kintore	WML/N/20185	NJ795139
Les Taylor Contractors Ltd	Newton of Savoch, Longside, Peterhead	WML/N/20196	NK066423
Levenseat Ltd	Torphin Quarry, Harburn, West Calder	WML/E/00058	NT028597
Luddon Construction Ltd	East Mavis Valley, Bishopbriggs	WML/W/00065	NS597714
Luddon Construction Ltd	Dalreoch Quarry, Renton Road, Dumbarton	WML/W/00015	NS388761
M & D Russell (Haulage) Ltd	Clapperton Bing, Pumpherstoun	WML/E/00048	NT78697

Appendix VII

Licence holder	Site	WML number	NGR
M & J Ballantyne	Broomhouse Quarry, Maxton	WML/E/0000001	NT633309
M K Leslie Ltd	West Staney Hill, Lerwick	WML/N/0050101	HU448422
Mardon Plant Hire Ltd	Hillhouse Farm	WML/E/00053	NT117674
Marshall Farms	Muirpark Farm, Tullibody, Clackmannanshire	WML/E/20171	NS867961
McIntosh Plant Hire (Aberdeen) Ltd	Leys Quarry, Mintlaw, Peterhead	WML/N/20206	NK004524
Messrs J & R Mitchell	Pairney Quarry, Auchterarder	WML/E/00310	NN977130
Messrs McFadyens Contractors, Campbeltown Ltd	Dhurrie Farm, Campbeltown, Argyll	WML/W/00220	NR684223
Moray Council	Kirkhill Landfill, Calcots Road, Elgin	WML/N/20095	NJ234634
Mr A P Anderson	Kinbuck Quarry	WML/E/00323	NN795050
Mr Gavin Craig	Avonside, Drumclog	WML/W/00156	NS630370
Mr George Adam	Muirton Park Cottage, Bannockburn	WML/E/00326	NS818896
Mr James Rae Halliday	Campbelton Farm, Twynholm, Whiteliggate	WML/W/00265	NX657538
Mr Robert Drummond	Straid Farm, Lendalfoot	WML/W/00245	NS213507
Murray & Burrell Ltd	Hartwoodburn Farm, Selkirk	WML/E/00012	NT467269
N C Law Construction & Demolition	Burnside Phase 2, By Tillicoultry	WML/E/00322	NS907968
Norman Jamieson	No. 7 Holdings, Gagie Quarries, near Monikie	WML/E/00233	NO468367
North Ayrshire Council	Brodick Landfill Site	WML/W/20057	NS029353
North Lanarkshire Council	Auchinlea Landfill, Bellside, Cleland	WML/W/20070	NS280658
Orkney Islands Councils	Mitchell's Quarry, Stronsay, Orkney	WML/N/50006(a)	HY657281
Orkney Islands Councils	Westside Road Quarry, Eday, Orkney	WML/N/50007(a)	HY562334
Orkney Islands Councils	Blossom Quarry, Rousay, Orkney	WML/N/50008(a)	HY424324
Orkney Islands Councils	Gallowtuag Quarry, South Walls, Hoy, Orkney	WML/N/50009	ND304896
Orkney Islands Councils	Chinglebraes Quarry, St Ola, Orkney	WML/N/50020	HY427090
Orkney Islands Councils	Bossack Quarry, Tankerness, Orkney	WML/N/50019(b)	HY504084
Patersons of Greenoakhill Ltd	Greenoakhill, Hamilton Road, Broomhouse, Glasgow	WML/W/00036	NS666627
Perth & Kinross Council	North Forr Landfill Site, by Crieff	WML/E/20059	NN871202
R W & P Millican	Heughhead, Reston	WML/E/00132	NT877626
Railtrack plc	Shewalton Moss Tip, Irvine	WML/W/00185	NS333350
Reclaim (Helensburgh) Ltd	Finnart Landfill Site, Garelochhead	WML/W/00017	NS241944
Reigart Contracts Ltd	Drumcavel Quarry	WML/W/20133	NS705693
Renfrewshire Council	Linwood Moss, Linwood	WML/W/20088(a)	NS443656
Robertson Contracting	Newton Toll, Elgin	WML/N/20112	NJ166632
Robinson & Davidson Ltd	Townhead Farm, Collin	WML/W/00211	NY028757
Russell Coal Limited	Gartshore 9/11 Soils Tip, Twechar	WML/W/00064	NS702763
S McAlister	West Thomaston Farm, Banknock	WML/E/00018	NS778798
Scottish Borders Council	Far Knowes Landfill Site, Easter Langlee, Galashiels	WML/E/20099	NT518367
Scottish Power	Foreshore, West Pans, Musselburgh	WML/E/00072	NT360735
Scottish Power	Longannet	WML/E/00250	NS960850
Scottish Power	Valleyfield (Torry Bay)	WML/E/00251	NT000850
Scottish Water	Craggans Hill, Glenturret	WML/E/00299	NN856243
Scottish Water	Killiecrankie Water Treatment Works, Perthshire	WML/E/00306	NN921626
Scottish Water	Carbarns STW, Netherton, Wishaw	WML/W/20120	NS771538

Appendix VII

Licence holder	Site	WML number	NGR
Scottish Water	Gorbals Works, Corslett Road, Glasgow	WML/W/20146	NS235582
Scottish Water	Elf Hill Quarry, Elgin	WML/N/20097	NJ211557
Scottish Water	Upperside Quarry, near Temple	WML/E/00085	NT291559
Scottish Water	Glassford Water Treatment Works	WML/W/00135	NS708478
Scottish Water	Broadside Reservoir, Denny	WML/E/000025	NS769831
Scottish Water	Lochcraigs Wood, Lintrathen	WML/E/00236	NO280543
Shanks Argyll & Bute Ltd	Dalinelongart Landfill Site, Sandbank, near Dunoon	WML/W/20039	NS138814
Shanks Argyll & Bute Ltd	Lingerton Landfill Site, Lochgilphead	WML/W/20040	NR867853
Shanks Argyll & Bute Ltd	Larkhall/Westland Road, Rothesay	WML/W/20041(a)	NS075648
Shanks Argyll & Bute Ltd	Moleigh Landfill Site, Ariogan, By Oban	WML/W/20043(a)	NM869268
Shanks Ltd	Greengairs, Airdrie	WML/W/00001	NS789698
Shanks Ltd	Tarbothill, Murcar, Aberdeen	WML/N/0020151	NJ957138
Shanks Waste Services Ltd	Hartloughill, Wattston, Airdrie	WML/W/00164	NS770699
Shetland Islands Council	Rova Head, Lerwick, Shetland	WML/N/50052	HU471452
Smith Skip Ltd	Knowes Farm, Beith	WML/W/00074	NS342553
Stewart Milne Homes Ltd	Lynturk Tough, Alford	WML/N/20067	NJ595124
Stirling Council	Lower Polmaise Landfill, By Fallin, Stirling	WML/E/0020076	NS834931
T Muir (Haulage) Ltd	Balbie Farm, Kirkcaldy	WML/E/00260	NT232892
Talisman Energy UK Ltd	Golta Tip, Flotta	WML/N/50071	ND365948
Tarbolton Landfill Ltd	Tarbolton Moss Landfill Site, Tarbolton	WML/W/20006	NS426283
Tarmac Northern Ltd	Coltness Factory, Newmains, Wishaw	WML/W/00170	NS825553
Tayside Contracts	Bolshan Quarry, Kinnell, Friockheim	WML/E/00211	NO621527
Tayside Contracts	Cultullich, Aberfeldy	WML/E/00300	NN873504
Tillicoultry Quarries Ltd	Tulliallan Quarry	WML/E/00252	NS939898
Toffolo Jackson	Burnfield Road, Glasgow	WML/W/00102	NS557598
Uist Builders (Construction) Ltd	Grimshader Quarry, Grimshader, Isle of Lewis	WML/N/50083	NB394275
UKAEA	Dounreay near Thurso	WML/N/50085	NC992679
W Forrest & Son	Omoa Works, Newarthill, Motherwell	WML/W/00191	NS798598
W H Malcolm Ltd	Medrox Quarry, Glenboig	WML/W/00159	NS726699
W H Malcolm Ltd	Inchbelly Landfill, Kilsyth Road, Kirkintilloch	WML/W/00050	NS668756
W H Malcolm Ltd	Reilly Quarry, Bishopton, Renfrewshire	WML/W/00077	NS418695
W J & R Morgan	Anniston, Inverkeilor, Arbroath	WML/E/00221	NO663478
Waste Recycling Group (Scotland) Ltd	Easter Deans Landfill Site, near Leadburn	WML/E/00134	NT239532
Waste Recycling Group Ltd	Drummond Moor, No. 2 Landfill	WML/E/20192	NT272597
Watermill Aggregates Ltd	Broomhead Farm Quarry	WML/N/20209	NJ982637
William Hamilton & Sons (Contractors) Ltd	Dovesdale Farm, Stonehouse	WML/W/00155	NS770460
William Tracey Limited	Middleton Quarry, Lugton, Beith	WML/W/20185	NS400528
Wm Thompson & Son (Dumbarton) Ltd	Riggangower Quarry, Milton	WML/W/00020	NS438752

Appendix VII

Mobile Plants

Licence holder	Site	WML number
Bio-logic Remediation Ltd	Not applicable as mobile plant	WML/W/0020131
Bio-logic Remediation Ltd	Not applicable as mobile plant	WML/W/0020143
Bio-logic Remediation Ltd	Not applicable as mobile plant	WML/W/0020154
Bio-logic Remediation Ltd	Not applicable as mobile plant	WML/W/0020113
Bio-logic Remediation Ltd	Not applicable as mobile plant	WML/W/0020125
Central Demolition Ltd	Not applicable as mobile plant	WML/E/0220149
CSC Land Restoration Limited	Not applicable as mobile plant	WML/E/0220166
Digit Site Services Ltd	Not applicable as mobile plant	WML/W/0022020
Environmental Reclamation Services Ltd	Not applicable as mobile plant	WML/W/0020134
Environmental Reclamation Services Ltd	Not applicable as mobile plant	WML/W/0020152
Hadyn James Ltd	Not applicable as mobile plant	WML/W/0220173
I & H Brown Limited	Not applicable as mobile plant	WML/E/0220171
Land & Water Services Ltd	Not applicable as mobile plant	WML/E/0020201
Morrison Construction Services Ltd	Not applicable as mobile plant	WML/E/0220107
Shanks Waste Management Ltd	Not applicable as mobile plant	WML/W/0220245

Treatment Plants

Licence holder	Site	WML number	NGR
60 North Recycling Ltd	Layfields/Rova Head, Lerwick	WML/N/0050076	HU470449
A B Jackson	Barrmill, Beith	WML/W/0220196	NS368513
A Christie & Sons	11-13 Glendale Street, Glasgow	WML/W/0020189	NS616649
Aberdeenshire Council	Civic Amenity Site, Souterford Road, Inverurie	WML/N/0020027	NJ778219
Aberdeenshire Council	Kirkton Road Depot, Stonehaven	WML/N/0220003	N0861860
All Urban Waste Disposal	3 Albert Road, Edinburgh	WML/E/0020203	NT279763
Alstec Limited	AMRR Test Facility, Janestown Industrial Estate, Thurso	WML/N/0220142	ND095662
Armstrong Waste Management Ltd	Newton Road Industrial Estate, Dumfries	WML/W/0000199	NX955783
ASAP Contracts Ltd	Rear of Cairnhill Cottage, Sykeside Road, Airdrie	WML/W/0020140	NS754637
Barr Environmental Ltd	Heathfield Waste Recovery and Transfer Facility	WML/W/0220254	NS358234
Caledonian Industrial Ltd	Caleco Waste Transfer Station	WML/E/0020179	NT284666
Caledonian Industrial Services	Blaitummock Road, Queenslie Industrial Estate, Glasgow	WML/W/0020102	NS653659
Champion Technologies Inc	Minto Avenue, Altens, Aberdeen	WML/N/0020008	NJ955030
Clackmannanshire Council	Black Devon Landfill Site, Bowhouse Road, Alloa	WML/E/0020023	NS895913
Clearwater DC Ltd	9 Polmadie Avenue, Glasgow	WML/W/0020105	NS599626
CMI Demolition	60a Clydeholm Road, Glasgow	WML/W/0000043	NS535667
CRM Recycling	Yard 2 Mayfield	WML/E/0120038	NT343639
D & W Stewart (Ladybank) Ltd	Lower Melville Wood, Ladybank	WML/E/0000283	N0297116
East Coast Skips	Macmerry Industrial Estate, Macmerry, East Lothian	WML/E/0020075	NT443726

Appendix VII

Licence holder	Site	WML number	NGR
East Dunbartonshire Council	Broomhill Dewatering Facility, Kirkintilloch	WML/W/0020148	NS662748
East Lothian Council	Barbachlaw Refuse Baling & Transfer Station, Wallyford	WML/E/0020083	NT361719
East Lothian Council	Macmerry Industrial Estate, Macmerry, East Lothian	WML/E/0120039	NT445284
East of Scotland Water Authority	Dalderse WWTW, Davids Loan, Falkirk	WML/E/0020163	NS902820
East of Scotland Water Authority	Carron Valley Treatment Works, Denny	WML/E/0020212	NS766836
Enviroco Limited	Dam Head Industrial Estate, Peterhead	WML/N/0020125	NK011044
Enviroco Limited	Hillview Industrial Estate, Aberdeen	WML/N/0020187	NJ950037
Enviroscot Limited	Langmuir Way, Bargeddie	WML/W/0020118	NS705641
Enviroscot Limited	600 Gilmerton Road, Edinburgh	WML/E/0020187	NT298681
Euro Environmental Contracts Ltd	2 Whitestone Place, Whitehill Industrial Estate, Bathgate	WML/E/0020195	NS982663
Granish Waste Recycling Centre	Granish Farm, Aviemore	WML/N/0220031	
Hamilton Waste & Recycling Ltd	Wallyford Industrial Estate, Musselburgh	WML/E/0000075	NT369718
J A Kerins, Kwik Skips	Yard No. 5, The Clippens Yard, Station Road, Loanhead	WML/E/0020169	NT269662
J Burnett	Dalkeith Demolition, Mayfield Industrial Estate, Dalkeith	WML/E/0000094	NT343643
J Haig Hamilton and Sons	West Fortune Farm, Drem, North Berwick	WML/E/0120001	NT532810
James Easdale	40 Upper Cartsburn Street, Greenock	WML/W/0020098	NS284752
Leigh Environmental Ltd	Abbots Road, Bankside Industrial Estate, Falkirk	WML/E/0000019	NS897815
M McKenzie	Old Pentland, Loanhead, Edinburgh	WML/E/0000091	NT265662
M S Industrial Services Limited	Shore Road, Invergordon	WML/N/0220016	NH709684
McIntosh Plant Hire (Aberdeen) Ltd	Birchmoss Plant & Storage Depot, Echt, Westhill	WML/N/0020173	NJ747502
Ministry of Defence (N)	Ministry of Defence, Clyde Submarine Base, Faslane	WML/W/0000023	NS242901
Network Rail Infrastructure	Millerhill Marshalling Yard	WML/E/0120023	NT323712
North Ayrshire Council	46 Metcalf Place, Shewalton, Irvine	WML/W/0020056	NS333365
North of Scotland Water Authority	Halkirk Wastewater Treatment Plant, Halkirk	WML/N/0050243	ND141597
Orkney Islands Councils	Workwell Quarry, Orphir, Orkney	WML/N/0050010	HY307054
Perth & Kinross Council	Ladywell Leachate Irrigation System, Dunkeld	WML/E/0020050	NO022417
Scottish Borders Council	Galashiels WTS, Easter Landglee Road, Galashiels	WML/E/0220215	NT520362
Scottish Water	Broadford WWTP, Broadford, Skye	WML/N/0220015	NG638241
Scottish Water	Kilmory Sludge Treatment Centre, Kilmory	WML/N/0220287	
Scottish Water	Corntown, Conon Bridge	WML/N/0220012	NJ550562
Scottish Water	Bogton Road, Forres	WML/N/0220014	NJ039596
Shanks	Greenbank Road, East Tullos, Aberdeen	WML/N/0020158	NJ950038
Shanks	Greenbank Crescent, East Tullos, Aberdeen	WML/N/0020170	NJ952037
Shanks & McEwan (Cont) Ltd	Cultins Road, Sighthill Industrial Estate	WML/E/0000110	NT185712
Shanks Waste Management Limited	Blochairn Road, Glasgow	WML/W/0020181	NS261666
Shaun Skinner	Veitch's Yard, Edgefield Road, Loanhead, Midlothian	WML/E/0020191	NT284668
Shredding Solutions Limited	Kinminty Farm, Turriff	WML/N/0220032	NJ749531

Appendix VII

Licence holder	Site	WML number	NGR
SITA, Block 7	Sclettie Civic Amenity Site, Bucksburn, Aberdeen	WML/N/0020010 & WML/N/0020207	NJ893100
SITA, Block 7	Civic Amenity Site, Pitmedden Road, Dyce	WML/N/0020012	NJ884131
SITA, Block 7	Refuse Treatment Plant, East Tullos, Aberdeen	WML/N/0020014	NJ953039
Stephen G Dalton & Son	52-66 Salamander Street, Leith	WML/E/0220164	NT277762
Stirling Council	Lower Polmaise, Fallin, Stirling	WML/E/0220124	NS834931
Stirling Water Seafield Limited	Sewage Treatment Works, 4 Marine Esplanade	WML/E/0000114	NT288760
Summerside Skips Ltd	Freightliner Yard, Sir Harry Lauder Road, Portobello	WML/E/0020206	NT305735
Sureclean	10 River Drive, Teaninich Industrial Estate, Alness	WML/N/0050054	NH652692
Swire Oilfield Services	Souterhead Road, Altens, Aberdeen	WML/N/0020165	NJ950020
T B Williamson & Son Ltd	Unit 39, Newbattle Industrial Estate, Mayfield, Dalkeith	WML/E/0020150	NT344644
Taylor Industrial Services Limited	Hareness Circle, Altens Industrial Estate, Aberdeen	WML/N/0220002	NJ954025
Taylor's Industrial Services	Hareness Circle, Altens, Aberdeen	WML/N/0020001	NJ945027
Tayside Contracts	Forfar Depot, Kirriemuir Road, Forfar	WML/E/0020207	N0447516
Tayside Contracts	Loanleven Treatment Facility	WML/E/0020200	N0047253
The Highland Council	Units 5A & 7, Alness Industrial Estate, Alness	WML/N/0050075	NH651694
The Highland Council	Tain Recycling Centre, Blarliath Industrial Estate, Tain	WML/N/0050382	NH776827
The Highland Council	Dingwall Recycling Centre, Dingwall Business Park	WML/N/0220203	NH536595
The Highland Council	Nairn Recycling Centre, Park Quarry, Nairn	WML/N/0220206	NH900528
The Highland Council	Wick Recycling Centre, Wick	WML/N/0220176	
The Highland Council	Thurso Recycling Centre, Janetstown	WML/N/0220221	
The Highland Council	Fort William Recycling Centre, Fort William	WML/N/0220204	NN117746
The Highland Council	Recycling Centre, Henderson Drive, Inverness	WML/N/0220187	NH664466
Total Waste Management Alliance Plc	Unit 12, Dales Industrial Estate, Peterhead	WML/N/0020202	NK110447
Town & Country Skips Ltd	Macmerry Industrial Estate, Macmerry	WML/E/0120012	NT444726
Town & Country Skips Ltd	5 Sheriffhall Mains, Dalkeith	WML/E/0220050	NT320686
UK Waste	Greenbank Road, Aberdeen	WML/N/0020018	NJ948038
UK Waste Management Ltd	Kilsyth Treatment Centre, Twechar	WML/W/0000009	NS701762
W H Malcolm	865 South Street, Glasgow	WML/W/0220162	NS532670
Walsh Brothers Industrial Services Ltd	15-17 Castle Street, Alloa	WML/E/0000333	NS884923
Waste Advisory Services (Scotland) Ltd	Kinning Parkway Industrial Estate, Glasgow	WML/W/0022007	NS567641
Waste Control Solutions Ltd	5 Portland Road, Irvine	WML/W/0220258	NS316377
Watson Skip Hire Ltd	Compound No. 5, Easthouses Industrial Estate, Dalkeith	WML/E/0020205	NT346656
William Tracey	Dunniflats Depot, Lugton	WML/W/0000187	NS418531
William Tracey	15 Carlibar Road, Barrhead	WML/W/0000011	NS500592
William Tracey	Burnbrae Road, Linwood	WML/W/0020110	NS432643
Tayside Contracts	Blair Atholl Roads Depot	WML/E/0000319	NN865654

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Post-closure

Licence holder	Site	WML number	NGR
Aberdeenshire Council	Govals Quarry, Lumsden	WML/N/0020091	NJ477232
Aberdeenshire Council	Burnside Quarry, Leylodge, Kintore	WML/N/0020065	NJ774127
Aberdeenshire Council	Pitdrichie Landfill, Drumlithie	WML/N/0020021	NO798819
Aberhill Metals Ltd	Old Leven Colliery Bing, Methil	WML/E/0000264	NO369005
Aggregate Industries UK Ltd	Fledmyre, Montrose Road, Forfar (Site 2)	WML/E/0000214	NO487516
Alcan	Kinlochleven Disposal Site	WML/N/0050061	NN180619
Alexander Sandison & Sons Ltd	Hagdale Quarry, Baltasound, Shetland	WML/N/0050001	HP638101
Ambion Homes Ltd	Peel Glen Road, Bearsden	WML/W/0000012	NS519727
Andrew Cook (Containers) Ltd	Devon Quarry, Kennoway	WML/E/0000285	NO337048
Angle Park Sand & Gravel Co Ltd	Ramornie Sand Pit, Ladybank	WML/E/0000289	NO312101
Angus Council	Arrats Mill Landfill Site, Montrose Road, Brechin	WML/E/0020025	NO646587
Angus Council	Lochhead Landfill Site	WML/E/0020024	NO480510
Argyll and Bute Council	Achadaphail Quarry, Bunessan, Isle of Mull	WML/W/0020044	NM400224
Arjo Wiggins Fine Papers Ltd	Little Clinterty Quarry, Bucksburn, Aberdeen	WML/N/0020070	NJ836123
Armstrong Waste Management Ltd	Auchenlosh Quarry, Dalbeattie (Phase I)	WML/W/0000271	NX851612
Balfour Beatty Construction Ltd	Creaggan Bridge, Balcardine, Argyll	WML/W/0020123	NM977441
Barr Ltd	Hollybush Farm, Mauchline, Ayr	WML/W/0000240	NS489297
Binn Landfill (Glenfarg) Ltd	Binn Farm, Glenfarg	WML/E/0000298	NO178142
Blue Circle Industries plc	North Quarry, Dunbar	WML/E/0000073	NT700775
Braidbar Nurseries	Star & Garter Farm, Newton Mearns	WML/W/0000100	NS526533
British Petroleum	Caldback Ness, Sullom Voe	WML/N/0050100	HU403765
British Petroleum	Sullom Voe/Esso Bernicia, Sullom Voe	WML/N/0050094	HU401768
British Steel plc	Secure Containment Facility	WML/W/0000024	NS768578
Bruce Plant Ltd	Charlestown, Cove, Aberdeen	WML/N/0020150	NJ944010
Castelli & Girola UK Ltd	Boyd's Farm, Eaglesfield	WML/W/0000200	NY231735
Castelli & Girola UK Ltd	Bonshawside 1 + 2, Lockerbie	WML/W/0000201	NY225723
Castelli & Girola UK Ltd	Woodhouse Mains, Kirtlebridge	WML/W/0000202	NY268711
City of Glasgow Council	Cathkin Quarry, Cathkin Road, Glasgow	WML/W/0000101	NS622583
Comhairle nan Eilean Siar	Raoinavat, South Shawbost, Isle of Lewis	WML/N/0050032	NB243459
CORUS	Clydebridge Works, Ballochmill Road, Glasgow	WML/W/0000107	NS632625
Culdaff Construction Ltd	Calderside Farm, by Auchentibber, Hamilton	WML/W/0000133	NS665549
D Cochrane	Catmoss Quarry, Greenlaw	WML/E/0000136	NT713451
D Geddes (Contractors) Ltd	Lochaber, Arbroath	WML/E/0000223	NO604433
D J Laing (Contractors) Ltd	Lauriston Quarry, Quarryfield Farm, St Cyrus	WML/N/0020145	NO759667
D J Laing (Contracts) Ltd	Petterden Land Reclamation, Dundee	WML/E/0000228	NO424398
Dan Ramsay & Son Ltd	Meadowbank Farm, Torrance	WML/W/0000061	NS628739
Daniel Campbell & Sons (Contractors)	Millwell Farm, Drumboay Road, Auldhouse, East Kilbride	WML/W/0000108	NS653497

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Licence holder	Site	WML number	NGR
Deryck Forbes	Crossley Quarry, Maryculter	WML/N/0020144	NO865964
Dr & Mrs H Riffkin	Teuchats Farm, By Leven, Fife	WML/E/0000293	NO403075
Dumfries & Galloway Council	Tongland Layby, Kirkcudbright	WML/W/0000255	NX702546
Dundee City Council	Longhaugh Landfill, Pitkerro Road, Dundee	WML/E/0020081	NO433329
Dykebar Waste Ltd	Harelaw Farm	WML/W/0000079	NS499607
E Bowman	Duisky-2, Kinlochiel	WML/N/0050072	NN009767
East Coast Skips	Hope Quarry, Near Pathhead	WML/E/0000092	NT403630
East Dumbartonshire Council	Broomhill Industrial Estate, Kirkintilloch	WML/W/0000063	NS664748
East Lothian Council	Carberry Landfill Site, Near Whitecraig, East Lothian	WML/E/0020086	NT364701
Easter Hatton Environmental (Waste Away) Ltd	Easter Hatton Farm, Balmedie	WML/N/0020007	NJ965157
Farrans Construction	Auchenfoyle Farm, Kilmacolm	44-012	NS311671
Fife Council	Lochty Park, Glenrothes	WML/E/0000265	NT289984
G & A Munn & Son Landfill Ltd	Site 6, Mid Auchencarroch Farm, Jamestown	WML/W/0000022	NS419813
G & B Building & Civil Engineering Contractors Ltd	Greenhead Farm, Rescobie, Forfar	WML/E/0000220	NO515514
G & D Cunningham Ltd	Haugh Road, Mauchline, Ayrshire	WML/W/0000242	NS502263
George Beattie & Sons (Contractors) Ltd	Colzium Quarry, Kilsyth	WML/W/0000054	NS725788
George Munn & Others	Site 3, Mid Auchencarroch Farm, Jamestown	WML/W/0000019	NS414824
Glasgow City Council	Wilderness Quarry, Bishopbriggs	WML/W/0000049	NS598725
Grant Construction Services (Fife) Ltd	Dodhead Links, Kirkcaldy Road, Burntisland	WML/E/0020015	NT247869
Henry Gilles Haulage Contractor	Drumshoreland Bing, Pumpherston	WML/E/0000049	NT074700
Highland Council	Gairloch Site C, Poolewe Road, Gairloch	WML/N/0050037(a)	NG819778
Highland Council	Croftaugh, Brora, Sutherland	WML/N/0050048	NC896042
Highland Council	Ullapool Waste Transfer Station, Strathain, Ullapool	WML/N/0050050(b)	NH122964
Highland Council	Rhiconich Landfill Site, Rhiconich, Sutherland	WML/N/0050057	NC262526
Highland Council	Tongue Landfill Site, Tongue, Sutherland	WML/N/0050058	NC612547
Highland Council	Bettyhill Landfill Site, Bettyhill, Sutherland	WML/N/0050059	NC737603
Highland Council	Melvich Landfill Site, Melvich, Sutherland	WML/N/0050060	NC866645
Highland Council	Raasay Waste Disposal Site, Creachan, Raasay	WML/N/0050024	NG554379
International Paper (UK) Ltd	Inverurie Paper Mills, Broomend, Inverurie	WML/N/0020063	NJ770190
J & A Crozier	Lochdrum Farm, Bonnybridge	WML/E/0000022	NS818782
J & J Currie	Down's Moss, Catherinefield Road, Dumfries	WML/W/0000207	NY013778
J H Connon Ltd	Cairnhall, Kintore	WML/N/0020064	NJ787178
J Haig-Hamilton	West Fortune Farm, Drem	WML/E/0000077	NT534801
J J Spence	East Hatton Farm, Balmedie	WML/N/0020153	NJ965157
J Wilson & Son (Coulton) Ltd	Old Toll Garage, Littlemill Road, Drongan, Ayrshire	WML/W/0000241	NS446187
James Barr	Catherinefield Road, Heathhall, Dumfries	WML/W/0000209	NY006786
James Rae	Auchenstarry Farm, Kilsyth	WML/W/0000068	NS712765
John Gibbons (Contractors) Ltd	Site No. 2, Middle Essie, St Fergus, Peterhead	WML/N/0020122	NK076546
John H Connon Ltd	Woodlands Quarry, Tulloford, Oldmeldrum	WML/N/0020000	NJ797327

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Licence holder	Site	WML number	NGR
Joss (Aberdeen) Ltd	Newtonhill, Whitecairns	WML/N/0020005	NJ928153
Kirkmyres Sand & Gravel	Pitnacalder Quarry, New Aberdour	WML/N/0020117	NJ873628
Kirkmyres Sand & Gravel	Balquhindachy Farm, Turriff	WML/N/0020089	NJ761486
KMS (Fife) Ltd	Tolliehill Landfill	WML/E/0000245	NT165930
Laing House	Gallowflats, Errol	WML/E/0000303	NO209213
Leiths Surfacing Ltd	Home Farm, Kingswells, Aberdeen	WML/N/0020045	NJ863063
Les Taylor Contractors Ltd	Savoch Quarry, Longside, Peterhead	WML/N/0020124	NK066425
Les Taylor Contractors Ltd	South Auchincleach, Westhill, Skene	WML/N/0020066	NJ803119
Les Taylor Contractors Ltd	Wogle Farm, Kinellar	WML/N/0020069	NJ825084
Les Taylor Contractors Ltd	Auchentibber, Newhousemill Road, East Kilbride	WML/W/0000132	NS667527
Levenseat Ltd	Muldron Quarry, near Fauldhouse	WML/E/0000047	NS915575
Lewis Land Services Ltd	Druim Shader, Isle of Lewis	WML/N/0050077	NB528343
Lothian Recycling 1996 Ltd	Pentland Mains Landfill, Damhead, Midlothian	WML/E/0020145	NT254654
Luddon Construction Ltd	Birdston Tip, Kirkintilloch	WML/W/0000048	NS649748
McIntosh Plant Hire (Aberdeen) Ltd	Cairdhillock Landfill Site, Kingswells, Aberdeen	WML/N//0020003	NJ847068
McIntosh Plant Hire (Aberdeen) Ltd	Kingsford, Kingswells, Aberdeen	WML/N/0020046	NJ845064
McIntosh Plant Hire (Aberdeen) Ltd	Backhill, Kingswells, Aberdeen	WML/N/0020047	NJ843064
McIntosh Plant Hire (Aberdeen) Ltd	Cairdhillock East, Kingswells, Aberdeen	WML/N/0020201	NJ840064
McTaggart Construction Ltd	Giffenmill Railway Cutting, Barrmill, by Beith	WML/W/0020093	NS372514
Messrs George Raeburn	Earnockmuir Farm, Hamilton	WML/W/0000139	NS687525
Midlothian Council	Drummond Moor Landfill Site, Roslin, Penicuik	WML/E/0020047	NT273597
Moray Council	Newtyle Landfill, Rafford, Forres	WML/N/0050038	NJ054552
Morris Young (Perth) Ltd	Loanleven Farm, Perth	WML/E/0020139	NO055258
Mr B Paterson	Barclosh Moss, Dalbeattie	WML/W/0000250	NX851612
Mr David Morton	Hayston Farm, Kirkintilloch	WML/W/0000067	NS642740
Mr G Kerr	Pumpherstons Works	WML/E/0000057	NT074695
Mr G Watters, Law Mining Ltd	Rigmuir Farm, Chapelton	WML/W/0000143	NS673524
Mr Ian Ross	Cousland, By Dalkeith	WML/E/0000090	NT375688
Mr J Adams, ARC Northern	A R C, Annanbank Farm, Johnstone Bridge	WML/W/0000198	NY105935
Mr J Muir	Inverqueich Farm, Alyth	WML/E/0000235	NO274499
Mr Neil Knox	Scoughall Farm, North Berwick	WML/E0000076	NT618833
Mr Peter Beattie, George Beattie & Sons Ltd	Gartshore No. 1 Colliery, Twechar	WML/W/0000060	NS270673
Mrs Sarah Coyle	Waterbank Farm, Carmunnock	WML/W/0000103	NS598562
North Lanarkshire Council	Hope Park, Croy	WML/W/0000066	NS729760
North Lanarkshire Council	Dalmacoulter Quarry, Stirling Road, Airdrie	WML/W/0020069	NS765679
North of Scotland Water Authority	Lumsden, Rhynie	WML/N/0020061	NJ468224
North of Scotland Water Authority	Ruthven, Huntly, Aberdeenshire	WML/N/0020093	NJ517467
Norwest Holst Construction Ltd	Badenheath Park Farm, 80 Cumbernauld Road, Annathill	WML/W/0000174	NS720719
Orkney Islands Councils	Orkney Islands Councils	WML/N/0050005	ND347926
Parker Brothers Ltd	Hayston Garage, 38 Glasgow Road, Kirkintilloch	WML/W/0000051	NS645739

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Licence holder	Site	WML number	NGR
Pat Munro (Alness) Ltd	Caplich Quarry, Alness	WML/N/0050108	NH668704
Paterson of Greenoakhill Ltd	Greenhead Moss, Waterloo	WML/W/0000172	NS813547
Pennant Plant Ltd	Prestonholm, Dalhousie	WML/E/0000086	NT324627
Peter Moretti	Cardowan Cottage, Stepps	WML/W/0000281	NS669685
Pure Malt Products Ltd	Victoria Bridge, Haddington	WML/E/0000074	NT518744
R Garrick	The Old Lime Quarry, Girlsta	WML/N/0050099	HU430504
R M Supplies (Inverkeithing) Ltd	Ferrytoll Quarry Landfill, near Inverkeithing	WML/E/0000249	NT127815
Robert Russell	Wester Seamores Farm, Dennyloanhead	WML/E/0000014	NS805794
S Oosterhof	Lower Tyacksnook, Lonmay, Fraserburgh	WML/N/0020123	NK032597
Scottish Borders Council	SBC Roads DLO, Caddonlee Farm, Clovenfords	WML/E/0000011	NT466353
Scottish Borders Council	SBC Roads DLO, Caddonlee Farm, Clovenfords	WML/E/0000139	NT447357
Scottish Borders Council	Corsbie Dean	WML/E/0000141	NT623455
Scottish Borders Council	Dunion Hill Landfill Site, Jedburgh	WML/E/0020100	NT625189
Scottish Borders Council	Cleugh Landfill Site, Preston	WML/E/0020101	NT792592
Shanks	Wester Hatton Farm, Balmedie	WML/N/0020149	NJ948153
Smith Anderson	Cabbagehall Tip, Leslie	WML/E/0000263	NO245013
South Lanarkshire Council	Curlingmyre, Kelvin South, East Kilbride	WML/W/0000105	NS637158
South Lanarkshire Council	Newlandsmuir Road, Gardenhall, East Kilbride	WML/W/0000106	NS611530
South Lanarkshire Council	Markethill Road, Law Place, Nerston, East Kilbride	WML/W/0000109	NS632557
South Lanarkshire Council	Blue Waters Quarry, Limekilnburn Road, Quarter	WML/W/0000131	NS717514
South Lanarkshire Council	Earnock Quarry, Parkneuk Road, Blantyre	WML/W/0000142	NS677539
South Lanarkshire Council	Cadzow Dam Landfill, Off Muttonhole Road, Hamilton	WML/W/0000249	
Stair Estates	The Pot, Castle Kennedy, Stranraer	WML/W/0000259	NX100600
Tarmac Northern Ltd	Haverall Wood Quarry, Lasswade, Midlothian	WML/E/0000098	NT293659
Tarmac Northern Ltd	Melville Sandpit Landfill, Lasswad	WML/E/0000084	NT298667
The Buccleuch Estates Ltd	Harelaw Hill, Langholm	WML/W/0000279	NY427786
Torith Ltd	Baldragon Farm, Bridgefoot, Dundee	WML/E/0000229	NO378352
Tulloch Capital Quarries	Harelaw, Port Glasgow	WML/W/0000076	NS309727
UK Waste Management	Wellbank Quarry, Dundee	WML/E/0020114	NO473378
Vesuvius Premier	Haining Wood, Manual Works, Whitecross	WML/E/0000023	NS955774
W H Malcolm Ltd	Overgree Farm, Burnhouse	WML/W/0000223	NS385510
W H Malcolm Ltd	Shewalton Road Sand Quarry, Irvine	WML/W/0000186	NS330371
W H Malcolm Ltd	Giffen Quarry, Greenhills, By Beith	WML/W/0000221	NS379507
W H Malcolm Ltd	Mavis Valley, Balmuildy Road, Bishopbriggs	WML/W/0000052	NS593714
W H Malcolm Ltd	Avenuehead Farm	WML/W/0000277	NS702698
W H Malcolm Ltd	Southbar Landfill, Bishopton, Renfrewshire	WML/W/0000078	NS447693
W M Tracey Ltd	Griffenmill Quarry, Greenhills, Barmill, by Beith	WML/W/0020002	NS373510
W Waugh Et Son (Builders) Ltd	W Waugh, Auldgrith	WML/W/0000215	NX915842
Waste Recycling Group Ltd	Kaimes Quarry, Kirknewton	WML/E/0000109	NT130665
West of Scotland Water	Dechmont Old Service Reservoir	WML/W/0000104	NS664576

Appendix VII

Licence holder	Site	WML number	NGR
West of Scotland Water	Dryfield Sewage Treatment Works, Kirkintilloch	WML/W/0020114	NS673263
West of Scotland Water	Jellyhill Sewage Treatment Works, Bishopbriggs	WML/W/0020115	NS671260
West of Scotland Water	Sludge Lagoons, Locharmoss, Dumfries	WML/W/0000216	NY010783
West of Scotland Water	Loch Whinyeon, Gatehouse of Fleet	WML/W/0000262	NX630612
West of Scotland Water	Laurieston Forest	WML/W/0000283	NX665635
William Tracey	Knowes Farm, Beith, Phase 3	WML/W/0000075	NS345557
William Tracey Limited	Barkip Landfill	WML/W/0000005	NS335505
Wm Baxter & Son	Baxter's Food Factory, Fochabers	WML/N/0020096	NJ339601

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