



Waste Data Digest 6

WDD6

2004 and 2004/2005 data



Contents

Introduction	2
Waste Arisings	4
Total Waste Arisings for Scotland	5
Waste Statistics Regulation	5
Local Authority Waste Arisings	6
Composition of household waste	10
Commercial and Industrial Waste	11
National Best Practice Projects	12
Construction and Demolition Wastes	13
Waste Management Facilities	15
Packaging and Packaging Waste	16
Hazardous and Special Wastes	16
Trends and Conclusions	18
Local authority waste collection	18
Waste Recovery	20
Local Authority Waste Recovery	21
Local authority quarterly recycling/composting return	21
Local authority recycling	23
Local authority recycling initiatives	26
Local authority composting	28
Local authority composting initiatives	29
Home composting	30
Waste Treatment	30
Exempt Activities	32
Packaging and Packaging Waste	33
Hazardous and Special Waste	35
Imports and Exports of Wastes Covered by the Waste Shipments Regulation	37
Trends and Conclusions	39

Waste Disposal	40
Local Authority Waste Disposal	41
Local authority disposal to landfill	43
Local authority energy recovery	45
Incineration and Thermal Treatment Plants	45
Waste Management Licence Facility Disposals	46
Trends and Conclusions	49
Disposal of waste to landfill	50
Waste Related Operational Activities	52
Waste Management Authorisations	53
Registered brokers and carriers	53
Waste management licences by activity	53
Waste management licences related to special waste	54
Waste management licences related to recycling activity	54
Waste management licences related to disposal activity	54
Post-closure landfill sites	56
Landfill site gas and leachate operational controls	56
Waste Management Regulation	57
Inspections of licensed waste management facilities	57
Enforcement	57
Fly-tipping	57
Appendices	58
Appendix I – Glossary	59
Appendix II – Acronyms and Abbreviations	61
Appendix III – European Waste Catalogue List of Waste (EWC 2002)	62
Appendix IV – European Waste Catalogue – STAT (EWC-STAT)	63
Appendix V – Waste Strategy Area Map	64
Appendix VI – Accredited Reprocessors and Exporters of Packaging Waste 2004	65
Appendix VII – Licensed Sites in Scotland in 2004	67

Introduction



CHP01



Introduction

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

The sixth 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 2004 calendar year. However, in some instances, only financial year information is available and this is reported for 2004/2005. The data are presented in four chapters dealing with arisings, recovery, disposal and waste related operational activities.

The annual Local Authority Waste Arisings Survey (LAWAS) remains SEPA's main source of data on municipal waste. The LAWAS is a voluntary survey completed by all 32 Scottish local authorities at the request of SEPA. On 1 April 2006 local authorities started using WasteDataFlow to report data on waste arisings, recycling and disposal. WasteDataFlow is a web-based system for municipal waste data reporting by UK local authorities.

In April 2004 SEPA introduced a new quarterly survey, the Local Authority Quarterly Recycling/Composting Return. This new survey was designed, among other things, to allow Scotland's progress towards reaching the targets for the recycling and composting of municipal waste to be monitored. In April 2005 it was renamed the Landfill Allowance Scheme Quarterly Monitoring Return and now meets the requirements of the Landfill Allowances Scheme (Scotland) Regulations 2005. This survey was also replaced by WasteDataFlow from April 2006.

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

SEPA carried out a national survey of commercial and industrial waste producers in 2004. This survey sought data on waste arisings, recycling and recovery and disposal to provide, for the first time, a comprehensive picture of commercial and industrial waste in Scotland. The findings will be published on SEPA's website in November 2006.

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

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

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

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

The next data digest, Waste Data Digest 7, reporting on 2005 and 2005/2006 waste data, will be published in spring 2007.

Waste Arisings

Total Waste Arisings for Scotland
Waste Statistics Regulation

Local Authority Waste Arisings
Composition of household waste

Commercial and Industrial Waste

National Best Practice Projects

Construction and Demolition Wastes

Waste Management Facilities

Packaging and Packaging Waste

Hazardous and Special Wastes

Trends and Conclusions

Local authority waste collection



CHP02



Waste Arisings

Total Waste Arisings for Scotland

An estimated 19 million tonnes of controlled waste arose in Scotland in 2004. Controlled waste is waste regulated by SEPA and includes three major waste streams:

- household waste collected by, or on behalf of, local authorities;
- commercial and industrial wastes produced by businesses; and
- construction and demolition wastes.

Following the introduction of the Waste (Scotland) Regulations 2005, the controlled waste regime has been extended to include agricultural wastes and non-mineral wastes from mines and quarries (excluding mineral wastes from site workings). Data on these wastes will be reported in future editions of the Digest.

The types and quantities of controlled waste produced in 2004 are presented in Table 1.

Table 1 – Total controlled waste arisings for Scotland in 2004/2005

Waste type	Tonnes	%
Household	2,797,423	15
Commercial and industrial*	8,960,000	47
Construction and demolition*	7,300,000	38
Total	19,057,423	100

Source: SEPA Local Authority Waste Arisings Survey 2004/2005, SEPA Commercial and Industrial Waste Survey 2004 and SEPA Construction and Demolition Waste Study 2004

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

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 compiled data for the first reference year of 2004 on behalf of the UK for transmission to the Commission. SEPA worked with the Scottish Executive and Defra to ensure that the appropriate data was available for Scotland.

SEPA used a number of different sources of data to complete the reporting matrices for the Waste Statistics Regulation and has undertaken data collection initiatives to provide the required data. Results from the commercial and industrial waste producer survey, the study of construction and demolition wastes and Local Authority Waste Arisings Survey provided information on waste generation. Statutory returns from waste management facilities regulated by SEPA provided much of the data on the disposal and recovery of waste. Through the review of the Waste Data Strategy SEPA will investigate ways to improve both the quality of data and ease of reporting in the future.

SEPA intends to compile and publish data for Scotland in the Waste Statistics Regulation format every year.

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) 2004/2005. All 32 Scottish local authorities responded to SEPA's 2004/2005 LAWAS. For consistency with previous Digests, road maintenance waste reported in the LAWAS has not been included in this Digest's totals.

On 1 April 2006 local authorities started using WasteDataFlow to report data on their waste arisings, recycling and disposal. WasteDataFlow is a web-based system for municipal waste data reporting by UK local authorities.

WasteDataFlow is designed for local authorities:

- to allow faster and more accurate data collection of municipal waste statistics, more regularly and efficiently;
- to enhance their local data management for reporting and strategic planning purposes;
- to offer them streamlined access to performance benchmarking with other authorities.

WasteDataFlow will allow government and agencies:

- to monitor progress towards national and local targets;
- to enable the UK to meet reporting obligations;
- to guide policy.

Until recently the definition of municipal waste was unclear and previous Waste Data Digests referred only to 'waste collected by, or on behalf of, local authorities'. The recycling and composting rate for Scotland was calculated from year to year according to definitions agreed with Audit Scotland.

The coming into force of the Landfill Allowance Scheme in April 2005 clarified the definition of municipal waste. According to the Interim Guidance on the Landfill Allowance Scheme (Scotland) Regulations 2005 (published by the Scottish Executive in May 2005), municipal waste is 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; 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.

The Interim Guidance is currently being revised by the Scottish Executive and will be published in due course. This may result in changes to definitions which may affect future digests.

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. Where reference to municipal waste is required (i.e. calculation of recycling/composting rate and diversion of biodegradable municipal waste), the data on road maintenance waste, construction and demolition waste, and industrial waste have been subtracted.

Waste Arisings

In 2004/2005, a total of 3.51 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 1 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 2004/2005

Waste type	Tonnes	%
Waste collected for disposal		
Household*	2,275,611	64.90
Commercial	487,530	13.90
Industrial	72,146	2.06
Other non-household†	24,166	0.69
Total	2,859,453	81.55
Waste collected for recycling and composting		
Household	521,812	14.88
Commercial‡	98,083	2.80
Industrial‡	26,940	0.77
Total	646,834	18.45
Total arisings§	3,506,287	100.00

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

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

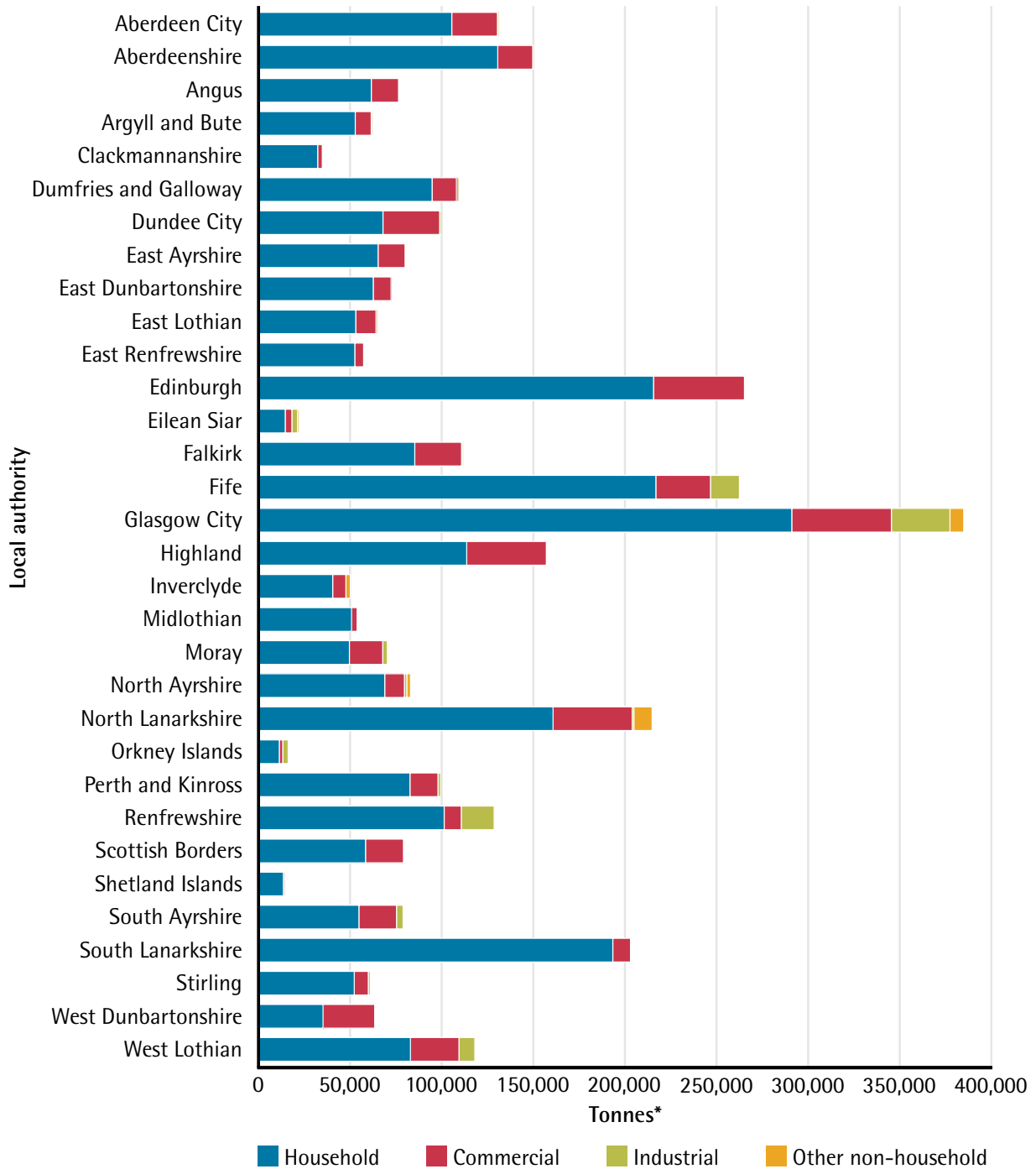
†Other non-household waste includes: local authority parks and gardens waste; beach cleaning waste; clearance of fly-tipped waste and waste not otherwise specified

‡Includes incinerator residues

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

Waste Arisings

Figure 1 – Controlled waste collected by, or on behalf of, individual Scottish local authorities 2004/2005



Source: SEPA Local Authority Waste Arisings Survey 2004/2005

*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 2004/2005

Local authority	Number of households*	Total local authority waste arisings (tonnes)	Waste collected for disposal (tonnes)				Waste collected for recycling and composting (tonnes)			Household waste produced per household (tonnes)*
			Household	Commercial	Industrial†	Other non-household	Household	Commercial	Industrial†	
Aberdeen	107,434	131,829	89,230	24,126	0	0	17,108	876	489	0.99
Aberdeenshire	102,250	150,817	111,100	13,651	0	0	20,406	5,507	153	1.29
Angus	50,544	77,266	37,642	8,263	0	0	24,617	6,648	96	1.23
Argyll and Bute	45,123	62,883	38,556	5,796	324	0	14,917	2,940	350	1.19
Clackmannanshire	22,586	35,493	19,909	1,830	0	0	12,995	687	72	1.46
Dumfries and Galloway	69,650	110,328	89,366	13,122	1,054	90	6,186	210	300	1.37
Dundee	72,210	100,614	60,172	28,622	0	0	8,478	2,406	936	0.95
East Ayrshire§	53,847	81,075	53,413	14,272	0	0	12,554	501	335	1.23
East Dunbartonshire	43,299	73,118	52,741	6,519	0	0	10,567	3,254	37	1.46
East Lothian	41,117	65,638	43,603	8,423	308	0	10,134	2,659	511	1.31
East Renfrewshire	37,815	58,549	40,635	4,814	0	477	12,589	0	34	1.41
Edinburgh	223,203	267,129	179,338	44,834	0	0	37,466	4,975	516	0.97
Eilean Siar	12,847	22,781	14,161	3,522	2,434	900	957	102	705	1.18
Falkirk	67,444	112,396	66,446	19,537	554	0	19,621	6,079	159	1.28
Fife	163,857	263,838	162,113	23,502	15,547	0	55,978	6,383	315	1.33
Glasgow	291,129	386,679	265,742	47,434	27,678	7,519	26,780	7,107	4,419	1.00
Highland	100,376	158,654	101,698	42,993	0	236	12,809	602	316	1.14
Inverclyde	39,819	50,797	38,220	6,644	0	2,412	2,910	561	50	1.03
Midlothian	33,563	54,955	48,894	3,031	0	258	2,562	0	210	1.53
Moray	41,005	71,026	41,322	8,482	0	0	8,947	9,742	2,533	1.23
North Ayrshire	64,766	83,737	47,726	10,211	1,231	2,041	21,897	555	76	1.07
North Lanarkshire†	140,598	216,053	140,385	30,177	0	10,000	21,410	13,145	936	1.15
Orkney Islands	9,522	16,750	8,499	1,186	0	24	3,367	695	2,979	1.25
Perth and Kinross	67,325	100,167	55,586	12,204	1,268	0	27,845	3,126	138	1.24
Renfrewshire	80,578	129,523	77,814	9,325	18,021	0	24,363	0	0	1.27
Scottish Borders	55,085	80,022	54,459	19,224	0	0	4,637	1,557	145	1.07
Shetland Islands**	10,155	14,951	13,131	631	0	0	964	111	114	1.39
South Ayrshire	52,800	79,875	44,523	15,303	2,235	209	10,943	5,295	1,367	1.05
South Lanarkshire	136,681	204,443	140,596	5,246	0	0	53,924	4,438	239	1.42
Stirling	38,014	61,701	38,132	4,978	1,091	0	14,806	2,694	0	1.39
West Dunbartonshire	43,676	64,255	31,708	27,861	0	0	4,132	414	140	0.82
West Lothian	70,368	118,944	68,751	21,766	400	0	14,943	4,814	8,270	1.19
Total	2,388,686	3,506,288	2,275,611	487,530	72,146	24,166	521,812	98,083	26,940	1.17

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

*Provided by Audit Scotland

†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

§East Ayrshire commercial waste collected includes 9,537 tonnes of third party commercial waste delivered to a council-owned transfer station. This is considered to be collected on behalf of the council

†North Lanarkshire sent some waste collected for disposal to a sorting facility

**The Shetland figure for household waste collected for disposal does not include 545 tonnes of materials removed and sent to a sorting facility

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 produced 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 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. Use of these primary categories for national reporting purposes will enable the comparison, benchmarking and aggregation of data at a Scottish or UK level.

The LAWAS 2004/2005 asked local authorities if they had carried out a compositional analysis of household waste during 2004/2005. It also asked about the methods used to carry out this analysis. Only three local authorities had carried out an analysis of household waste. The results from the analyses reported by the three local authorities are shown in Table 4.

Table 4 – Household waste composition 2004/2005

Material category	% of waste material found by weight		
	Rural*	Mixed*	Mixed*
1. Newspapers and magazines	13.07	10.70	0.00
2. Other recyclable paper	4.08	7.30	16.80
3. Card and card packaging	5.92	6.00	7.02
4. Non-recyclable paper	4.52	0.00	1.61
5. Plastic film	4.69	11.60	1.63
6. Dense plastic	7.32	3.10	9.21
7. Textiles	6.16	4.20	2.35
8. Glass	5.66	6.90	7.61
9. Organic kitchen (catering) waste	25.37	15.30	28.23
10. Organic garden waste	6.82	19.20	5.82
11. Other putrescibles	1.45	0.00	2.02
12. Ferrous metal	3.35	2.40	3.53
13. Non-ferrous metal	0.96	1.00	1.78
14. Electrical/electronic equipment	0.86	1.00	0.72
15. Potentially hazardous	0.24	0.20	0.87
16. Other combustibles	3.34	3.40	9.17
17. Other non-combustible	2.50	7.70	1.35
18. Fines	3.69	0.00	0.28
Total	100.00	100.00	100.00

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

*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 organisations to report non-municipal waste arisings to SEPA. To address this data gap, SEPA commissioned a national survey of commercial and industrial waste producers in 2004. The main objective of the survey was to establish both the amount of waste produced in Scotland and how it was managed, primarily to meet the reporting requirements of the Waste Statistics Regulation. To achieve this, approximately 12,500 organisations throughout Scotland were asked to complete and return a purpose-designed questionnaire. Questionnaires were sent to all organisations in Scotland employing 50 people or more and a selection of smaller organisations. All business sectors were represented in the survey, with the exception of the agricultural and construction sectors. The survey was completed in May 2005 and achieved a return rate of 16.9%. Statistical analysis of the sample data provided estimates of the types and quantities of waste produced by businesses in Scotland and how the waste was managed. These estimates are subject to large confidence intervals and the results are therefore only indicative.

Initial results from the survey show that an estimated 8.96 million tonnes of waste were produced by businesses in Scotland in 2004. Of this, 6.39 million tonnes (71%) of waste arose from commerce and 2.57 million tonnes (29%) 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 2004

Waste Strategy Area	Commercial (tonnes)*	Industrial (tonnes)*	Total (tonnes)*
Orkney and Shetland	70,000	40,000	110,000
Western Isles	30,000	30,000	60,000
Highland	330,000	130,000	460,000
North East	740,000	420,000	1,160,000
Tayside	480,000	220,000	700,000
Forth Valley	330,000	130,000	460,000
Fife	380,000	180,000	560,000
Lothians and Borders	1,240,000	370,000	1,610,000
Ayrshire, Dumfries and Galloway	580,000	280,000	860,000
Glasgow and Clyde Valley	2,080,000	720,000	2,800,000
Argyll and Bute	130,000	50,000	180,000
Total	6,390,000	2,570,000	8,960,000

Source: SEPA Commercial and Industrial Waste Survey 2004

*Rounded to the nearest 10,000 tonnes

The amounts of waste produced by the different business sectors in Scotland are shown in Table 6. 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: food and drink; and coke, oil, gas, electricity and water.

More detailed results from the survey will be available on the SEPA website in November 2006.

Waste Arisings

Table 6 – Commercial and industrial waste produced by business sector in 2004

Business sector	Tonnes*
Industrial	
Food and drink	490,000
Textiles and leather production	100,000
Wood and paper production	410,000
Chemicals and chemical products	430,000
Mineral products	110,000
Metals and metal products	110,000
Manufacture of machinery, vehicles and equipment	300,000
Coke, oil, gas, electricity and water	540,000
Recycling	20,000
Miscellaneous industrial	50,000
Commercial	
Retail and wholesale	1,640,000
Hotels and restaurants	1,220,000
Transport and communications	220,000
Finance	120,000
Education	670,000
Health and social work	460,000
Sewage and refuse disposal	580,000
Miscellaneous business and service activities and public administration	1,490,000
Total	8,960,000

Source: SEPA Commercial and Industrial Waste Survey 2004

*Rounded to nearest 10,000 tonnes

National Best Practice Projects

The information obtained from the commercial and industrial waste survey complements data on specific waste streams and sector-specific wastes gathered through SEPA's Priority Waste Stream Projects and 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 non-municipal 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.

Waste Arisings

Recently several phase 1 projects were finalised and the reports posted on the SEPA website including Waste Mineral Oils, Used Cooking Oils, Used Batteries and Wastes from Petroleum Refining, Natural Gas Purification and Pyrolytic Treatment of Coal.

A phase 1 project on food preparation and processing wastes began in January 2006 and will focus on raw meat and fish waste arisings. The phase 1 of the Clinical and Sanpro Waste project ended in summer 2006 and guidance is due to be published in late 2006.

Work to date has provided a better understanding of the waste data and a well-received opportunity to discuss issues with waste producers, the waste industry, reprocessors and other interested parties. However, a number of challenges meant that SEPA was unable to complete the current programme by the end of 2005/2006. These included waste data collection, the plethora of available guidance and the timeliness of projects where the management of waste awaits EU legislation.

During 2005, the Scottish Executive and SEPA developed a Consultation Paper on the Sustainable Management of Waste from Business and the Public Sector Organisations in Scotland. A question on the National Best Practice Programme asked about its approach, which sectors/waste streams might benefit and what the aims and outputs should be. SEPA expects to undertake a general review of its National Best Practice Projects programme once the Framework and Action Plan for Commercial and Industrial Waste have been finalised.

The status of the following Priority Waste Stream Projects and National Best Practice Projects is given at 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
- 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

Construction and Demolition Wastes

Construction and demolition (C&D) wastes constitute a large proportion of controlled waste arisings. Until recently no comprehensive dataset existed in Scotland for all wastes produced by the construction and demolition industry. A Priority Waste Stream Project on C&D waste arisings undertaken by SEPA collected data for the year 2000 but did not provide detailed information on waste types. Surveys carried out by other organisations have looked only at soils and aggregates produced by the construction and demolition waste industry.

Waste Arisings

The Waste Statistics Regulation requires data on waste generation to be reported by waste type within each industry sector. For the construction industry this means that all wastes classified under Chapter 17 of the European Waste Catalogue List of Wastes (see Appendix III) need to be reported. SEPA therefore carried out a study of Chapter 17 wastes handled by waste management facilities in 2004 to ascertain the types and quantities of C&D waste handled by sites with a waste management licence, a 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.

In addition, a survey of mobile plant operators was undertaken to establish the amount of C&D waste crushed or screened by mobile plant operating in Scotland. A 30% return rate was achieved by this survey. The results indicated that the companies that responded handled around 1 million tonnes of C&D waste.

Preliminary results from the SEPA study show that a total of 7.3 million tonnes of C&D waste was handled by licensed, permitted and exempt sites in 2004 (see Table 7). Some of this waste may be double-counted as, for example, waste may pass through a transfer station before going on for recovery or final disposal.

Table 7 – Construction and demolition waste handled by waste management facilities in 2004

Waste Strategy Area	Sites with PPC permit or waste management licence (tonnes)	Exempt activities (tonnes)*	Total (tonnes)
Orkney and Shetland	51,495	4,673	56,168
Western Isles	16,293	7,004	23,297
Highland	119,551	58,977	178,528
North East	266,123	166,596	432,719
Tayside	442,627	246,604	689,231
Forth Valley	319,075	139,769	458,844
Fife	247,927	84,328	332,255
Lothians and Borders	597,504	673,797	1,271,301
Ayrshire, Dumfries and Galloway	747,946	273,725	1,021,671
Glasgow and Clyde Valley	2,375,111	408,666	2,783,777
Argyll and Bute	7,049	50,305	57,354
Total	5,190,702	2,114,444	7,305,145

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 types and quantities of C&D waste handled at waste management facilities in 2004 are shown in Table 8. The vast majority is reported to be non-hazardous mineral wastes, which includes soils and mixed C&D waste. Soils constitute around two-thirds of the C&D waste handled in Scotland. Less than 7% of C&D waste was segregated fractions such as metals, glass, plastic and wood.

Waste Arisings

Table 8 – Types of construction and demolition waste handled at waste management facilities in 2004

Waste type	Total tonnes
Metals	351,246
Glass	4,928
Plastics	5,599
Wood	85,261
Dredging spoil	21,804
Mineral waste (non-hazardous)	6,634,093
Mineral waste (hazardous)	62,834
Contaminated soils	139,380
Total	7,305,145

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

More detailed data on C&D wastes will be available on the SEPA website in winter 2006.

Waste Management Facilities

All licensed/permited 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 9 shows the quantities of waste entering waste management licensed/permited sites in Scotland in 2004. 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 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 9 – Waste handled by site type in 2004

Site type	Tonnes
Civic amenity	586,917
Landfill	8,092,021
Recycler or reprocessor	2,729,574
Transfer station	3,702,717
Treatment plant	1,561,994

Source: SEPA Licensed/Permitted Waste Management Site Returns

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, which came into force on 1 January 2006 when they superseded the 1997 version and its amendments.

Approximately 10.2 million tonnes of packaging waste were produced in the UK in 2004, an increase of 1.7% compared with 2003. 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 2004.

Table 10 – Total tonnage of packaging flowing into the UK waste stream 2004

Material	Tonnes
Paper	3,725,652
Glass	2,400,000
Plastic	1,845,966
Steel	691,189
Wood	1,403,694
Aluminium	141,500
Other	22,000
Total	10,230,001

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 2004 approximately 534,000 tonnes of special waste were consigned within Scotland, an increase of about 8.7% compared with 2003. In addition, approximately 119,000 tonnes were consigned to England and Wales from Scotland in 2004, an increase of 56% over 2003. The exported total may include wastes already consigned within Scotland. The total waste exported may also be an underestimate as it is not possible to identify how much waste is collected as part of carriers' rounds. Some carriers' rounds originate in England or Wales and collect waste in Scotland; this waste will not be included in the total.

Table 11 shows a breakdown of the waste by destination type and Table 12 by EWC 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 2004

Destination type	Tonnes
Landfill	172,832
Transfer station	103,950
Treatment plant	205,660
Incinerator	27,892
Scrapyard	2,093
Transfer station/treatment plant*	20,706
Unallocated	491
Total	533,624

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 2004

EWC chapter	Description	Consigned within Scotland (tonnes)	Consigned to England or Wales*† (tonnes)
01	Mining and minerals	110,946	7,528
02	Agricultural and food production	492	138
03	Wood and paper production	1,489	69
04	Leather and textile production	307	37
05	Petrol, gas and coal refining/treatment	1,592	3,951
06	Inorganic chemical processes	4,866	6,230
07	Organic chemical processes	21,612	39,324
08	Paints, varnish, adhesive and inks	5,181	2,383
09	Photographic industry	1,929	560
10	Thermal process waste (inorganic)	1,614	911
11	Metal treatment and coating processes	6,003	2,143
12	Shaping/treatment of metals and plastics	4,662	30
13	Oil and oil/water mixtures	105,378	30,654
14	Solvents	3,019	2,917
15	Packaging, cloths, filter materials	8,459	1,079
16	Not otherwise specified	51,589	8,485
17	Construction and demolition waste and asbestos	159,205	2,709
18	Health care	988	483
19	Waste/water treatment and water industry	39,610	1,484
20	Municipal and similar commercial wastes	4,602	1,954
Uncoded	Unclassified	81	5,782
Total		533,624	118,849

Source: SEPA Special Waste Database

*The exported total may include wastes already consigned within Scotland

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

Waste Arisings

Trends and Conclusions

Local authority waste collection

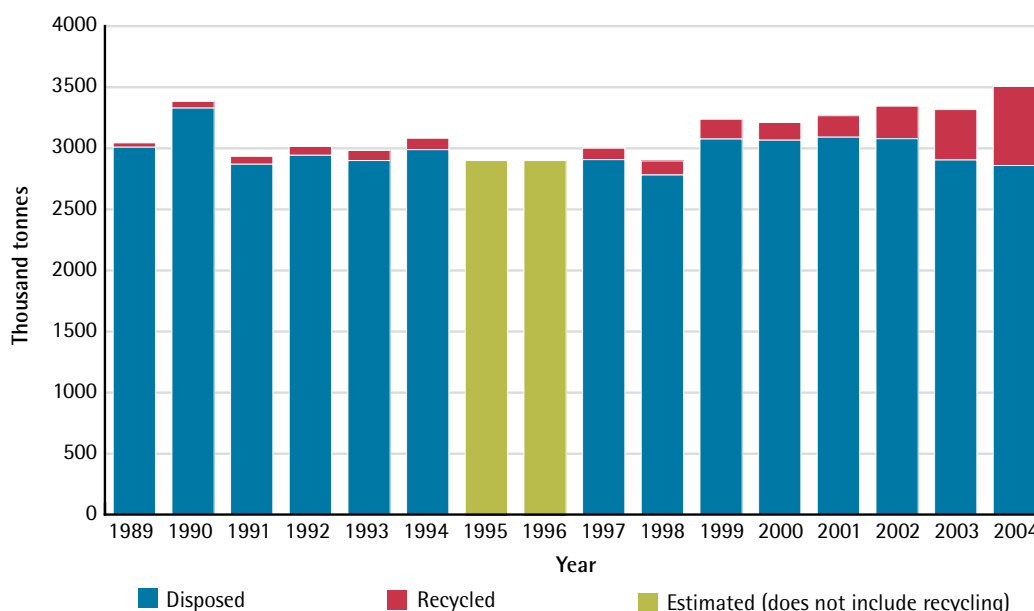
Total local authority waste arisings in 2004/2005 were 3.51 million tonnes. This total consists of all controlled waste collected by, or on behalf of, Scottish local authorities including end-of-life vehicles, and separately collected construction and demolition waste and industrial waste but excluding road maintenance waste. Between 2003/2004 and 2004/2005 the amount of waste collected increased by 5.7% (approximately 189,000 tonnes). This change was due mainly to an increase in household waste collected of approximately 134,000 tonnes (5%), apparently a result of more materials being recycled and composted.

Though the amount of household waste collected for disposal fell by about 24,000 tonnes, the quantity collected for recycling increased by 106,000 tonnes and the quantity collected for composting by 51,000 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 recycled materials collected without a corresponding decrease in disposed materials is harder to explain. There is no obvious single reason for this increase, though some of it may be a consequence of the continued annual growth in waste arisings.

Since 1994, when 3.08 million tonnes was collected in Scotland, there has been an increase of 13.8% in total waste arisings. This equates to an annual growth rate of about 1.3% between 1994 and 2004. At this annual growth rate local authority waste arisings could increase to approximately 4.31 million tonnes per year by 2020. But using the annual growth rate of 0.85% for the period 1994 to 2003, the total would be only 4.01 million tonnes. It is hoped that the data for 2005/2006 will clarify which of these assumptions is correct.

Figure 2 and Table 13 present available data for controlled waste collected by, or on behalf of, Scottish local authorities for recycling, composting and disposal.

Figure 2 – Controlled waste collected by, or on behalf of, Scottish local authorities 1989–2004



Source: 1989–1994 figures extracted from Table A1.2 of Scottish Office Bulletin 1994 (refers to 1989–1994 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 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 2004/2005 figures are from the respective Local Authority Waste Arisings Surveys

Waste Arisings

Table 13 – Controlled waste collected by, or on behalf of, Scottish local authorities 1989–2004
(thousand tonnes)

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

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

Waste type	1999	2000/01	2001/02	2002/03	2003/04	2004/05
Waste collected for disposal, of which:						
Household, commercial and industrial	2,763.9	2,682.2	2,739.6	2,697.0	2,560.5	2,561.6
Civic amenity	402.1	384.6	351.6	381.7	359.9	297.8
Total waste collected for disposal	3,166.0	3,066.7	3,091.2	3,078.9	2,920.4	2,859.5
Total waste collected for recycling and composting	162.0	144.7	175.8	266.6	396.7	646.8
Total local authority waste arisings	3,328.0	3,211.4	3,267.0	3,345.5	3,317.1	3,506.3

Source: 1989–1994 figures extracted from Table A1.2 of Scottish Office Bulletin 1994 (refers to 1989–1994 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 2004/2005 figures are from the respective Local Authority Waste Arisings Surveys

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

Waste Recovery

Local Authority Waste Recovery

- Local authority quarterly recycling/composting 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 2004. These are, however, classified as disposal activities and details of them are included in the Waste Disposal chapter of this Digest.

The combined recycling and composting rate for Scotland for 2004/2005 was 17.5% 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 2004/2005, there is good agreement between the rates published by the two organisations, 17.6% from Audit Scotland and 17.5% from SEPA.

The recycling and composting rate for 2004/2005 shows a substantial rise over the rate of 12.1% achieved in 2003/2004. 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 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; 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.

Table 14 shows the recycling and composting rates for Scottish local authorities for 2004/2005.

Local authority quarterly recycling/composting return

In April 2004 SEPA introduced a new quarterly survey, the Local Authority Quarterly Recycling/Composting Return, in order to collect data on the types and quantities of waste recycled and composted by Scottish local authorities. This new survey was designed, among other things, to allow Scotland's progress towards reaching the targets for the recycling and composting of municipal waste. The results from the survey are available on SEPA's website at www.sepa.org.uk/nws/data/returns.htm

In April 2005 this survey was renamed the Landfill Allowance Scheme Quarterly Monitoring Return and now meets the requirements of the Landfill Allowances Scheme (Scotland) Regulations 2005. It was replaced by WasteDataFlow in April 2006.

Waste Recovery

Table 14 – Recycling and composting rates for Scottish local authorities 2004/2005

Local authority	Total local authority waste arisings (tonnes)*	Waste recycled (%)	Waste composted (%)	Waste composted or recycled (%)
Aberdeen	131,339	10.2	3.5	13.7
Aberdeenshire	150,666	8.9	3.5	12.5
Angus	77,168	21.1	7.9	29.0
Argyll and Bute	62,240	13.3	4.8	18.1
Clackmannanshire	34,980	26.2	11.6	37.9
Dumfries and Galloway	108,974	5.7	0.0	5.7
Dundee	99,324	22.1	4.4	26.5
East Ayrshire	80,742	12.5	3.7	16.2
East Dunbartonshire	73,082	13.1	5.3	18.4
East Lothian	64,819	11.2	8.5	19.7
East Renfrewshire	58,516	19.5	8.9	28.4
Edinburgh	266,614	12.0	3.9	15.9
Eilean Siar	19,642	6.7	1.8	8.6
Falkirk	111,683	12.6	6.5	19.1
Fife	247,977	19.1	6.0	25.1
Glasgow	354,469	4.6	4.2	8.8
Highland	158,338	6.5	2.5	9.0
Inverclyde	50,748	5.5	1.3	6.8
Midlothian	54,745	4.7	0.0	4.7
Moray	68,493	22.9	4.4	27.3
North Ayrshire	82,423	12.5	11.3	23.9
North Lanarkshire	216,680	11.0	6.3	17.4
Orkney Islands	13,771	11.6	7.6	19.2
Perth and Kinross	99,030	17.6	8.7	26.3
Renfrewshire	111,501	11.5	3.5	15.0
Scottish Borders	79,876	7.8	0.0	7.8
Shetland Islands	14,293	9.6	0.0	9.6
South Ayrshire	76,274	12.0	9.0	21.0
South Lanarkshire	204,205	19.5	8.9	28.4
Stirling	60,610	15.3	13.5	28.9
West Dunbartonshire	64,114	6.9	0.2	7.1
West Lothian	109,265	8.4	9.5	17.9
Total	3,406,601	12.2	5.3	17.5

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

*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 441,943 tonnes of waste collected by, or on behalf of, Scottish local authorities was recycled during 2004/2005 (excluding road maintenance waste for consistency of reporting with previous years). When 26,940 tonnes of end-of-life vehicles, and separately collected construction and demolition waste and industrial waste are excluded, the total recycled becomes 415,149 tonnes. This is made up of 469,296 tonnes of waste collected for recycling minus 54,147 tonnes collected for recycling but sent for disposal because either there was no market for the recycle or contamination had made the waste unfit for recycling.

A total of approximately 110,000 tonnes of material was sent for recycling outside the local authority area within which it was collected and around 285,000 tonnes were recycled within the authority. The destination of approximately 20,000 tonnes was unknown.

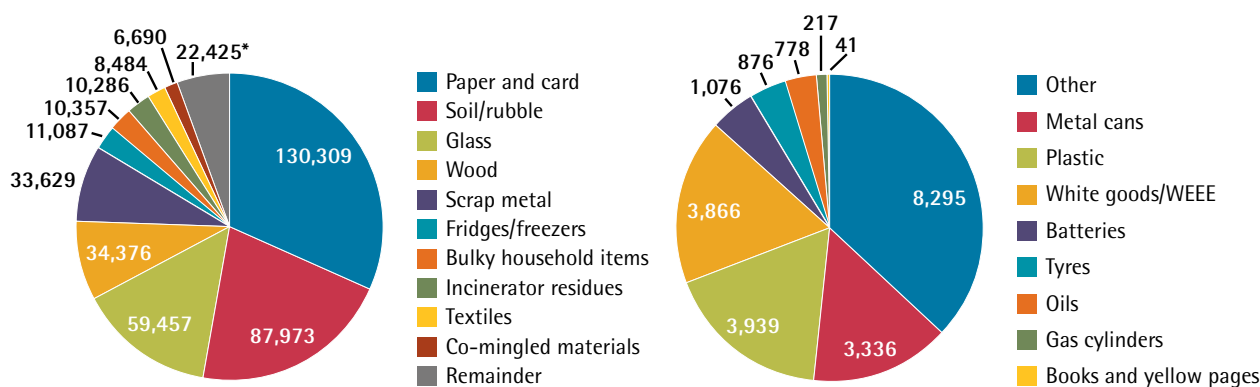
Recyclables were mainly collected through kerbside schemes and bring (drop-off) collection schemes consisting of 159 local authority recycling centres and 2,016 recycling points. A total of 167,000 tonnes was collected by kerbside collections and 198,000 tonnes at recycling centres and points.

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 3a and 3b show the breakdown of Scottish local authority recycling in 2004/2005 by material. For clarity, Figure 3a shows those materials where the weight recycled exceeded 5,000 tonnes and Figure 3b shows those where the weight was less than 5,000 tonnes. Table 15 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 16 shows the amount recycled by the local authorities by the source of the material and the type of collection.

Figure 3 – Scottish local authority recycling 2004/2005

Breakdown of materials (tonnes)



(a) total weight recycled >5,000 tonnes

(b) total weight recycled <5,000 tonnes

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

*A breakdown is shown in Figure 3b

WEEE = waste electrical and electronic equipment

Waste Recovery

Table 15 – Breakdown by material of waste recycled by, or on behalf of, Scottish local authorities
2004/2005

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	2324	0	0	4,364	0	0	0	0	25	19	907	292	50
Aberdeenshire	3,350	5,063	2,000	0	0	0	226	205	380	54	1,619	7	143
Angus	1,653	2,295	1,056	32	127	23	0	217	132	15	2,405	0	71
Argyll and Bute	1,853	3,392	407	0	37	17	137	115	148	31	1,536	64	19
Clackmannanshire	1,254	1,877	188	0	0	0	325	270	164	11	568	8	28
Dumfries and Galloway	1,422	2,522	66	340	0	0	6	9	138	14	195	737	48
Dundee	2,260	2,686	164	0	0	16	0	6	402	2	3,288	0	37
East Ayrshire	1,966	0	376	3,794	0	0	268	13	175	99	441	19	14
East Dunbartonshire	1,403	3,431	0	0	0	0	50	129	180	6	0	109	0
East Lothian	3,139	579	0	0	0	0	73	0	118	27	856	0	20
East Renfrewshire	1,072	2,523	75	0	0	0	6	10	55	5	723	0	23
Edinburgh	5,164	11,787	476	1,133	72	18	0	118	1,994	17	1,765	521	44
Eilean Siar	250	143	0	0	0	0	40	43	0	92	621	0	45
Falkirk	1,289	4,068	794	0	0	0	226	193	148	13	149	749	49
Fife	4,038	0	1,243	14,343	0	0	0	67	1,150	81	3,211	123	87
Glasgow	4,074	7,739	23	0	229	31	135	64	1,368	24	688	0	33
Highland	3,229	1,511	600	26	0	0	34	0	220	22	1,660	246	28
Inverclyde	693	1,167	0	133	5	3	0	14	0	4	437	0	12
Midlothian	853	682	0	0	0	0	26	0	31	14	710	3	32
Moray	1,372	0	1,195	1,903	0	0	76	0	113	19	789	198	52
North Ayrshire	1,577	2,598	7	0	0	4	0	0	346	13	1,340	378	0
North Lanarkshire	1,512	5,107	1,036	0	51	36	0	0	227	27	845	0	44
Orkney Islands	530	0	0	0	7	5	0	0	0	81	365	50	11
Perth and Kinross	2,630	4,491	159	0	0	0	10	739	126	11	1,232	12	54
Renfrewshire	1,129	918	323	0	0	0	0	0	27	15	1,178	0	35
Scottish Borders	1,877	0	10	3,412	0	0	32	0	79	10	493	0	37
Shetland Islands	316	0	0	0	22	8	0	0	0	0	299	0	0
South Ayrshire	2,189	3,181	1,501	393	205	7	4	51	0	0	649	0	0
South Lanarkshire	1,760	6,409	997	1,609	0	0	369	1,341	335	35	2,948	0	12
Stirling	1,831	3,933	576	0	0	0	245	102	211	0	600	73	21
West Dunbartonshire	643	2,141	184	0	9	4	0	12	98	0	223	226	0
West Lothian	803	3,660	672	796	1	0	112	220	95	16	889	52	27
Total	59,457	83,903	14,128	32,278	765	171	2,400	3,939	8,484	778	33,629	3,866	1,076

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

*Scrap metal includes both ferrous and non-ferrous metal

Waste Recovery

Table 15 – Breakdown by material of waste recycled by, or on behalf of, Scottish local authorities 2004/2005 (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	2,770	0	0	2,100	0	513	0	0	5	0	13,370	10.2	489	
Aberdeenshire	0	0	0	0	0	354	25	0	0	0	13,426	8.9	153	
Angus	0	810	2,520	4,657	0	204	0	9	0	35	16,259	21.1	96	
Argyll and Bute	0	59	0	268	0	196	4	0	0	0	8,283	13.3	350	
Clackmannanshire	0	675	0	3,684	0	96	20	7	0	0	9,175	26.2	72	
Dumfries and Galloway	0	113	0	0	0	603	0	20	1	3	6,237	5.7	300	
Dundee	0	43	7,538	1,236	0	286	0	0	0	3,981	21,946	22.1	936	
East Ayrshire	0	449	0	2,271	0	205	0	5	2	0	10,098	12.5	335	
East Dunbartonshire	0	0	0	3,734	0	541	0	0	0	0	9,583	13.1	37	
East Lothian	0	0	0	1,628	0	169	0	6	0	668	7,285	11.2	511	
East Renfrewshire	3,225	491	0	3,022	0	179	0	0	0	0	11,409	19.5	34	
Edinburgh	0	2,511	0	4,546	0	1,537	81	0	5	149	31,938	12.0	516	
Eilean Siar	0	0	0	0	0	39	49	0	0	0	1,322	6.7	705	
Falkirk	0	2,152	0	4,005	0	250	7	13	1	0	14,107	12.6	159	
Fife	0	5,865	0	16,244	0	731	226	31	0	0	47,440	19.1	315	
Glasgow	0	709	0	0	0	1,012	0	48	3	0	16,180	4.6	4,419	
Highland	0	716	0	1,210	0	457	11	0	0	337	10,309	6.5	316	
Inverclyde	0	0	0	0	0	323	0	0	0	0	2,790	5.5	50	
Midlothian	0	0	0	0	0	130	61	19	1	0	2,562	4.7	210	
Moray	0	3,464	0	6,262	0	182	33	0	10	0	15,669	22.9	2,533	
North Ayrshire	0	2,347	0	1,443	0	259	0	4	1	0	10,319	12.5	76	
North Lanarkshire	0	6,328	0	5,313	0	595	43	0	0	2,777	23,941	11.0	936	
Orkney Islands	0	0	0	484	0	47	18	0	0	0	1,598	11.6	2,979	
Perth and Kinross	0	707	228	6,679	0	219	134	16	0	0	17,447	17.6	138	
Renfrewshire	144	673	0	7,900	0	340	0	0	0	167	12,848	11.5	0	
Scottish Borders	0	0	0	0	0	220	7	17	0	0	6,194	7.8	145	
Shetland Islands	551	0	0	0	0	0	0	0	0	178	1,374	9.6	114	
South Ayrshire	0	842	0	0	0	165	0	0	0	0	9,187	12.0	1,296	
South Lanarkshire	0	2,764	0	10,273	10,290	577	76	0	6	0	39,801	19.5	239	
Stirling	0	1,520	0	0	0	157	0	22	5	0	9,296	15.3	0	
West Dunbartonshire	0	618	0	44	0	191	57	0	0	0	4,449	6.9	140	
West Lothian	0	521	0	969	67	309	24	0	0	0	9,233	8.4	8,270	
Total	6,690	34,376	10,286	87,973	10,357	11,087	876	217	41	8,295	415,073	12.2	26,869	

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

*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

‡'Others' includes botanical wastes, laminates and organic wastes

§Additional waste recycled includes end-of-life vehicles and separately collected construction and demolition waste but excludes road maintenance waste. All these wastes were not included in calculating either the total waste recycled or the recycling rate for the local authorities

Waste Recovery

Table 16 – Breakdown of the local authority recycling by material source and collection type 2004/2005

Local authority	Tonnes											Materials sent to sorting facility (already in totals)	Additional waste recycled [†]
	Household			Commercial			Industrial*			Total			
	Kerbside	Bring	Other [†]	Kerbside	Bring	Other [†]	Kerbside	Bring	Other [†]				
Aberdeen	7,135	5,359	0	876	0	0	0	0	0	13,371	0	489	
Aberdeenshire	1,504	6,712	0	5,209	0	0	0	0	0	13,426	0	153	
Angus	2,398	8,228	2,643	0	2,410	580	0	0	0	16,260	5,412	96	
Argyll and Bute	2,223	4,893	0	19	1,148	0	0	0	0	8,283	0	350	
Clackmannanshire	3,475	5,013	0	0	687	0	0	0	0	9,175	0	72	
Dumfries and Galloway	2,981	3,056	0	200	0	0	0	0	0	6,237	0	300	
Dundee	2,194	2,906	10,428	1,400	6	5,012	0	0	0	21,946	0	936	
East Ayrshire	4,394	5,203	0	495	6	0	0	0	0	10,098	4,438	335	
East Dunbartonshire	3,586	3,317	0	427	0	2,253	0	0	0	9,583	368	37	
East Lothian	2,212	4,702	0	0	371	0	0	0	0	7,285	0	511	
East Renfrewshire	2,852	4,519	3,004	0	0	1,034	0	0	0	11,409	0	34	
Edinburgh	6,987	19,991	724	3,807	0	429	0	0	0	31,938	0	516	
Eilean Siar	0	599	621	0	102	0	0	0	0	1,322	0	705	
Falkirk	4,972	5,066	9	640	3,404	18	0	0	0	14,107	2,890	159	
Fife	15,074	28,419	0	3,262	685	0	0	0	0	47,440	0	315	
Glasgow	7,650	5,454	0	3,076	0	0	0	0	0	16,180	7,227	4,419	
Highland	616	7,765	1,325	602	0	0	0	0	0	10,309	0	316	
Inverclyde	1,133	1,096	0	561	0	0	0	0	0	2,790	0	50	
Midlothian	0	2,562	0	0	0	0	0	0	0	2,562	0	210	
Moray	1,206	3,050	2,275	1,015	672	7,451	0	0	0	15,669	0	2,533	
North Ayrshire	3,366	6,393	199	339	21	0	0	0	0	10,319	4,241	76	
North Lanarkshire	16,262	2,399	2,381	0	0	2,975	0	0	0	24,017	4,105	936	
Orkney Islands	28	651	582	153	174	10	0	0	0	1,598	0	2,979	
Perth and Kinross	3,715	12,295	239	1,144	0	53	0	0	0	17,446	8,448	138	
Renfrewshire	700	9,417	2,731	0	0	0	0	0	0	12,848	6,410	0	
Scottish Borders	2,388	2,249	0	1,557	0	0	0	0	0	6,194	0	145	
Shetland Islands	47	188	1,028	0	111	0	0	0	0	1,374	0	114	
South Ayrshire	6,719	1,419	0	715	263	0	71	0	0	9,187	4,470	1,296	
South Lanarkshire	20,755	17,252	0	0	98	1,695	0	0	0	39,801	8,490	239	
Stirling	5,482	3,217	0	597	0	0	0	0	0	9,296	0	0	
West Dunbartonshire	3,163	872	0	414	0	0	0	0	0	4,449	0	140	
West Lothian	4,688	2,725	246	613	490	471	0	0	0	9,233	5,011	8,270	
Total	139,906	186,988	28,435	27,120	10,648	21,981	71	0	0	415,149	61,510	26,869	

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

*It is assumed that no industrial waste is delivered to civic amenity sites or bring sites

[†]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. All these wastes were not included in calculating either the total waste recycled or the recycling rate for the local authorities

Local authority recycling initiatives

In 2004/2005, all local authorities had a bring (drop-off) recycling collection scheme operating in their area. Thirty of the 32 local authorities reported that they had a kerbside recycling collection scheme for household waste and 22 that they had a kerbside recycling collection scheme for commercial/industrial waste. A separate kerbside recycling collection was offered to 1.42 million households (equivalent to 59% of all households in Scotland). This is an increase of approximately 310,000 households between 2003/2004 and 2004/2005. Household kerbside recycling accounts for 34% of all waste recycled in Scotland excluding end-of-life vehicles, road maintenance waste and separately collected construction and demolition waste. Table 17 gives a breakdown by local authority.

Waste Recovery

Table 17 – Scottish households offered a kerbside recycling collection 2004/2005

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	7,135	0	7,135	89
Aberdeenshire	30,116	29	1,504	0	1,504	50
Angus	40,000	79	2,398	0	2,398	60
Argyll and Bute	20,000	44	2,223	0	2,223	111
Clackmannanshire	20,250	90	3,475	0	3,475	172
Dumfries and Galloway	65,280	94	2,981	0	2,981	46
Dundee	49,471	69	2,194	0	2,194	44
East Ayrshire	30,088	56	4,394	0	4,394	146
East Dunbartonshire	35,049	81	3,586	0	3,586	102
East Lothian	35,000	85	2,212	0	2,212	63
East Renfrewshire	27,000	71	2,852	0	2,852	106
Edinburgh	120,000	54	6,987	0	6,987	58
Eilean Siar	0	0	0	0	0	0
Falkirk	58,084	86	5,291	319	4,972	86
Fife	142,140	87	15,074	0	15,074	106
Glasgow	100,000	34	9,608	1,958	7,650	77
Highland	3,338	3	616	0	616	185
Inverclyde	13,225	33	1,133	0	1,133	86
Midlothian	0	0	0	0	0	0
Moray	12,876	31	1,206	0	1,206	94
North Ayrshire	57,000	88	3,737	371	3,366	59
North Lanarkshire	120,000	85	24,733	8,471	16,262	136
Orkney Islands	7,971	84	235	207	28	4
Perth and Kinross	43,000	64	3,715	0	3,715	86
Renfrewshire	20,500	25	749	49	700	34
Scottish Borders	31,200	57	2,388	0	2,388	77
Shetland Islands	4,000	39	47	0	47	12
South Ayrshire	52,800	100	6,962	243	6,719	127
South Lanarkshire	78,000	57	21,202	447	20,755	266
Stirling	36,200	95	5,482	0	5,482	151
West Dunbartonshire	28,000	64	3,163	0	3,163	113
West Lothian	60,600	86	5,502	814	4,688	77
Total	1,421,188	59	152,785	12,879	139,906	98

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

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

Waste Recovery

Local authority composting

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

In 2004/2005, a total of 181,450 tonnes of waste collected by, or on behalf of, Scottish local authorities was composted. In addition 7,970 tonnes of waste collected for composting were disposed of before composting and 7,034 tonnes of composted materials were used as daily cover for landfill sites; this is considered to be disposal. This represents about 7.6% of the total collected for composting. The majority of the waste sent for composting was green waste (157,499 tonnes), with the remainder being mixed organic waste (16,664 tonnes) and mixed municipal waste (14,321 tonnes). Most of the waste sent for composting originated from kerbside collection of green waste, local authority recycling centres, and local authority parks and gardens.

Table 18 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 18 – Waste composted by, or on behalf of, Scottish local authorities 2004/2005

Local authority	Tonnes				
	Household	Commercial	Industrial	Other non-household	Total*
Aberdeen	4,613	0	0	0	4,613
Aberdeenshire	5,314	30	0	0	5,344
Angus	6,120	0	0	0	6,120
Argyll and Bute	2,378	568	29	0	2,975
Clackmannanshire	4,065	0	0	0	4,065
Dumfries and Galloway	0	0	0	0	0
Dundee	3,379	999	0	0	4,378
East Ayrshire	2,957	0	0	0	2,957
East Dunbartonshire	3,665	176	0	0	3,841
East Lothian	3,220	2,288	0	0	5,508
East Renfrewshire	5,218	0	0	0	5,218
Edinburgh	9,764	739	0	0	10,503
Eilean Siar	358	0	0	0	358
Falkirk	7,253	0	0	0	7,253
Fife	12,485	2,436	0	0	14,921
Glasgow	11,465	3,397	0	0	14,862
Highland	3,933	0	0	0	3,933
Inverclyde	681	0	0	0	681
Midlothian	0	0	0	0	0
Moray	2,416	604	0	0	3,020
North Ayrshire	9,348	0	0	0	9,348
North Lanarkshire	4,061	9,645	0	0	13,706
Orkney Islands	914	125	0	0	1,039
Perth and Kinross	6,590	1,982	0	0	8,572
Renfrewshire	3,870	0	0	0	3,870
Scottish Borders	0	0	0	0	0
Shetland Islands	0	0	0	0	0
South Ayrshire	2,562	4,317	0	0	6,879
South Lanarkshire	15,470	2,645	0	0	18,114
Stirling	6,107	2,097	706	0	8,910
West Dunbartonshire	97	0	0	0	97
West Lothian	6,654	3,711	0	0	10,365
Total	144,956	35,759	735	0	181,450

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

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

Waste Recovery

Local authority composting initiatives

In 2004/2005, 29 of the 32 Scottish local authorities used centralised composting schemes. Twenty-six authorities had a bring (drop-off) collection scheme operating in their area and 26 had a kerbside collection scheme for waste for composting. Table 19 gives details of the composting initiatives in each Scottish local authority in 2004/2005.

Table 19 – Local authority composting initiatives in Scotland 2004/2005

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	Yes*	Yes
Angus	Yes	Yes*	Yes*	Yes
Argyll and Bute	Yes	Yes	Yes*	Yes
Clackmannanshire	Yes*	Yes	Yes	Yes
Dumfries and Galloway	Yes	Yes	No	Yes
Dundee	Yes	No	Yes	Yes
East Ayrshire	Yes	Yes	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	No [†]	Yes
Fife	Yes	Yes*	Yes	Yes
Glasgow	Yes	No	Yes	Yes
Highland	Yes	Yes	Yes	Yes
Inverclyde	Yes*	Yes	Yes*	No
Midlothian	No	No	No	No
Moray	Yes	Yes	Yes*	Yes
North Ayrshire	Yes	No	Yes	Yes
North Lanarkshire	Yes	No	Yes	No [†]
Orkney Islands	Yes	Yes	Yes	Yes
Perth & Kinross	Yes	Yes	Yes	Yes
Renfrewshire	Yes	No	Yes	Yes
Scottish Borders	No [†]	No [†]	No [†]	No
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	No	Yes	Yes
Total yes	29	23	26	26

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

*New scheme in 2004/2005

[†]Scheme ceased in 2004/2005

Waste Recovery

SEPA asked local authorities in its Local Authority Waste Arising Survey 2004/2005 what the compost produced was used for. Table 20 gives a breakdown of the uses. The tonnages given are for the materials after composting.

Table 20 – Use of composted materials by Scottish local authorities during 2004/2005

Use of compost	Composted material			Total
	Household	Commercial	Industrial	
Meeting BSI PAS 100*	17,650	4,864	0	22,513
Used for landfill restoration	10,266	3,165	0	13,431
Used as soil conditioner or for landscaping	25,542	2,094	0	27,636
Other	33,164	5,858	353	39,374
Total	86,622	15,981	353	102,954

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

*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

Home composting

Twenty-three local authorities reported that they had distributed containers for home composting to the public during 2004/2005 (35,389 composters, 2,739 digesters and 312 womeries). Most were provided either free of charge or on a subsidised basis. Local authorities have now distributed around 140,000 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. The Waste and Resources Action Programme (WRAP) is working with partners and key stakeholders to develop a model that will allow local authorities to calculate how much garden and kitchen waste has been diverted from landfill as a result of home composting activity.

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 waste and reduce disposal costs for industry.

Approximately 3.4 million tonnes of waste were treated at treatment plants in Scotland in 2004. A breakdown of the waste by EWC-STAT short code and Waste Strategy Area (WSA) is given in Table 21. More information about EWC-STAT codes is given in Appendix IV.

Waste Recovery

Table 21 – Controlled waste treated at licensed waste management sites in Scotland 2004

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	74	0	1,440	0	1	92	407	31
Western Isles	0	0	0	0	8	701	33	60
Highland	134	0	34	0	0	998	2,614	356
North East	11,996	738	65,053	0	0	16,012	15,924	4,550
Tayside	0	156	69	0	3,854	58,199	8,870	11,375
Forth Valley	430	768	21,320	0	0	1,230	68,234	1,618
Fife	0	0	0	0	0	49,658	21,615	8,178
Lothians and Borders	901	0	2,522	0	0	30	3,502	1,025
Ayrshire, Dumfries and Galloway	234	42	2,512	0	0	8,472	17,597	7,622
Glasgow and Clyde Valley	34,448	3,399	40,345	0	5,542	40,813	92,969	17,927
Argyll and Bute	0	0	3,422	0	0	0	0	0
Scotland	48,216	5,104	136,718	0	9,405	176,205	231,764	52,741

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	2,546	8,893	66	6	0	0	13,556
Western Isles	0	877	3,255	0	0	6	4,940
Highland	638	0	5,206	62,910	0	551	73,442
North East	10,280	28,085	49,220	139,181	0	2	341,041
Tayside	40,575	4,684	110,912	92,981	0	701	332,376
Forth Valley	3,523	2,331	42,891	20,465	0	1	162,811
Fife	4,117	8,010	135,006	94,092	0	0	320,676
Lothians and Borders	16,909	53,628	81,301	447,216	0	9,795	616,829
Ayrshire, Dumfries and Galloway	30,968	50,660	347,553	248,125	0	0	713,786
Glasgow and Clyde Valley	7,475	207,458	105,164	269,436	4,435	5,122	834,532
Argyll and Bute	2	5,421	0	0	0	0	8,845
Scotland	117,033	370,047	880,574	1,374,412	4,435	16,178	3,422,834

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

Some activities involving waste materials are exempt from licensing if they meet the requirements detailed in Regulations 17 and 18 of the Waste Management Licensing Regulations 1994 (as amended). More information can be found at www.sepa.org.uk/regulation/waste/exemptions.htm

The Waste Management Licensing Amendment (Scotland) Regulations 2003 introduced a requirement for most of those activities exempt under paragraphs 7, 9 and 19 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 Waste Management Licensing Amendment (Scotland) Regulations 2004 widened the requirements to cover the following exemptions:

- paragraphs 7, 8, 10 and 46;
- paragraphs 9 and 19 where the volume of waste used exceeds 2,500 m³; and
- paragraphs 12 and 12A 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, 10, 12, 12A and 46 in January 2006. Data are gathered annually from the site operators and include the waste type, quantity of waste and geographical origin of the waste.

The quantities of wastes handled by sites exempt under the relevant paragraphs are shown in Table 22.

Table 22 – Waste handled by exempt activities registered under paragraphs 7, 9 and 19 in 2004

Waste type	Waste handled by exemption paragraph (tonnes)			Total
	Paragraph 7	Paragraph 9	Paragraph 19	
Mineral wastes	81,158	666,070	1,642,697	2,389,925
Vegetables waste from food processing	158,514	-	-	158,514
Wood wastes	7,459	-	-	7,459
Industrial effluent sludges	3,552	2,556	-	6,108
Common sludges (excluding dredging spoils)	6,397	98,662	417	105,476
Dredging spoils	-	2,556	15	2,571
Off specification compost	9,763	3,833	-	13,596
Paper and card wastes	5,374	-	-	5,374
Lime and mud waste	557	-	-	557
Combustion wastes	-	-	372	372
Total	272,774	773,676	1,643,500	2,689,951
Number of sites	213	112	408	733

Source: SEPA Exempt Site Returns

The total amount of waste handled by exempt activities registered under paragraphs 7, 9 and 19 in 2004 was 2.7 million tonnes. Around 60% of these data were obtained from annual returns and the remainder were estimates taken from the application form completed by operators when applying for the exemption. There were no data available for 7% of sites.

Over 61% of waste was handled by exempt activities registered under paragraph 19, 29% under paragraph 9 and 10% under paragraph 7. The types of waste most commonly handled under these exemptions are mineral wastes including soils, stones and gravel, followed by vegetable waste from food preparation and processing, and common sludges such as sludges from treatment of public sewage water and biodegradable sludges from the treatment of waste water.

Waste Recovery

Packaging and Packaging Waste

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

By 31 December 2008 all Member States should achieve:

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

The 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 23 gives a breakdown of organisations registered with SEPA.

Table 23 – Registrations with SEPA 2004

Organisation	Number of registrations
Companies registered with SEPA	94
Members of SEPA registered schemes	929
Total registration	1,023

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.

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

Waste Recovery

Table 24 gives the UK's recovery and recycling targets for 2004, while Table 25 details the recovery and recycling actually achieved in the UK in 2004. The results show that the UK met its recovery and recycling target for 2004: there are no individual targets for Scotland. Table 26 shows the amounts of packaging waste reprocessed by SEPA accredited companies in 2004.

Table 24 – UK recovery and recycling targets 2004

Material	Tonnes	
	Recovery	Recycling
Paper	2,025,671	2,089,978
Glass	1,285,200	999,600
Aluminium	80,690	33,301
Steel	378,652	315,543
Plastic	1,049,994	358,331
Wood	619,029	176,865
Other*	12,659	0
Total	5,451,895	3,973,618

Source: SEPA Producer Responsibility Team

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

Table 25 – UK recovery and recycling achieved 2004

Material	Tonnes
Paper*	2,539,206
Glass†	1,049,644
Aluminium	33,054
Steel	317,320
Plastic	344,317
Wood	797,382
Total recycling	5,080,923
Energy from waste	602,799
Total recovery	5,683,722
Specific waste stream	10,230,001
Recovery %	55.56%
Recycling %	49.67%

Source: SEPA Producer Responsibility Team

*Includes 957 tonnes of composting

†Includes 20,368 tonnes of 'alternative evidence' glass recycled that fell outside the PRN system

Waste Recovery

Table 26 – Packaging waste reprocessed by SEPA accredited reprocessors and exporters in Scotland 2004

Material	Tonnes		Total PRN/PERNs issued
	Accepted	Reprocessed/exported	
Reprocessed			
Paper	226,846	226,844	226,433
Plastic	3,375	3,375	3,370
Glass	133,051	132,849	132,583
Wood	81,869	81,818	81,826
Energy from waste – Municipal solid waste	4,090	4,090	4,090
Total reprocessed	449,231	448,976	448,302
Exported			
Paper	94,059	94,059	94,059
Plastic	1,465	1,465	1,464
Steel	8,601	8,601	8,600
Aluminium	75	75	75
Total exported	104,200	104,200	104,198
Total reprocessed/exported	553,431	553,176	552,500

Source: SEPA Producer Responsibility Team

Hazardous and Special Waste

In 2004/2005, 39 waste management sites were licensed to treat special waste in Scotland. In addition, seven sites permitted under the Integrated Pollution Control Regulations and one site authorised under the PPC Regulations treated special waste. A total of 205,660 tonnes of special waste was consigned to treatment plants in Scotland in 2004; this represents approximately 40% of all special waste consigned within Scotland. There was an increase of approximately 4,000 tonnes (2%) over that consigned in 2003. 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 2004

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	7,523	6	0	16	30	0	0	2	0	1	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	71,130	37	36	0	288	502	1,337	1,012	68	142	420
Tayside	0	0	0	0	0	0	0	0	0	0	0
Forth Valley	0	0	0	0	0	0	0	0	0	0	0
Fife	0	0	0	0	0	0	0	0	0	0	0
Lothians and Borders	0	15	0	22	0	14	11,538	318	0	0	0
Ayrshire, Dumfries and Galloway	0	0	0	0	0	0	0	0	0	0	0
Glasgow and Clyde Valley	32	109	143	43	95	1,448	3,214	1,000	24	301	512
Argyll and Bute	0	0	0	0	0	0	0	0	0	0	0
Scotland	78,685	166	179	81	413	1,964	16,089	2,333	91	444	933

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	1,208	0	23	13	2	0	2	2	0	8,828
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	317	22,056	121	3,709	15,908	344	60	3,912	349	17	121,765
Tayside	0	5,778	16	0	1,284	39	80	0	1,170	0	8,367
Forth Valley	0	0	0	0	0	0	0	0	0	0	0
Fife	0	0	0	0	0	0	0	0	0	0	0
Lothians and Borders	0	11	872	17	21	0	0	26	17	0	12,871
Ayrshire, Dumfries and Galloway	0	0	0	0	0	0	0	0	0	0	0
Glasgow and Clyde Valley	1,589	36,295	1,362	460	3,197	141	298	2,497	1,005	63	53,828
Argyll and Bute	0	0	0	0	0	0	0	0	0	0	0
Scotland	1,906	65,346	2,372	4,209	20,424	526	438	6,437	2,543	81	205,660

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 Regulation

Council Regulation (EEC) No. 259/93, the Waste Shipments Regulation (WSR), governs the supervision and control of shipments of waste within the EU, imports to and exports from the EU, and transit shipments through the EU. 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 requirements 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. The degree of hazard associated with the waste is also significant with respect to shipments destined for recovery. In general, red and amber list wastes are considered hazardous and green list wastes are considered non-hazardous. Annexes III and IV of Council Regulation (EEC) No. 259/93 provide details of substances designated as either amber or red list wastes.

The data presented in this section relate to the transfrontier shipment of 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 2004, 7,589.3 tonnes of wastes were imported into Scotland for recovery and 514.2 tonnes was exported from Scotland for recovery. No red list waste transfrontier shipment movements were notified to SEPA during 2004.

Breakdowns of the total quantity of wastes imported into Scotland in 2004 by waste type and recovery code are presented in Tables 28 and 29 respectively. The corresponding data wastes exported from Scotland in 2004 are presented in Tables 30 and 31.

Table 28 – Wastes notified in terms of the WSR imported into Scotland for recovery 2004

Waste type	Tonnes	%
Non-halogenated solvents	7,019.5	92.5
Halogenated solvents	569.8	7.5
Total	7,589.3	100.0

Source: SEPA Central Regulatory Unit

Table 29 – Recovery codes for wastes notified in terms of the WSR imported into Scotland 2004

Recovery code*	Tonnes	%
R2 [†]	376.7	5.0
R13 [§] , R1 [†] , R2 [†]	6,642.7	87.5
R13 [§]	569.8	7.5
Total	7,589.3	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

Waste Recovery

Table 30 – Wastes notified in terms of the WSR exported from Scotland for recovery 2004

Waste type	Tonnes	%
Spent catalyst	21.4	4.2
IT and mobile phones	335.4	65.2
Discarded IT equipment	140.0	27.2
Catalyst	17.4	3.4
Total	514.2	100.0

Source: SEPA Central Regulatory Unit

Table 31 – Recovery codes for wastes notified in terms of the WSR exported from Scotland for recovery 2004

Recovery code*	Tonnes	%
R4 [†]	38.8	7.5
R5 [†]	475.4	92.5
Total	514.2	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

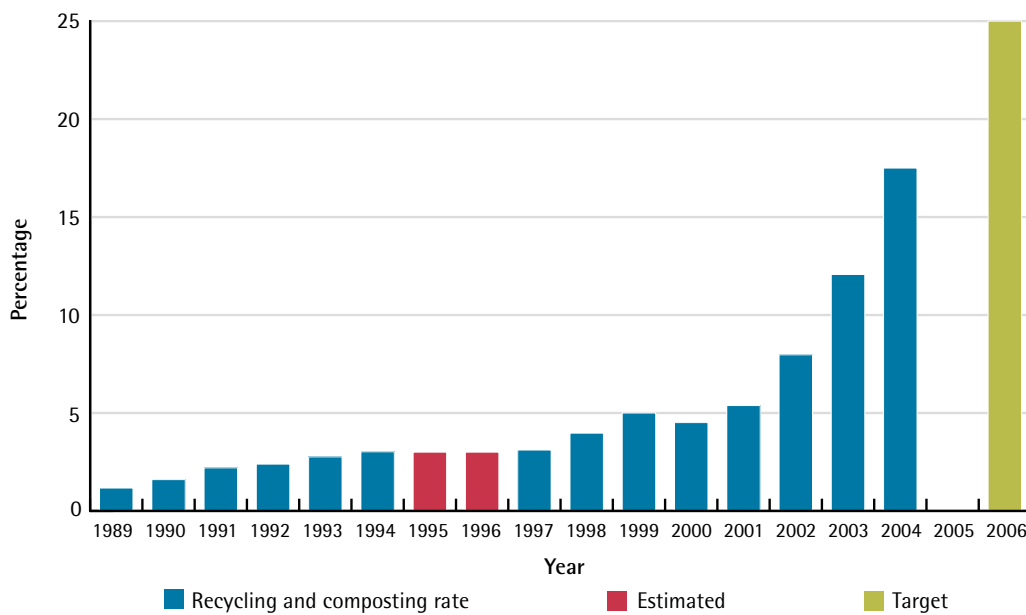
Trends and Conclusions

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 by local authorities that is recycled or composted to 25% by 2006. The National Waste Plan 2003 sets out how this target will be achieved.

The recycling and composting rate for Scottish local authorities was 17.5% in 2004/2005. This rate has risen significantly in the last three years and preliminary data for the first three quarters of 2005/2006 indicate that this trend will continue. 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 4 shows the annual recycling and composting rate for the period from 1989 to 2004/2005 compared with the Scottish Executive's target for 2006.

Figure 4 – Annual average recycling and composting rate for Scottish local authorities 1989–2004



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



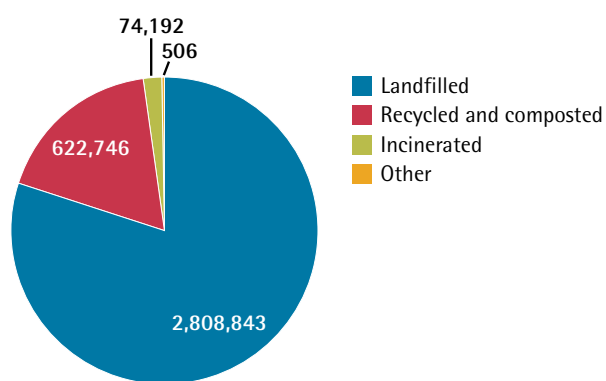
Waste Disposal

Local Authority Waste Disposal

In 2004/2005, a total of 3.51 million tonnes of waste was collected by, or on behalf, of local authorities of which 2.88 million tonnes were disposed of and 0.62 million tonnes were recycled or composted.

Of the waste sent for disposal in 2004/2005, 2.81 million tonnes were disposed of to landfill, approximately 74,000 tonnes were sent for incineration with energy recovery and about 500 tonnes were disposed of by other means. Figure 5 shows the relative proportions of waste handled by different waste management methods.

Figure 5 – Waste management methods used for waste collected by, or on behalf of, Scottish local authorities in 2004/2005 (tonnes)



Source: SEPA Local Authority Waste Arisings Survey 2004/2005

Table 32 shows the total amount of controlled waste disposed of by each local authority and the disposal methods used in 2004/2005.

Waste Disposal

Table 32 – Total controlled waste disposed of by, or on behalf of, Scottish local authorities 2004/2005

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	113,356	0	0	0	0	0	0	0	113,356
Aberdeenshire	0	0	0	131,895	0	0	0	0	0	131,895
Angus	39,527	0	0	0	0	0	0	15,262	0	54,789
Argyll and Bute	0	14,343	0	37,029	0	0	0	0	0	51,372
Clackmannanshire	0	0	0	516	21,223	0	0	0	50	21,789
Dumfries	0	0	0	102,737	0	1,054	0	0	0	103,791
Dundee	0	32,236	0	0	0	0	40,764	0	0	73,000
East Ayrshire	67,685	0	0	0	0	0	0	0	0	67,685
East Dunbartonshire	0	59,260	0	0	0	0	0	0	398	59,658
East Lothian	51,181	1,152	0	0	0	0	0	0	2	52,335
East Renfrewshire	0	41,889	0	0	0	0	0	0	0	41,889
Edinburgh	0	0	0	0	224,172	0	0	0	0	224,172
Eilean Siar	0	0	0	20,396	0	0	0	0	0	20,396
Falkirk	85,878	334	0	4,665	0	0	0	0	0	90,877
Fife	200,533	0	630	0	0	0	0	0	0	201,163
Glasgow	0	0	0	0	350,284	821	0	0	0	351,105
Highland	0	86,265	0	57,830	0	0	0	0	0	144,095
Inverclyde	0	47,276	0	0	0	0	0	0	0	47,276
Midlothian	52,183	0	0	0	0	0	0	0	0	52,183
Moray	0	0	0	49,796	0	0	0	0	8	49,804
North Ayrshire	61,378	33	0	2,577	0	0	0	0	0	63,988
North Lanarkshire	170,562	0	0	0	8,471	0	0	0	0	179,033
Orkney Islands	0	1,534	0	1,653	0	0	0	7,946	0	11,133
Perth and Kinross	68,285	162	0	3,351	0	1,268	0	1,214	0	74,280
Renfrewshire	0	94,632	0	151	0	17,973	0	0	48	112,804
Scottish Borders	0	13,075	0	52,304	8,303	0	0	0	0	73,682
Shetland Islands	0	0	0	3,913	0	0	9,006	0	0	12,919
South Ayrshire	0	46,293	0	16,219	0	0	0	0	0	62,512
South Lanarkshire	0	43,437	0	0	102,852	0	0	0	0	146,289
Stirling	0	0	0	16,196	26,914	1,091	0	0	0	44,201
West Dunbartonshire	59,568	0	0	0	0	0	0	0	0	59,568
West Lothian	4,765	84,902	400	0	0	0	0	0	0	90,067
Total	861,545	680,178	1,030	501,228	742,219	22,207	49,770	24,422	506	2,883,105

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

Waste Disposal

Local authority disposal to landfill

In 2004/2005, a total of 2.81 million 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 years). This shows virtually no change from the amount landfilled in 2003/2004.

Of the waste sent to landfill, 1.54 million tonnes were landfilled at sites having methane recovery and 1.27 million tonnes at sites with no methane recovery. Approximately half the waste landfilled by local authorities was landfilled within the area where it was produced; the rest was exported to other local authority areas for disposal ('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 and the Scottish Executive maintains a register of landfill allowances used, banked, borrowed and, in the future, traded by a local authority. A mass balance calculation will be used to determine the amount of BMW landfilled using a figure of 63% for the biodegradable content of 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 in 2004/2005 has been calculated using this mass balance approach to give an indication of Scotland's current position with regard to the 2006/2007 target. These data are shown in Table 33 by local authority 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 2004/2005

Local authority	Total BMW landfilled* ¹ (tonnes)	Allowance 2005/2006 ²	Allowance 2006/2007 ²
Aberdeen	74,927	73,076	60,619
Aberdeenshire	83,686	74,496	62,045
Angus	25,625 [†]	26,968	24,788
Argyll and Bute	33,090 [†]	37,009	30,901
Clackmannanshire	14,194 [†]	18,842	15,604
Dumfries	67,330	50,251	41,487
Dundee	16,803 [†]	31,686	29,838
East Ayrshire	42,993	40,876	33,775
East Dunbartonshire	37,930	37,485	31,203
East Lothian	32,319 [†]	32,327	26,900
East Renfrewshire	25,245 [†]	29,395	24,582
Edinburgh	140,842 [†]	144,511	119,815
Eilean Siar	12,696 [†]	14,310	11,799
Falkirk	56,373 [†]	66,506	55,142
Fife	119,279 [†]	147,030	121,339
Glasgow	198,106 [†]	213,142	175,980
Highland	92,909	86,216	71,037
Inverclyde	28,710	26,940	22,233
Midlothian	33,789	30,770	25,411
Moray	39,707	33,881	28,347
North Ayrshire	37,597 [†]	45,619	38,049
North Lanarkshire	101,212 [†]	111,756	92,271
Orkney Islands	1,051 [†]	1,487	1,400
Perth and Kinross	48,075 [†]	48,252	41,148
Renfrewshire	62,589	59,600	49,421
Scottish Borders	46,861	37,051	30,953
Shetland Islands	2,191 [†]	2,694	2,537
South Ayrshire	37,238 [†]	44,356	36,833
South Lanarkshire	94,607 [†]	103,728	86,776
Stirling	24,565 [†]	41,305	34,383
West Dunbartonshire	37,598	32,772	27,203
West Lothian	54,138 [†]	55,664	46,184
Total	1,724,273	1,800,000	1,500,000

Source: ¹SEPA Landfill Allowance Scheme Quarterly Monitoring Return 2004/2005

²Landfill 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

[†]Less than the 2005/2006 allowance

Waste Disposal

Local authority energy recovery

There were two municipal waste incinerators recovering energy from waste operating in Scotland in 2004: one in Dundee and the other on the Shetland Islands. The Dundee facility was licensed to accept 150,000 tonnes of waste per year including municipal waste, commercial and industrial waste, clinical waste and certain industrial combustible liquid waste. Clinical waste was limited to 15% of the total waste burned in any 12-month period and liquid wastes were limited to 5,000 tonnes in the same period. Energy in the form of electricity was produced by the plant and sold into the National Grid.

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

Five local authorities reported that they had incinerated a total of 74,192 tonnes of waste at these facilities in 2004/2005. There has been little change in the quantity of municipal waste incinerated annually in the last three years. A breakdown of the 2004/2005 total is provided in Table 34.

Table 34 – Scottish local authority waste sent for incineration with energy recovery 2004/2005

Local authority	Incinerated with energy recovery (tonnes)*	
	Within authority	Outside authority
Angus	0	15,262
Dundee	40,764	0
Orkney Islands	0	7,946
Perth and Kinross	0	1,214
Shetland Islands	9,006	0
Total	49,770	24,422

Source: SEPA Local Authority Waste Arisings Survey 2004/2005

*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, 18 other operational incinerators and thermal treatment plants dealt with commercial and industrial wastes in Scotland during 2004. 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.

Table 35 shows the quantity of commercial and industrial wastes handled by incinerators and thermal treatment plants in 2004.

Waste Disposal

Table 35 – Commercial and Industrial waste handled by incinerators and thermal treatment plants in 2004

Waste type	Tonnes
Chemical wastes excluding used oils	30,098
Clinical wastes	516
Animal remains/litter	118,448
Wood waste	2,104
Shredded tyres	8,000
Other commercial and industrial	15,341
Total	174,507

Source: SEPA returns and information from operators

In 2004 there were also 98 small waste oil burners authorised by SEPA for the burning of waste oil (often arising from vehicle servicing on garage premises) and 32 roadstone-coating plants that used recovered fuel oil in the manufacture of asphalt for road surfacing.

Waste Management Licence Facility Disposals

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

The total amount of controlled waste sent to Scottish landfills in 2004 was 7.81 million tonnes. This is approximately 1% less than the 2003 total of 7.88 million tonnes. Waste disposal trends are considered at the end of this chapter. Of the waste disposed of to landfill in 2004, 50% was classified as mixed ordinary wastes and 45% as mineral wastes. A breakdown of the total amount of waste disposed of to landfill in 2004 for each WSA is given in Table 36.

Information on the types and quantities of special waste disposed of to landfill in 2004 is given in Table 37.

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

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

Until April 2004, licence holders were required to describe wastes on the site return form using the 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 2004.

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

Waste recorded on special waste consignment notes is classified using EWC 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 2004

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	21	0	26	0	8	129	74	4
Western Isles	15	0	58	0	27	1	139	54
Highland	0	0	0	0	0	1	220	78
North East	44	0	5,658	0	6	238	4,713	0
Tayside	0	3,217	687	0	5,422	163	1,917	0
Forth Valley	1,300	109	7,053	0	1,497	4	6,575	77
Fife	0	0	540	1	0	0	1,879	0
Lothians and Borders	4,272	709	7,453	0	3,439	0	13,412	286
Ayrshire, Dumfries and Galloway	0	57	756	0	0	273	13,453	0
Glasgow and Clyde Valley	354	5,145	17,388	0	0	204	11,333	1
Argyll and Bute	0	0	0	0	0	514	421	13
Scotland	6,005	9,236	39,619	1	10,400	1,527	54,137	513

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	2,808	11,351	867	52,217	890	21	68,416
Western Isles	2,878	18,913	1,376	13,834	0	3,446	40,740
Highland	340	61,422	340	71,591	0	0	133,992
North East	2,664	484,156	3,831	159,594	42,581	78,639	782,124
Tayside	6,600	273,092	2,224	176,068	0	62	469,452
Forth Valley	42,406	281,562	8,904	246,936	0	0	596,422
Fife	1,761	231,531	0	392,039	0	0	627,750
Lothians and Borders	9,300	517,046	1,375	557,579	0	1,379	1,116,250
Ayrshire, Dumfries and Galloway	25,670	399,896	688	615,023	45	5,119	1,060,980
Glasgow and Clyde Valley	10,078	1,573,866	4,953	1,112,208	4,468	0	2,739,998
Argyll and Bute	1,429	52,199	566	123,278	0	334	178,755
Scotland	105,934	3,905,034	25,123	3,520,368	47,984	89,000	7,814,879

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 2004, a total of 172,832 tonnes of special waste was consigned to landfill sites in Scotland. This is an increase of nearly 8,500 tonnes over the figure for 2003. As in 2003, the vast majority of the hazardous waste (88%) sent to landfill is construction and demolition wastes and, of this, 75% are soils and stones containing dangerous substances. Much of this is believed to originate from large construction projects. 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 2004

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	276	0	0	0	0	0	0	0	0	0	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	2,165	0	0	0	0	0	11	0	0	0	5
Tayside	234	0	0	0	0	0	0	3	0	19	7
Forth Valley	3,078	151	17	0	222	0	31	5	0	20	250
Fife	0	0	0	0	0	0	0	0	0	0	0
Lothians and Borders	0	0	0	0	0	0	125	25	0	0	0
Ayrshire, Dumfries and Galloway	0	0	0	0	0	0	0	0	0	0	0
Glasgow and Clyde Valley	0	0	47	0	154	2	1	23	0	13	0
Argyll and Bute	0	0	0	0	0	0	0	0	0	0	0
Scotland	5,753	151	64	0	376	2	168	57	0	52	262

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	4	0	3	6	122	0	0	6	417
Western Isles	0	61	0	2	3	99	0	0	0	164
Highland	0	0	0	0	4	79	0	0	0	83
North East	0	0	0	0	0	1,565	0	0	0	3,746
Tayside	11	127	0	418	47	15,881	15	250	3	17,016
Forth Valley	43	1,290	0	439	35	42,961	3	157	0	48,703
Fife	0	0	0	0	0	58	0	0	0	58
Lothians and Borders	0	4	0	1	22	4,349	1	0	0	4,527
Ayrshire, Dumfries and Galloway	0	0	0	0	10	3,591	0	0	0	3,601
Glasgow and Clyde Valley	91	2,287	1	137	40	88,186	0	3,514	21	94,517
Argyll and Bute	0	0	0	0	0	0	0	0	0	0
Scotland	145	3,773	1	1,000	166	156,891	18	3,921	30	172,832

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

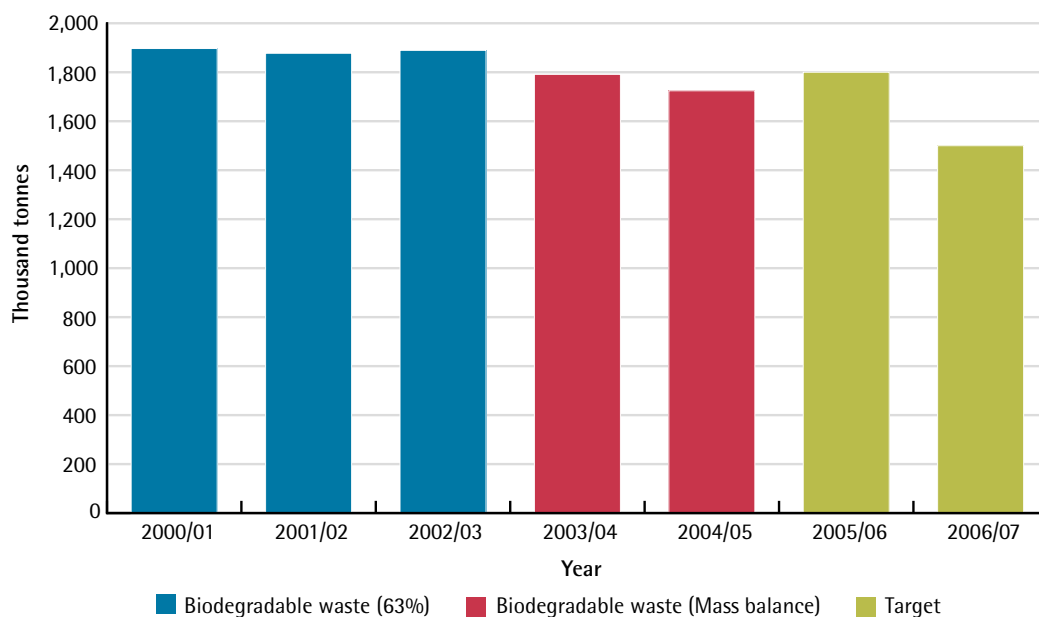
In Building a Better Scotland (2002), the Scottish Executive set an overall objective of ensuring progress towards sustainable management of Scotland's waste and achievement of European Union landfill reduction targets by 2010, 2013 and 2020. The Landfill (Scheme Year and Maximum Landfill Amount) Regulations 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 waste collected by local authorities to 1.5 million tonnes per year by 2006. The National Waste Plan 2003 sets out how this target will be achieved.

The quantity of BMW landfilled by local authorities has dropped by nearly 10% over the last four years from 1.90 million tonnes in 2000/2001 to 1.72 million tonnes in 2004/2005. This is below the target of 1.8m tonnes for 2005/2006 but exceeds that for 2006/2007 by approximately 220,000 tonnes. To achieve the 2006/2007 target will require a reduction in the next two years equivalent to that achieved in the last four. 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, as set out in the Landfill Allowance Scheme (Scotland) Regulations Interim Guidance, has been used to provide the data for 2003/2004 and 2004/2005.

Figure 6 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 6 – Biodegradable waste landfilled by Scottish local authorities 2000/2001 to 2004/2005



Source: SEPA Local Authority Waste Arisings Surveys
SEPA Landfill Allowance Scheme Quarterly Monitoring Return
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 2004 was 7.81 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 2004 is less than half that for 1994, when 15.88 million tonnes of controlled waste were disposed of. This downward trend appears to be levelling out at between 7.5 and 8.0 million tonnes.

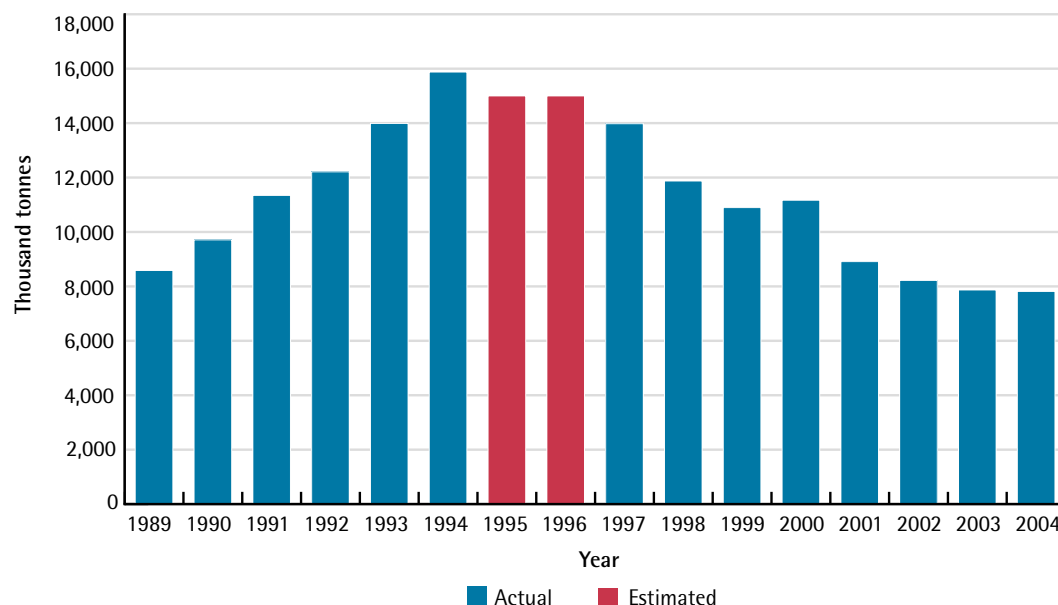
Part of the fall is due to less construction and demolition waste being disposed of over this period. A decline in the amounts of C&D waste going to landfill could reflect a reduction in the amount of C&D waste generated, an increase in the percentage of waste re-used or recycled, or an increase in unauthorised landfilling or fly-tipping.

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

The landfill tax for active materials in 2006/2007 is £21 per tonne. It will rise by £3 per tonne per year until it reaches a medium to long term figure of £35 per tonne. 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.

Figure 7 – Controlled waste landfilled in Scotland 1989–2004



Source: 1991–1994 figures extracted from Table A1.2 of Scottish Office Bulletin 1994 (refers to 1991–1994 inclusive)
 1995–1996 values are estimates. No specific data were available for these years
 1997–1998 figures are taken from the Databridge study by Environmental Resource Management (ERM) for SEPA and the Scottish Executive
 1993–2004 figures are taken from SEPA licensed/permitted waste management site returns

Waste Disposal

Table 38 – Controlled waste landfilled in Scotland 1989–2004 (thousand tonnes)

Waste type	1989	1990	1991	1992	1993	1994
Household	2,223.6	2,213.8	2,291.3	2,246.6	2,336.1	2,381.6
Commercial	1,948.9	1,437.0	1,667.5	1,733.8	1,790.6	1,873.5
Industrial (total)	4,412.9	6,058.8	7,384.5	8,229.4	9,862.1	11,622.3
Other	-	-	-	-	-	-
EWC-STAT	-	-	-	-	-	-
Total	8,585.4	9,709.6	11,343.3	12,209.8	13,998.8	15,877.4
Industrial (C&D)	n/k*	3,709.0	5,217.9	4,847.3	6,714.6	7,716.4
Industrial (other)	n/k*	2,349.7	2,166.6	3,382.1	3,147.5	3,905.9
Industrial (total)	4,412.9	6,058.8	7,384.5	8,229.4	9,862.1	11,622.3

Waste type	1995	1996	1997	1998	1999	2000
Household	n/k*	n/k*	2,698.0	2,990.9	2,888.9	2,494.2
Commercial	n/k*	n/k*	2,218.0	2,024.0	2,003.0	1,574.0
Industrial (total)	n/k*	n/k*	8,959.5	6,767.9	5,946.3	7,006.6
Other	n/k*	n/k*	103.1	90.7	57.9	90.9
EWC-STAT	n/k*	n/k*	-	-	-	-
Total	15,000.0[†]	15,000.0[†]	13,978.5	11,873.4	10,896.2	11,165.7
Industrial (C&D)	n/k*	n/k*	7,007.5	5,096.9	4,277.0	3,952.6
Industrial (other)	n/k*	n/k*	1,951.9	1,671.1	1,669.3	3,054.0
Industrial (total)	n/k*	n/k*	8,959.4	6,767.9	5,946.3	7,006.6

Waste type	2001	2002	2003	2004
Household	2,534.3	n/a [‡]	n/a [‡]	n/a [‡]
Commercial	691.1	n/a [‡]	n/a [‡]	n/a [‡]
Industrial (total)	2,757.3	n/a [‡]	n/a [‡]	n/a [‡]
Other	499.1	n/a [‡]	n/a [‡]	n/a [‡]
EWC-STAT	2,429.5	n/a [‡]	n/a [‡]	n/a [‡]
Total	8,911.2	8,219.8	7,880.0	7,814.0
Industrial (C&D)	2,175.9	n/a [‡]	n/a [‡]	n/a [‡]
Industrial (other)	581.4	n/a [‡]	n/a [‡]	n/a [‡]
Industrial (total)	2,757.3	n/a [‡]	n/a [‡]	n/a [‡]

Source: 1991–1994 figures extracted from Table A1.2 of Scottish Office Bulletin 1994 (refers to 1991–1994 inclusive)
 1995–1996 values are estimates. No specific data were available for these years
 1997–1998 figures are taken from the Databridge study by Environmental Resource Management (ERM) for SEPA and the Scottish Executive
 1993–2004 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



CHP05



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 2004/2005, the total number of waste carriers registered in Scotland/Northern Ireland was 6,857.

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 1,108 licences were in force during 2004/2005. A breakdown of these licences is given in Table 39 and Figure 8. This was obtained from the SEPA Waste Management Charging Scheme for the financial year 2004/2005. Details of the charging scheme can be found on SEPA's website at www.sepa.org.uk/charging/index.htm

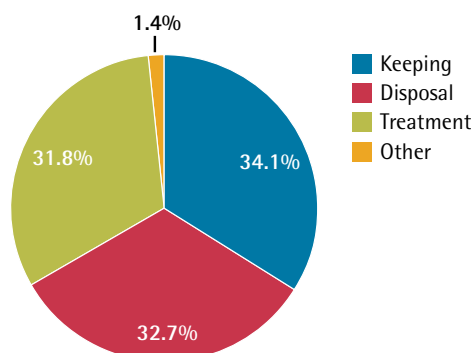
Table 39 – Number of waste management licences by activity 2004/2005

Activity	Number of licences
Treatment	
Recycling	270
Other	82
Keeping	
At civic amenity sites	138
At site where it is produced	3
For recycling	48
Other	189
Disposal	
Disposal – operational	231
Post-closure sites	124
Pet cemeteries	7
Other	
Incinerators	6
Mobile plants	10
Total	1,108

Source: SEPA Waste Management Charging Scheme 2004/2005

Waste Related Operational Activities

Figure 8 – Waste management licences by activity 2004/2005



Waste management licences related to special waste

There were 114 sites licensed to handle special waste in Scotland in 2004/2005. Table 40 provides a breakdown of this total by activity.

Table 40 – Number of waste management licences authorising the handling of special wastes 2004/2005

Activity	Number of licences
Treating	39
Keeping	55
Disposal – operational	14
Disposal – post-closure	6
Total	114

Source: SEPA Waste Management Charging Scheme 2004/2005

Waste management licences related to recycling activity

In 2004/2005, there were 270 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 2004/2005

Licensed capacity (tonnes)	Number of licences
75,000 and above	20
25,000 to <75,000	28
5,000 to <25,000	48
0 to <5,000	174
Total	270

Source: SEPA Waste Management Charging Scheme 2004/2005

Waste management licences related to disposal activity

Landfill is by far the most common management method for municipal waste in Scotland, accounting for over 78% of the total waste arisings in 2004/2005. The 231 landfill sites in operation during 2004/2005 form the principal network of disposal facilities and are shown on the map in Figure 9. Table 42 provides a breakdown of these sites by licensed capacity.

Waste Related Operational Activities

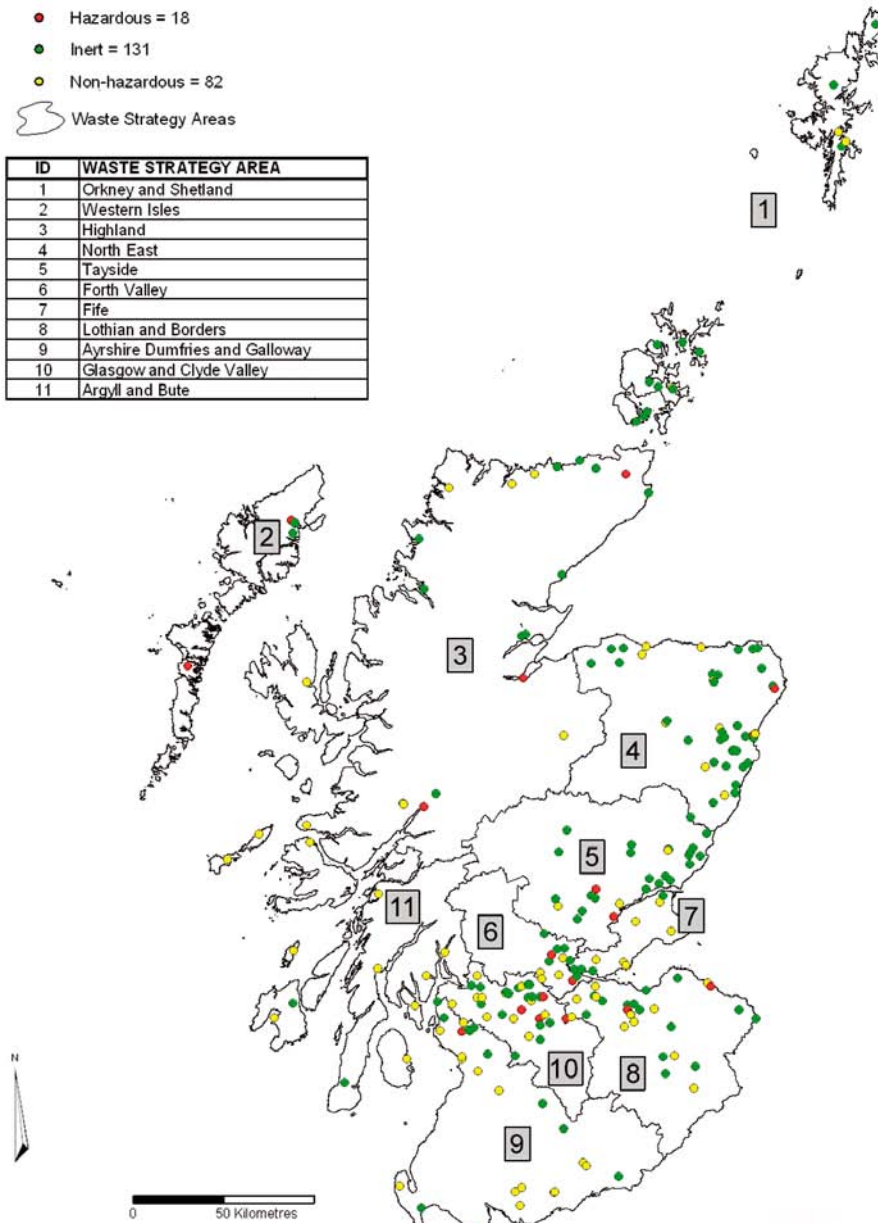
Figure 9 – Landfill sites in Scotland 2004/2005

Waste Classification Sites

- Hazardous = 18
- Inert = 131
- Non-hazardous = 82

 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



Includes material based upon Ordnance Survey mapping with permission of H.M. Stationery Office, (c) Crown Copyright. Licence GD03135G0019. Author: J.Bowes April, 2006

Waste Related Operational Activities

Table 42 – Waste management licences for operational landfills by licensed capacity 2004/2005

Licensed capacity (tonnes)	Number of licences
150,000 and above	10
75,000 to <150,000	47
25,000 to <75,000	31
0 to <25,000	143
Total	231

Source: SEPA Waste Management Charging Scheme 2004/2005

Post-closure landfill sites

Table 43 shows that 124 licensed sites had ceased landfilling waste and, in 2004/2005, 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 2004/2005

Total waste deposited (million tonnes)	Number of licences
2.5 and above	0
1 to <2.5	16
0.25 to <1	14
0 to <0.25	94
Total	124

Source: SEPA Waste Management Charging Scheme 2004/2005

Landfill site gas and leachate operational controls

Landfill gas and/or leachate management is carried out at some of the larger landfill sites. During 2004, 66 sites undertook some form of gas management; the most common method was venting. Flaring or energy production took place at 29 sites. Leachate management was carried out at 61 sites. Recirculation was the most common method of leachate management but aerobic treatment, waste stabilisation and other methods were also used. Table 44 gives a breakdown of the operational controls in place.

Table 44 – Gas and leachate operational controls at landfill sites 2004

Operational controls*	Number of landfill sites
Gas operational controls	
Energy production	10
Flaring	19
Venting	37
Leachate operational controls	
Recirculation	23
Aerobic treatment	16
Waste stabilisation	1
Other	21

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 2004/2005 SEPA staff made 6,455 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 2004/2005.

Table 45 – Waste related enforcement activities 2004/2005

Nature of enforcement	Number
Final warning letters	85
Enforcement notices issued	61
Referrals to Procurator Fiscal	25
Convictions secured	10
Total	181

Source: SEPA Annual Report 2004–2005

Fly-tipping

The Dumb Dumpers campaign continued to run throughout 2004/2005. This initiative, run by the Scottish Fly-Tipping Forum, encourages people to report illegal waste dumping using a Stoptime Number 0845 2 30 40 90. The Scottish Fly-Tipping Forum, whose membership includes SEPA, local authorities, Keep Scotland Beautiful, land owners, the Scottish Executive and other interested bodies, was established as a result of a litter and fly-tipping review by the Scottish Executive. The group aims to develop a strategy to reduce fly-tipping across Scotland.

In 2004/2005 SEPA carried out fly-tipping action plans in a number of its areas. Known problem areas were targeted, and enforcement and licensing action taken where appropriate. A joint operation by various road policing departments and SEPA highlighted a lack of awareness among companies that transport waste of their requirement to register as a waste carrier. Following this campaign there was a 40% increase in applications for registration in June–July 2004 compared with June–July 2003.

Local authorities were asked by SEPA in the LAWAS 2004/2005 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 12,555 tonnes of fly-tipped material was cleared separately. Most local authorities collected fly-tipped material as part of their mainstream collection rounds and were not able to provide separate tonnages. Therefore, it was not possible to obtain an accurate picture of the level of the fly-tipping problem in Scotland from these data.

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 2004

Appendix VII – Licensed Sites in Scotland in 2004



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; and → provision to the public of postal or communication services.
Integrated Pollution Control	Integrated Pollution Control (IPC) is a system established, under Part I of the Environmental Protection Act 1990 to control pollution from industry
Kerbside collection	Any regular collection of recyclable or compostable materials from premises. Excludes collection services delivered on demand
Landfill sites	Areas of land in or on which waste is deposited
Leachate controls	Methods to control the emission and quality of leachate from landfill sites

Appendix I

Material Reclamation Facility (MRF)	A facility to process wastes for the purpose of recovering useful materials using a variety of processes to separate out different materials, ranging from manual sorting to advanced mechanical separation techniques
Mixed organic waste	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	Establishment of eleven Waste Strategy Groups across Scotland. The groups are charged with making the national strategy a reality at a local level, developing local solutions in response to local needs
Packaging waste	Comprises waste arising from 'all products made of any materials of any nature to be used to the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods, from the producer to the use or the consumer' as defined in Directive 94/62/EC on Packaging and Packaging Waste
Recovery	Generating value from wastes from a wide variety of activities such as recycling, composting and energy recovery
Recyclables	Materials that are capable of being recycled
Recycling	Using waste materials in manufacturing other products of an identical or similar nature, as defined by the Organisation for Economic Co-operation and Development in Strategic Waste Prevention 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
Strategic Waste Management Baseline Assessment	An assessment and description of the existing waste management in an area. Examines wastes arisings, waste management facilities and capacities, imports and exports of waste, existing contract arrangements and demographics such as population and household numbers
Thermal treatment	A broad generic term covering processes that involve the use of heat to treat waste. Incineration is the most common thermal treatment process. Pyrolysis and gasification are other high temperature processes but there are also low temperature processes used, for example, in technologies producing refuse-derived fuel (RDF)
Transfer station	A site to which waste is delivered for sorting 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
EWG	European Waste Catalogue
IPC	Integrated Pollution Control
LAWAS	Local Authority Waste Arisings Survey
MRF	materials recycling facility or material reclamation facility
MSW	municipal solid waste
PERN	Packaging Waste Export Recovery Note
PRN	Packaging Waste Recovery Note
PPC	Pollution Prevention and Control
SEPA	Scottish Environment Protection Agency
UK	United Kingdom
WEEE	waste electrical and electronic equipment
WML	Waste Management Licence
WSA	Waste Strategy Area
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 will be periodically reviewed. It categorises wastes based on a combination of what they are, and the process or activity that produces them.

It is divided into 20 chapters, most of which are industry-based, although some are based on materials and processes. Each chapter is represented by a two-digit code between 01 and 20 and comprises one or more subchapters. Each subchapter is represented by a four-digit code, the first two digits relate to the chapter, 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', which will appear consecutively but one will be marked with an asterisk (*), normally with reference to 'containing dangerous substances', for example:

17 05 03* Soil and stones containing dangerous substances

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

Chapters of the list

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

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

Appendix IV

European Waste Catalogue – STAT (EWC-STAT)

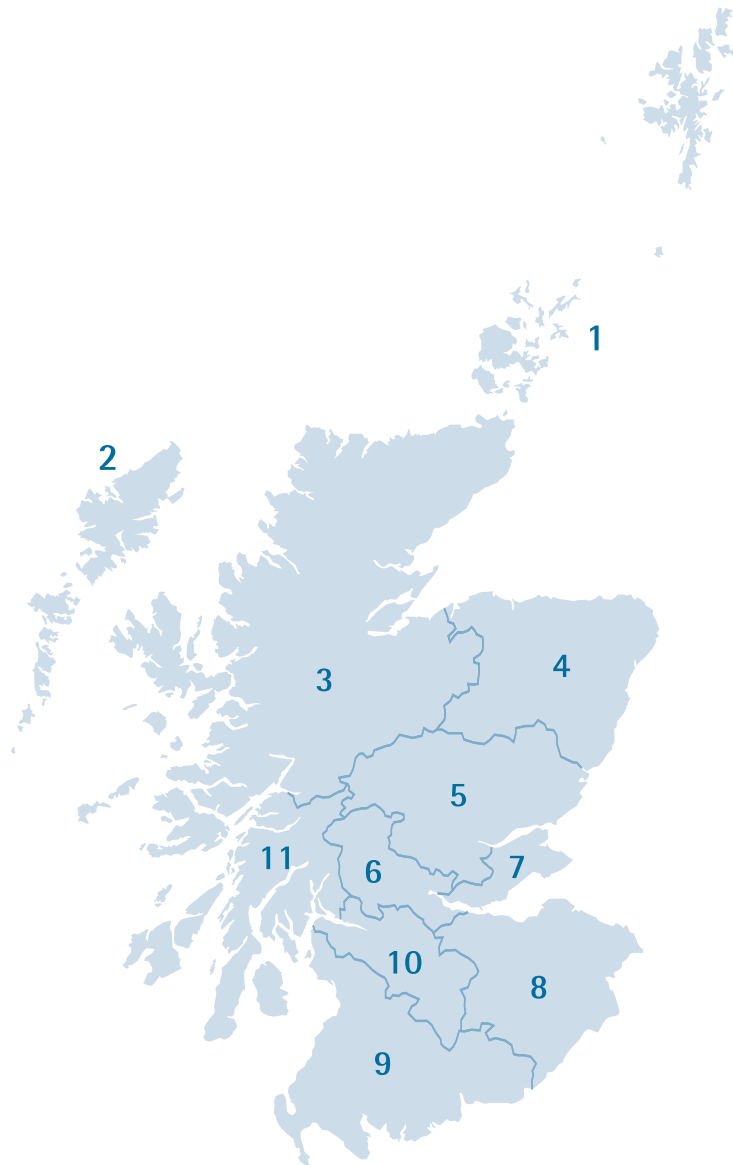
Regulation (EC) No. 2150/2002 of the European Parliament and of the Council of 25 November 2002 on Waste Statistics lays down the details of the type of information on waste that member states should transmit to the Commission as well as a number of definitions and classifications that must be observed.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

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

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

Appendix V

Waste Strategy Area Map



Waste Strategy Areas and their Constituent Local Authorities

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

Appendix VI

Accredited Reprocessors and Exporters of Packaging Waste 2004

Reprocessors accredited in 2004

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
C K Polymers	Unit 20, Charlesfield Industrial Estate, St Boswells	SR2002357	Plastic
Caledonian Ferguson Timpson	5 Atholl Avenue, Glasgow	SR1998203	Plastic
Comhairle Nan Eilean Siar	Bennadrove Landfill Site, Isle of Lewis	SR2001339	Glass
Comhairle Nan Eilean Siar	Rueval Landfill Site, Isle of Lewis	SR2003403	Glass
Egger (Barony) Ltd	Barony Road, Auchinleck	SR2002380	Wood
John W Hannay & Co Ltd	Linwood Avenue, East Kilbride	SR199821	Paper
M McKenzie	Old Pentland Sawmill, Loanhead	SR1998283	Wood
Mac-Glass Recycling	Dalhousie Business Park, Bonnyrigg	SR1998112	Glass
Norbord Limited	Station Road, Cowie, Stirling	SR1998238	Wood
North East Pallet Services Ltd	East Tullos Industrial Estate, Aberdeen	SR2002390	Wood
Plastic Polymer Processors Ltd	12 Inchyra Road, Grangemouth	SR2001338	Plastic
Plastic Technology Services Limited	Garroch Business Park, Dumfries	SR1998284	Plastic
RMC Materials Ltd	Kilbarchan Quarry, Renfrewshire	SR2003405	Glass
Robert Cullen & Sons Limited*	10 Dawsholm Avenue, Glasgow	SR1998219	Paper
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
Snowie Limited	Lambhill Farm, Blairingone	SR2000300	Paper composting
Snowie Limited	Lambhill Farm, Blairingone	SR2000302	Wood composting
Solway Recycling Ltd	Rigghead Farm, Dumfries	SR2003406	Plastic
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

*Cancelled at 13 October 2004

Appendix VI

Exporters accredited in 2004

Name of company	Site	Registration number	Principal operation
Christie & Son (Metal Merchants) Ltd	Meadowside Street, Renfrew	SX 199926	Steel 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
Independent Waste Paper Producers Ltd	19 High Street, Daventry, Northants	SX 200118	Paper 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
Solway Recycling Ltd	Rigghead Farm, Dumfries	SX 200113	Plastic export

Appendix VII

Licensed Sites in Scotland in 2004

Landfill Sites *Licensed to accept special waste

Licence holder	Site	WML number	National grid reference
*Alcan	Alcan, Lochaber Works	WML/N/50084	NN125753
*Binn Landfill (Glenfarg) Ltd	Binn Farm, Glenfarg	WML/E/00298	NO178142
*British Steel plc	Secure Containment Facility	WML/W/00024	NS768578
*Comhairle nan Eilean Siar	Bennadrove, Stornoway, Isle of Lewis	WML/N/50028(a)	NB386345
*Comhairle nan Eilean Siar	Rueval, Isle of Benbecula	WML/N/50029(a)	NF811535
*Highland Council	Longman, Inverness	WML/N/50036	NH675469
*Highland Council	Seater Landfill Site, Bower, By Wick	WML/N/50055	ND248603
*I & H Brown (Plant) Ltd	Battleby, Redgorton, Perth	WML/E/20131	NO082295
*Levenseat Ltd	Muldron Quarry, near Fauldhouse	WML/E/00047	NS915575
*Patersons of Greenoakhill Ltd	Greenoakhill, Hamilton Road, Broonhouse, Glasgow	WML/W/00036	NS666627
*Shanks Avondale Ltd	Avondale Quarry, Polmont	WML/E/20170	NS951787
*Shanks Ltd	Greengairs, Airdrie	WML/W/00001	NS789698
*Shanks Ltd	Wester Hatton Landfill, Balmedie, Aberdeenshire	WML/N/20210	NJ954152
*Stirling Council	Lower Polmaise Landfill, By Fallin, Stirling	WML/E/20076	NS834931
*Stoneyhill Waste Management Ltd	Stoneyhill Quarry, Peterhead	WML/N/20183	NK076409
*Viridor Ltd	South Quarry, Oxwellmains, Dunbar	WML/E/00079	NT720755
*Waste Recycling Group Ltd	Oastslie (No 7) Sandpit, Roslin, Midlothian	WML/E/00097	NT258626
*William Tracey Limited	Barkip Landfill	WML/W/00005	NS335505
A & M Smith	Bankhead, Duffshill, Portlethen	WML/N/20143	NO928996
Aberdeenshire Council	Brandon Howe Landfill, Inverboyndie, Banff	WML/N/20020	NJ667638
Aberdeenshire Council	Crows Nest Landfill, Raemoir Road, Banchory	WML/N/20019	NO688973
Aberdeenshire Council	Pitdrichie Landfill, 5 Roadway Junction, Drumlithie	WML/N/20021	NO798819
Aberdeenshire Council	Burnside Quarry, Leylodge, Kintore	WML/N/20065	NJ774127
Aberdeenshire Council	Govals Quarry, Lumsden	WML/N/20091	NJ477232
Aberdeenshire Council	Millmoss Landfill, Little Turriff, Turriff	WML/N/20036	NJ728493
Aggregate Industries Plc	Upper Townhead Farm, Kintore	WML/N/20060	NJ782170
Aggregate Industries UK Ltd	Fledmyre, Montrose Road, Forfar (Site 2)	WML/E/00214	NO487516
Alcan Chemicals Europe	Whinneyhall Landfill, Burntisland	WML/E/00261	NT248874
Alexander Sandison & Sons Ltd	Hagdale Quarry, Baltasound, Shetland	WML/N/05001	HP638101
Andrew Cook (Containers) Ltd	Belliston Quarry, Arncroach	WML/E/00291	NO498063
Angus Council	Restenneth Landfill Site, Montrose Road, Forfar	WML/E/20140	NO483515
Angus Council	Lochhead Landfill Site	WML/E/20024	NO480510
Argyll and Bute Council	Glengorm Landfill Site, Tobermory, Isle of Mull	WML/W/20045(a)	NM488558
Argyll and Bute Council	Bonaveh Landfill Site, Isle of Colonsay	WML/W/20048	NR398955
Argyll and Bute Council	Cliad Landfill Site, Isle of Coll	WML/W/20046	NM204602

Appendix VII

Licence holder	Site	WML number	National grid reference
Argyll and Bute Council	Garebreck Landfill Site, Bowmore, Isle of Islay	WML/W/20049	NR291579
Argyll and Bute Council	Gott Bay Landfill Site, Isle of Tiree	WML/W/20047	NM028462
Argyll and Bute Council	Ballygrant Quarry, Ballygrant	WML/W/22027	NR395662
Armstrong Waste Management Ltd	Auchenlosh Quarry, Dalbeattie (Phase II)	WML/W/00272	NX853614
Banchory Contractions Ltd	South Hirn, Crathes, Banchory	WML/N/20179	NJ737002
Bardon Aggregates	West Quarry, Charlestown	WML/E/00247	NT065840
Barr Ltd	Garlaff Quarry, Cumnock	WML/W/00238	NS542176
Barr Ltd	Site 5, Mid Auchencarroch Farm, Jamestown	WML/W/00021	NS420813
Barr Ltd	Clayshant, Sandhead	WML/W/00251	NX110525
Blue Circle Industries plc	North Quarry, Dunbar	WML/E/00073	NT700775
Borderland Reclamation Ltd	Meigle Potts, Clovenfords, By Galashiels	WML/E/20153	NT453365
British Petroleum	Caldback Ness, Sullom Voe	WML/N/50100	HU403765
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
D Geddes (Contractors) Ltd	Ardownie Quarry, Monifieth	WML/E/00231	NO493345
D Geddes (Contractors) Ltd	Border Quarry, Leysmill, Froikheim	WML/E/00216	NO600485
D Geddes (Contractors) Ltd	Kinnell, Friockheim	WML/E/00218	NO607503
D Geddes (Contractors) Ltd	Lochaber, Arbroath	WML/E/00223	NO604433
D Geddes (Contractors) Ltd	Prettycur, Hillside, Montrose	WML/E/00217	NO698608
Dumfries & Galloway Council	Galdenoch, Leswalt, Stranraer	WML/W/20022(a)	NW988644
Dumfries & Galloway Council	Blacks Plantation Landfill Site, Whithorn	WML/W20024	NX428406
Dumfries & Galloway Council	Gatelawbridge Waste Disposal Site, Thornhill	WML/W/20018	NX902965
Dumfries & Galloway Council	St Mary's Street Disposal Site, Sanquhar	WML/W/20016	NS782104
Dumfries & Galloway Council	Corsehill Waste Disposal Site, Eaglesfield Road, Annan	WML/W/20008	NY206697
Dumfries & Galloway Council	Aucheninnes Landfill Site, Dalbeattie	WML/W/20020	NX848609
Dundee City Council	Longhaugh Landfill, Pitkerro Road, Dundee	WML/E/20081	NO433329
Dundee City Council	Riverside Landfill, Wright Avenue, Dundee	WML/E/20079(b)	NO360295
E Bowman	Duisky-2, Kinlochiel	WML/N/50072	NN009767
E W G Dickey & Co	Kingsdale, Firth, Orkney	WML/N/50070	HY378115
East Ayrshire Council	Milton Landfill Site, Crookedholm, Kilmarnock	WML/W/20144	NS480376
East Coast Skips	Hope Quarry, Near Pathhead	WML/E/00092	NT403630
Easter Hatton Environmental (Waste Away) Ltd	Easter Hatton Farm, Balmedie	WML/N/20007	NJ965157

Appendix VII

Licence holder	Site	WML number	National grid reference
Easter Hatton Environmental (Waste Away) Ltd	Site 3, Easter Hatton Farm, Balmedie	WML/N/20195	NJ967161
Edgar Allan Ltd	Balbarnie Works, Whitburn Road, Bathgate	WML/E/00026	NS974682
Falkirk Council	Kinneil Kerse Landfill Site, Grangemouth Road, Bo'ness	WML/E/20012	NS975810
Fife Council	Lochhead Landfill Site, By Wellwood, Fife	WML/E/20087	NT080903
Fife Council	Lower Melville Wood Landfill Site, By Ladybank, Fife	WML/E/20063	NO300117
G & F Milne	Bodychell Landfill, Memsie, Fraserburgh	WML/N/20118	NJ954629
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
Glasgow City Council	Summerston Landfill, Balmore Road, Glasgow	WML/W/20035	NS579718
GR Service Company	West Carron, Carron, Falkirk	WML/E/00015	NS875820
Henry Gilles Haulage Contractor	Drumshoreland Bing, Pumpherston	WML/E/00049	NT074700
Highland Council	Bettyhill Landfill, Bettyhill, Sutherland	WML/N/50059	NC737603
Highland Council	Granish Landfill, Aviemore	WML/N/20098	NH900148
Highland Council	Kilchoan Landfill Site, Kilchoan, Argyll	WML/N/50026	NM469649
Highland Council	Portree	WML/N/50051(b)	NG471447
Highland Council	Rhiconich Landfill Site, Rhiconich, Sutherland	WML/N/50057	NC262526
Highland Council	Stoneyfield, Invergordon	WML/N/50003	NH690713
Highland Council	Tongue Landfill Site, Tongue, Sutherland	WML/N/50058	NC612547
Highland Council	Ardachu Landfill Site, Ardachu, Brora	WML/N/50044	NC893047
Highland Council	Brackletter	WML/N/50027(b)	NN190828
Highland Council	Melvich Landfill Site, Melvich, Sutherland	WML/N/50060	NC866645
Highland Council	South Head, Wick Harbour, Wick	WML/N/50107	ND372501
Highland Council	Torbreck, Lochinver, Sutherland	WML/N/50047	NC097241
Highland Council	Ullapool Waste Transfer Station, Strathain, Ullapool	WML/N/50050(b)	NH122964
Holt Drainage	Achscrabster Quarry, Thurso	WML/N/50086	ND080633
Howegarden Ltd	Hospital Wood, Auchterless, Turriff	WML/N/20120	NJ735458
International Paper (UK) Ltd	Inverurie Paper Mills, Broomend, Inverurie	WML/N/20063	NJ770190
J & A Plant Services in liquidation	Beithglass Quarry, Skelmorlie	WML/W/00073	NS200672
J & S Mackie	South House, Tankerness, Orkney	WML/N/50069	HY507076
J H Connon Ltd	Greendams, Newmachar, Aberdeenshire	WML/N/20068	NJ868202
J Haig Hamilton and Sons	West Fortune Landfill, West Fortune Farm, 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
James Rae	Auchenstarry Farm, Kilsyth	WML/W/00068	NS712765
John Fyfe Ltd	Marybank Quarry, Stornoway	WML/N/50078	NB408328
John Marshall & Son	Dalreoch Farm, Dunning	WML/E/00301	NO003173

Appendix VII

Licence holder	Site	WML number	National grid reference
Joss (Aberdeen) Ltd	Loch-hills Quarry, Parkhill, Dyce	WML/N/20062	NJ914144
King Contractors (Perth) Ltd	Huntingtower Quarry, Perth	WML/E/00304	NO076247
Kirkmyres Sand & Gravel	Balquhindachy Farm, Turriff	WML/N/20089	NJ761486
Kirkmyres Sand & Gravel	Pitnacalder Quarry, New Aberdour	WML/N/20117	NJ873628
Kirkton Barns Reclamation Account	Kirktonbarns Landfill, Tayport	WML/E/00295	NO452261
L H Spence & Sons	Brackmont Mill, St Michaels, Leuchars	WML/E/00286	NO437224
Laing House	Gallowflats, Errol	WML/E/00303	NO209213
Leiths Surfacing Ltd	Home Farm, Kingswells, Aberdeen	WML/N/20045	NJ863063
Les Taylor Contractors Ltd	Boghead Farm, Kintore	WML/N/20185	NJ795139
Les Taylor Contractors Ltd	Newton of Savoch, Longside, Peterhead	WML/N/20196	NK066423
Levenseat Ltd	Torphin Quarry, Harburn, West Calder	WML/E/00058	NT028597
Levenseat Ltd	Levenseat 11 Landfill Site	WML/E/20189	NS945585
Lothian Recycling 1996 Ltd	Pentland Mains Landfill, Damhead, Midlothian	WML/E/20145	NT254654
Luddon Construction Ltd	Birdston Tip, Kirkintilloch	WML/W/00048	NS649748
Luddon Construction Ltd	East Mavis Valley, Bishopbriggs	WML/W/00065	NS597714
Luddon Construction Ltd	Dalreoch Quarry, Renton Road, Dumbarton	WML/W/00015	NS388761
M & D Russell (Haulage) Ltd	Clapperton Bing, Pumpherston	WML/E/00048	NT78697
M K Leslie Ltd	West Staney Hill, Lerwick	WML/N/50101	HU448422
M Ridgeway, Esq	Railway Cutting, Nether Howden Farm, Oxtou	WML/E/00007	NT499532
Mardon Plant Hire Ltd	Hillhouse Farm	WML/E/00053	NT117674
Marshall Farms	Muirpark Farm, Tullibody, Clackmannanshire	WML/E/20171	NS867961
McIntosh Plant Hire (Aberdeen) Ltd	Cairdhillock Landfill Site, Kingswells, Aberdeen	WML/N/20003	NJ847068
McIntosh Plant Hire (Aberdeen) Ltd	Leys Quarry, Mintlaw, Peterhead	WML/N/20206	NK004524
McIntosh Plant Hire (Aberdeen) Ltd	Cairdhillock East, Kingswells, Aberdeen	WML/N/20201	NJ840064
McTaggart Construction Ltd	Giffenmill Railway Cutting, Barrmill, by Beith	WML/W/20093	NS372514
Messrs J & R Mitchell	Pairney Quarry, Auchterarder	WML/E/00310	NN977130
Messrs McFadyens Contractors, Campbeltown Ltd	Dhurrie Farm, Campbeltown, Argyll	WML/W/00220	NR684223
Michael Bowman	Duisky – 5, Fort William	WML/N/50124	NN007772
Midlothian Council	Drummond Moor Landfill Site, Roslin, Penicuik	WML/E/20047	NT273597
Moray Council	Kirkhill Landfill, Calcots Road, Elgin	WML/N/20095	NJ234634
Moray Council	Nether Dallachy Landfill, Spey Bay, Moray	WML/N/20094	NJ361643
Moray Council	Newtyle Landfill, Rafford, Forres	WML/N/50038	NJ054552
Morris Young (Perth) Ltd	Loanleven Farm, Perth	WML/E/20139	NO055258
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 J Muir	Inverqueich Farm, Alyth	WML/E/00335	NO274499
Mr James Rae Halliday	Campbelton Farm, Twynholm, Whiteliggate	WML/W/00265	NX657538

Appendix VII

Licence holder	Site	WML number	National grid reference
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 Tillicoulyry	WML/E/00322	NS907968
Norman Jamieson	No 7 Holdings, Gagie Quarries, near Monikie	WML/E/00233	NO468367
North Ayrshire Council	Shewalton Landfill, Shewalton, Irvine	WML/W/20059	NS333365
North Ayrshire Council	Brodick Landfill Site	WML/W/20057	NS029353
North Lanarkshire Council	Auchinlea Landfill, Bellside, Cleland	WML/W/20070	NS280658
Orkney Islands Councils	Bossack Quarry, Tankerness, Orkney	WML/N/50019(b)	HY504084
Orkney Islands Councils	Blossom Quarry, Rousay, Orkney	WML/N/50008(a)	HY424324
Orkney Islands Councils	Chinglebraes Quarry, St Ola, Orkney	WML/N/50020	HY427090
Orkney Islands Councils	Gallowtuag Quarry, South Walls, Hoy, Orkney	WML/N/50009	ND304896
Orkney Islands Councils	Mitchell's Quarry, Stronsay, Orkney	WML/N/50006(a)	HY657281
Orkney Islands Councils	Peat Road Landfill Site, West Hill, Flotta	WML/N/50005	ND347926
Orkney Islands Councils	Westside Road Quarry, Eday, Orkney	WML/N/50007(a)	HY562334
Pat Munro (Alness) Ltd	Caplich Quarry, Alness	WML/N/50108	NH668704
Pennant Plant Ltd	Prestonholm, Dalhousie	WML/E/00086	NT324627
Perth & Kinross Council	North Forr Landfill Site, By Crieff	WML/E/20059	NN871202
R Garrick	The Old Lime Quarry, Girlsta	WML/N/50099	HU430504
R W & P Millican	Heughhead, Reston	WML/E/00132	NT877626
Railtrack plc	Shewalton Moss Tip, Irvine	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	Dunion Hill Landfill Site, Jedburgh	WML/E/20100	NT625189
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	Upperside Quarry, Near Temple	WML/E/00085	NT291559
Scottish Water	Broadside Reservoir, Denny	WML/E/00025	NS769831
Scottish Water	Craggans Hill, Glenturret	WML/E/00299	NN856243
Scottish Water	Killiecrankie Water Treatment Works, Perthshire	WML/E/00306	NN921626
Scottish Water	Lumsden, Rhynie	WML/N/20061	NJ468224
Scottish Water	Elf Hill Quarry, Elgin	WML/N/20097	NJ211557
Scottish Water	Lochcraigs Wood, Lintrathen	WML/E/00236	NO280543
Scottish Water	Glassford Water Treatment Works	WML/W/00135	NS708478

Appendix VII

Licence holder	Site	WML number	National grid reference
Scottish Water	Loch Whinyeon, Gatehouse of Fleet	WML/W/00262	NX630612
Scottish Water	Laurieston Forest	WML/W/00283	NX665635
Scottish Water	Carbarns STW, Netherton, Wishaw	WML/W/20120	NS771538
Scottish Water	Gorbals Works, Corslett Road, Glasgow	WML/W/20146	NS235582
Shanks Argyll & Bute Ltd	Dalinlongart 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 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
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	Haverall Wood Quarry, Lasswade, Midlothian	WML/E/00098	NT293659
Tarmac Northern Ltd	Coltness Factory, Newmains, Wishaw	WML/W/00170	NS825553
Tayside Contracts	Bolshan Quarry, Kinnell, Frioekheim	WML/E/00211	NO621527
Tayside Contracts	Cultullich, Aberfeldy	WML/E/00300	NN873504
Tillicoultry Quarries Ltd	Tulliallan Quarry	WML/E/00252	NS939898
Toffolo Jackson	Burnfield Road, Glasgow	WML/W/00102	NS557598
Torith Ltd	Baldragon Farm, Bridgefoot, Dundee	WML/E/00229	NO378352
Uist Builders (Construction) Ltd	Grimshader Quarry, Grimshader, Isle of Lewis	WML/N/50083	NB394275
UKAEA	Dounreay near Thurso	WML/N/50085	NC992679
W Forrest & Son	Omoa Works, Newarthill, Motherwell	WML/W/00191	NS798598
W H Malcolm Ltd	Inchbelly Landfill, Kilsyth Road, Kirkintilloch	WML/W/00050	NS668756
W H Malcolm Ltd	Reilly Quarry, Bishopton, Renfrewshire	WML/W/00077	NS418695
W H Malcolm Ltd	Southbar Landfill, Bishopton, Renfrewshire	WML/W/00078	NS447693
W H Malcolm Ltd	Giffen Quarry, Greenhills, By Beith	WML/W/00221	NS379507
W H Malcolm Ltd	Medrox Quarry, Glenboig	WML/W/00159	NS726699
W J & R Morgan	Anniston, Inverkeilor, Arbroath	WML/E/00221	NO663478
Waste Recycling Group (Scotland) Ltd	Easter Deans Landfill Site, Nr Leadburn	WML/E/00134	NT239532
Waste Recycling Group Ltd	Drummond Moor, No 2 Landfill	WML/E/20192	NT272597
Watermill Aggregates Ltd	Broomhead Farm Quarry	WML/N/20209	NJ982637
William Hamilton & Sons (Contractors) Ltd	Dovesdale Farm, Stonehouse	WML/W/00155	NS770460
William Tracey Limited	Middleton Quarry, Lugton, Beith	WML/W/20185	NS400528
Wm Baxter & Son	Baxter's Food Factory, Fochabers	WML/N/20096	NJ339601
Wm Thompson & Son (Dumbarton) Ltd	Riggangower Quarry, Milton	WML/W/00020	NS438752



Please do not call these numbers for general enquiries

Additional copies of this publication can be obtained
from the SEPA website at
www.sepa.org.uk



Printed on totally chlorine free (TCF) material
containing 100% recycled post-consumer waste.
12/06 650
ISBN 1-901322-66-1

WDD6



**HOUSEHOLD
WASTE**

- Polythene ✓
- Polystyrene ✓
- Laminates ✓
- MDF ✓
- Chipboard ✓