



Waste Strategy 2000

England and Wales *Part 2*



SUSTAINABLE
DEVELOPMENT



Waste Strategy 2000

for England and Wales

Part 2

Presented to Parliament by the Secretary of State for
the Environment, Transport and the Regions
by Command of Her Majesty:

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CHAPTER 1

Introduction

- 1.1 Part 1 of this strategy sets out a vision of sustainable waste management in England and Wales for the next 20 years. It offers a strategic overview of waste policy, outlines the scale of the task facing us and the tools we can bring to bear on that challenge, and gives details of the actions stakeholders need to take in the next 5 years to meet the vision and targets we have set ourselves.
- 1.2 Part 2 is set out as a complement to Part 1, and should be read in conjunction with that document. In it, we:
- provide further data on the nature and quantity of waste production
 - provide more detailed background to many of the policies described in Part 1
 - describe some of the progress we have made since the last waste strategy, *Making Waste Work*, was published in 1995
 - set out arrangements for a number of specific waste streams, including packaging waste and special (hazardous) waste
 - describe the existing facilities for managing waste in England and Wales

The vision, aims and objectives of the waste strategy

- 1.3 The key messages of the waste strategy are:
- we produced 106 million tonnes of commercial, industrial and municipal waste in England and Wales last year, most of which was sent to landfill
 - at the heart of our strategy lies the need to tackle the growth in our waste
 - we need to maximise the amount of value we recover from waste, through increased recycling, composting and energy recovery
 - the strategy sets challenging targets for better waste management:
 - to recover value from 45% of municipal waste by 2010, at least 30% through recycling or composting
 - to recover value from two thirds of municipal waste by 2015, at least half of that through recycling and composting, and to go beyond this in the longer term

- we need to develop new and stronger markets for recycled materials – we will set up a major new programme, the sustainable waste action trust, to deliver more recycling and re-use, help deliver markets and end uses for secondary materials, and promote an integrated approach to resource use
- producers must increasingly expect to arrange for recovery of their products – in particular, we will develop an initiative on junk mail
- the amount of waste sent to landfill must be reduced substantially – we will introduce a system of tradable permits in England, restricting the amount of biodegradable municipal waste local authorities can send to landfill
- local authorities will need to make significant strides in recycling and composting – we will set statutory performance standards for local authority recycling and composting. We will work with local authorities to pilot schemes encouraging householders to reduce waste, and to participate in recycling schemes
- where energy recovery facilities are needed, we believe they should be appropriately sized to avoid competition with recycling, and the opportunities for incorporating Combined Heat and Power technology should always be considered

Waste and other Government policy initiatives

Waste has important links with many other aspects of Government policy. This strategy has therefore been prepared in light of the policies described in:

- The sustainable development strategy, *A Better Quality of Life*, May 1999 Cm 4345
- *Climate Change: Draft UK Programme*, DETR, February 2000, Product Code: 99EP0850. The Government's energy efficiency policy is being developed alongside the UK Climate Change Programme. The Government's energy policy, including sustainable energy, is set out in the DTI White Paper *Conclusions of the Review of Energy Sources for Power Generation and Government Response to Fourth and Fifth Reports of the Trade and Industry Committee* published in October 1998 (Cm 4071)
- *Sustainable Business – A consultation paper on sustainable development and business in the UK*, DETR, March 1998
- *Building a Better Quality of Life: A Strategy for more Sustainable Construction*, DETR, April 2000, Product Code: 99CD1065
- *New and Renewable Energy – Prospects for the 21st Century: Conclusions in Response to the Public Consultation Paper*, DTI, 2000
- *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland*, DETR January 2000, Cm 4548, SE 2000-3, NIA-7
- *Sustainable Production and use of Chemicals – A Strategic Approach – The Government's Chemicals Strategy*, December 1999
- The Draft Soil Strategy – to be published for consultation later this year
- The White Paper on Integrated Transport, *A New Deal for Transport: Better for Everyone*, July 1998 Cm 3950
- the 2000 Budget statement
- and taking into account developments in local and regional government, including the Best Value initiative, and the establishment of Regional Development Agencies.

Application of this strategy

- 1.4 This waste strategy (both Part 1 and Part 2), together with guidance to planning authorities on the siting of facilities, implements for England and Wales the requirement within the Framework Directive on Waste¹, and associated Directives², to produce waste management plans. Strategies covering Scotland and Northern Ireland have also been prepared, by the Scottish Environmental Protection Agency and the Northern Ireland Environment and Heritage Service.
- 1.5 The requirements for waste management plans in these Directives is implemented into law by Section 44a of the Environmental Protection Act 1990 (as amended by the Environment Act 1995).
- 1.6 This strategy (both Part 1 and Part 2) is also a strategy for dealing with waste diverted from landfill in England and Wales, as required by the Landfill Directive³.
- 1.7 This White Paper (both Part 1 and Part 2) replaces the previous waste management plan for England and Wales, published in June 1999 under the title *A Way With Waste – a draft waste strategy for England and Wales*.
- 1.8 Furthermore, this waste strategy is an advisory document. The 1990 Town and Country Planning Act requires local planning authorities in England and Wales to have regard to national policies in drawing up their development plans, and therefore this document will be an important source of guidance. These development plans will then provide a framework for individual planning decisions. Guidance on land use planning and waste in England is contained in Planning Policy Guidance notes 10 and 11. The equivalent documents in Wales are *Planning Guidance (Wales) Planning Policy First Revision April 1999*, and *draft Technical Advice Note on Planning, Pollution Control and Waste Management* issued in 1996.

¹ This strategy describes the current policy on waste management in England and Wales. As such, it is a waste management plan under Council Directive 75/442/EEC as amended by Council Directive 91/156/EEC and adapted by Council Directive 96/350/EC (known as the Framework Directive on Waste)

² Council Directive 91/689/EEC (the Hazardous Waste Directive), and the European Parliament and Council Directive 94/62/EC (the Packaging and Packaging Waste Directive)

³ 1999/31/EC, known as the landfill Directive

CHAPTER 2

Identifying the problem

- 2.1 Identifying the size of the challenge facing us is essential before we can make decisions on how best to meet that challenge. This chapter includes details on how we define and categorise our waste. It also includes a detailed account of the quantities of waste currently produced in England and Wales.

Descriptions of waste

- 2.2 Determining what constitutes waste is not a simple affair. The legal definition of waste is discussed in Annex B section B.19 of this part of the strategy. Waste can also be divided into a number of different categories. A number of terms for waste are used throughout this strategy, and have the following meanings:

- **Controlled waste** – is used to describe waste which must be managed and disposed in line with waste management and other waste related regulations. It includes municipal, commercial and industrial waste. It can be from a house, school, hospital, shop, office, factory or any other trade or business. It may be solid or liquid; scrap metal, old newspapers, a used plastic bottle, etc. It does not need to be hazardous or toxic to be a controlled waste. Wastes collected from households, however, and certain animal wastes are specifically exempted from the Duty of Care requirements applied to other controlled wastes.
- **Municipal waste** – includes all waste under the control of local authorities or agents acting on their behalf. It includes all household waste, street litter, waste delivered to council recycling points, municipal parks and garden wastes, council office waste, civic amenity site waste, and some commercial waste from shops and smaller trading estates where local authority waste collection agreements are in place.
- **Household waste** – is defined in the Environmental Protection Act 1990, supplemented by the Controlled Waste Regulations 1992. It includes waste from household collection rounds, bulky waste collection, hazardous household waste collection and separate garden waste collection, plus waste from services such as street sweeping, litter and civic amenity sites. The definition also covers waste from schools.
- **Business (or commercial and industrial) waste** – covers commercial wastes and industrial wastes. Generally, businesses are expected to make their own arrangements for the collection, treatment and disposal of their wastes. Waste from smaller shops and trading estates where local authority waste collection agreements are in place will generally be treated as municipal waste.
- **Commercial waste** – waste arising from wholesalers, catering establishments, shops and offices.
- **Industrial waste** – waste arising from factories and industrial plants.

- **Agricultural waste** – is any waste from a farm or market garden, and includes organic matter such as manure, slurry, silage effluent and crop residues, but also includes packaging and films, and animal treatment dips (for example sheep dip).
- **Construction and demolition waste** – arises 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, plastics and (occasionally) special waste materials.
- **Mines and quarries waste** – includes materials such as *overburden*, rock interbedded with the mineral, and residues left over from initial processing of the extracted material into saleable products.

2.3 In statistical terms, waste is defined by source, in terms of the Standard Industrial Classification (SIC) codes. Details of these codes can be found in the *Draft UK Waste Classification Scheme*.

Waste tracking and monitoring systems

- 2.4 There are a number of systems in place to monitor and track the movements of controlled waste. The Control of Pollution (Amendment) Act 1989 makes it a criminal offence for a person who is not a registered carrier to transport controlled waste to or from any place in Great Britain. The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991 establish a system for registration of carriers of controlled waste and supplement the provisions of the Act dealing with the seizure and disposal of vehicles used for illegal waste disposal. The Regulations also set out the various groups who are exempt from the requirement to register.
- 2.5 Under the Environmental Protection (Duty of Care) Regulations 1991 (see Chapter 3 section 3.46 of this part of the strategy), when waste is passed from one person to another, the person taking the waste must have a written description of it (unless one of the parties is exempt from the Duty of Care). A transfer note must also be filled in and signed by both persons involved in the transfer. The transfer note will include a range of information on the waste, such as what the waste is and how much there is of it what sort of container it is in, where the transfer took place, and details of the people involved in the transfer.
- 2.6 The movements of special waste are tightly controlled by a system of consignment notes introduced as part of the Special Waste Regulations 1996 (see Chapter 6 of this part of the strategy).
- 2.7 The policy and practicalities of importing or exporting waste are covered in the *United Kingdom Management Plan for Exports and Imports of Waste*¹, which is currently being reviewed. In general, the importing or exporting of waste for disposal is banned (with a few specified exemptions, such as importing certain wastes for high temperature incineration), while the import and export of waste for recovery is permitted in certain circumstances.
- 2.8 There are also obligations on certain businesses to keep track of the amount of packaging they produce, so that they comply with the Producer Responsibility Obligations (Packaging Waste) Regulations 1997.

¹ United Kingdom Management Plan for Exports and Imports of Waste, HMSO, £15.00, ISBN 0-11-753181-2

Exports and imports of waste

The 1989 United Nations Basel Convention on the control of transboundary movements of hazardous wastes and their disposal provides the framework for a global system of controls on international movements of hazardous and certain other wastes. Countries who sign up to the Convention are obliged to take appropriate measures to:

- reduce transboundary movements to a minimum, consistent with their environmentally sound management
- minimise the generation of waste
- aim at self-sufficiency in final disposal
- prevent transboundary movements where the proposed country of destination has not given its consent
- ensure environmentally sound disposal and recovery of wastes
- (subject to the ratification of the "Ban" amendment agreed in 1995) prohibit the export of hazardous waste from Annex VII countries (for example those belonging to the OECD, the European Union and Liechtenstein) to non-Annex VII countries.

The United Kingdom, together with the European Commission and most other EC Member States, became a Party to the Convention in May 1994, and implemented the provisions of the Convention in the European Community by way of Council Regulation (EEC) No. 259/93 (the *Waste Shipments Regulation*). This was amended by Council Regulation 120/97 to implement the ban on exports of hazardous wastes from EU Member States to non-OECD Countries.

The Waste Shipments Regulation also incorporates the OECD *Decision on the Control of Transfrontier Movements of Waste Destined for Recovery Operations*. This Decision, which is regarded as a multilateral agreement under the Basel Convention, was introduced to facilitate movements of wastes for recovery between countries belonging to the OECD.

Within this framework, the United Kingdom has some scope to draw up additional controls on shipments of waste. Such controls are set out in the legally binding *United Kingdom Management Plan for Exports and Imports of Waste* (the UK Plan). The UK Plan reflects long-standing UK policies of self-sufficiency in waste disposal and the proximity principle, whereby waste should be disposed of in, or as close as possible to, the country of origin. It therefore prohibits exports and imports of waste for disposal, except in limited circumstances. At the same time, the UK Plan seeks to preserve the trade in wastes for genuine and environmentally sound recovery operations in line with international agreements.

The UK Government recently launched a public consultation exercise on future policies on waste exports and imports. It is intended that the policies proposed in the revised UK Plan should complement those in this strategy. The draft revised UK Plan recommends maintaining the existing policy framework, but with minor changes to reflect operational experience and other political and environmental developments.

Commercial and industrial waste data

- 2.9 The Environment Agency has undertaken a survey of industrial and commercial waste, providing detailed information of the amounts and different types of waste produced by industrial and commercial companies in England and Wales.
- 2.10 Data was collected by means of site visits and by telephone, from a sample of about 20,000 companies between October 1998 and April 1999, and a full analysis of the data from the survey will be published by the Agency in 2000.
- 2.11 A summary of the provisional data is given below. Further work is continuing in order to improve the conversion factors used to convert waste volumes to waste tonnages, and there will be some changes to the figures when the final conversion factors have been calculated. The preliminary results show:

- total industrial waste is estimated at 48 million tonnes
- total commercial waste is estimated at 30 million tonnes

Estimated totals for different sectors of industry and commerce	
Business sector	Estimated annual waste generation Million Tonnes
Industrial companies	
Food, drink and tobacco	8
Textiles, wood, paper	7
Chemicals, rubber, mineral products	9
Metals, metal products	8
Other manufacturing	7
Coke, oil, gas, electricity, water	3
Transport, storage, communications	4
Miscellaneous	2
Total industrial	48
Commercial companies	
Wholesale	4
Retail	7
Hotels and catering	4
Education	2
Other business and public administration	13
Total commercial	30
Total industrial and commercial	78

Estimated totals for identified waste streams	
Waste type	Estimated annual waste generation Million Tonnes
Inert, in-house (small scale) construction	2
Paper and card	7
Food	3
Other general and biodegradable	9
Metals and scrap equipment	6
Contaminated and healthcare	5
Mineral waste and residues	6
Chemicals	4
General commercial	23
General industrial	13
Total	78

Recovery and disposal routes for each identified waste type, by percentage

Waste type	Waste recovered:		total	Waste disposed:		total
	recycled	other		landfill	other	
Inert, in-house construction	39%	0%	39%	56%	5%	61%
Paper and card	76%	1%	77%	22%	1%	23%
Food	69%	11%	80%	7%	13%	20%
Other general and biodegradable	42%	21%	63%	26%	11%	37%
Metals and scrap equipment	89%	0%	89%	10%	1%	11%
Contaminated and healthcare	34%	2%	36%	42%	22%	64%
Mineral waste and residues	38%	0%	38%	62%	0%	62%
Chemicals	21%	7%	28%	45%	27%	72%
General commercial	18%	4%	22%	78%	0%	78%
General industrial	11%	2%	13%	86%	1%	87%

Recovery and disposal routes (million tonnes – calculated from data given above)

Waste type	Waste recovered:		total	Waste disposed:		total
	recycled	other		landfill	other	
Inert, in-house construction	0.78	0.00	0.78	1.12	0.10	1.22
Paper and card	5.32	0.07	5.39	1.54	0.07	1.61
Food	2.07	0.33	2.40	0.21	0.39	0.60
Other general and biodegradable	3.78	1.89	5.67	2.34	0.99	3.33
Metals and scrap equipment	5.34	0.00	5.34	0.60	0.06	0.66
Contaminated and healthcare	1.70	0.10	1.80	2.10	1.10	3.20
Mineral waste and residues	2.28	0.00	2.28	3.72	0.00	3.72
Chemicals	0.84	0.28	1.12	1.80	1.08	2.88
General commercial	4.14	0.92	5.06	17.94	0.00	17.94
General industrial	1.43	0.26	1.69	11.18	0.13	11.31
Total commercial and industrial	27.68	3.85	31.53	42.55	3.92	46.47
Total percentages	35.49%	4.94%	40.42%	54.55%	5.03%	59.58%

- 2.12 Overall, about 40% of industrial and commercial waste is recovered (35% being recycled), and the other 60% is disposed, mainly to landfill. Nearly half the total waste is identified as general commercial or industrial waste, of which about 80% is landfilled and about 15% is recycled. Recycling is highest for separately collected waste streams such as metals and scrap equipment (89%) and paper and card (76%).
- 2.13 Analysis of the data from the survey will provide – for the first time – detailed information on the amounts of different types of waste produced by companies in each industrial and commercial sector, together with details of treatment and disposal routes for the waste. The 1998/99 survey will establish baseline data for industrial and commercial waste. The Agency plans to carry out further surveys every three years to update the information. It is planned to make the results of these surveys widely accessible through a waste database:

- a report of the survey will be published in 2000
- strategic waste management assessment reports will also be published in 2000 for each planning region in England and Wales
- results of the survey will also be made available through a website which will include a suite of interactive tools, including a benchmarking tool for businesses, a waste exchange and a recycling database

Business environmental performance

Alongside factual questions such as types and quantities of wastes generated, and methods of waste management used, companies were also asked to assess their own environmental performance. While the responses to this question are not statistically representative of business environmental performance, the results do offer some indication of how businesses generally view their own performance on waste management issues.

Some of the salient points to emerge include:

- 16% of businesses surveyed claim to have achieved waste reduction (mainly as a result of carrying out waste audits) and a further 2% plan to achieve waste reductions during the next 12 months
- 40% of companies claim to monitor waste expenditure and a further 3.5% plan to introduce waste expenditure monitoring in the next 12 months
- 20% of companies report having carried out a waste audit and 60% of those report waste savings as a result of the audit
- 30% of companies claim to have a published environmental policy, 80% of which either include waste policies or cover waste issues; a further 5% of companies plan to publish an environmental policy in the next 12 months
- 10% of companies are members of a local Business Environment Group and a further 2% plan to join one in the next 12 months.

Municipal waste data

- 2.14 Starting in 1995/96, the Department of the Environment, Transport and the Regions (DETR) and the Welsh Office (the National Assembly for Wales from 1 July 1999) have commissioned an annual survey of local authorities in England and Wales, to collect information on the collection, treatment and disposal of municipal and household waste. Local authorities' response to the survey has been very good, and information was provided by 90% of authorities in 1995/96, rising to 95% in 1997/98. So far, all but one local authority have replied to the 1998/99 survey.
- 2.15 This high response has enabled reliable national estimates to be made of levels of municipal and household waste; recycling rates; and methods of waste collection, disposal and treatment routes. The survey also collects information on the amounts of waste collected for centralised composting and asks local authorities to provide estimates of the amounts diverted to home composting. Information from the first three years of the survey show that:
- There were around 27 million tonnes of municipal waste in 1997/98, up from 25.2² million tonnes in 1995/96

² The figure for total municipal waste has been revised from 25.9 million tonnes since the publication of Municipal Waste Management 1995/96. The revised figure takes account of late returns, and uses information from subsequent surveys to make improvements to the grossing methodology.

- over 90% of municipal waste comes from household sources – 24.6 million tonnes in 1997/98 – which represents about 22 kg per household per week
- the majority of municipal waste, 85%, was disposed of to landfill in 1997/98, slightly more than in 1995/96
- in 1997/98, 14% of municipal waste had value recovered from it through recycling, composting or energy from waste schemes, up from 12% in 1995/96
- around two million tonnes of household waste were collected for recycling or composting in 1997/98
- the percentage of household waste collected for recycling or composting increased from 6.5 per cent in 1995/96 to 8% in 1997/98
- Paper and card accounted for nearly 40% of the household waste collected for recycling in 1997/98, while glass and centralised composting accounted for another 20% each
- the number of *bring* sites and civic amenity sites for recycling has increased slightly to a level of about eight sites per ten thousand households, but there has been a substantial increase in the number of households served by *kerbside* recycling schemes, from 17% of households in 1995/96 to 37% in 1997/98
- amounts of waste collected for centralised composting have more than doubled in two years, to 390,000 tonnes in 1997/98; in addition, local authority estimates suggest that between 200,000 and 300,000 tonnes of waste are composted at home
- the use of wheeled bins for the collection of waste from households has increased from 38% of households in 1995/96 to 42% in 1997/98

2.16 The preliminary results of the 1998/99 survey show that:

- there were around 27.9 million tonnes of municipal waste arising in 1998/99
- of this total around 83% was landfilled, while 9% (over 2.5 million tonnes) was recycled and 8% was incinerated with energy recovery, giving a total municipal recovery figure of 17%.

Sustainable waste and resource use indicators

2.17 Following the publication of the Government's Sustainable Development Strategy, *A better quality of life*³, launched by the Deputy Prime Minister in May 1999, a baseline assessment of a series of headline and core indicators for sustainable development was set out in *Quality of life counts*⁴, published in December 1999.

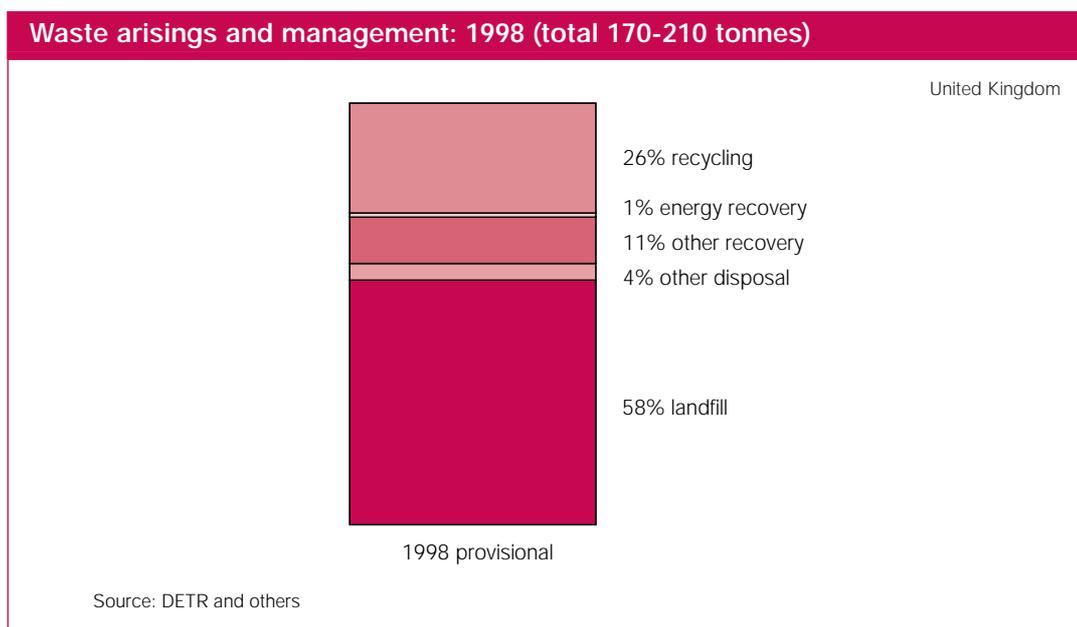
³ *A better quality of life* – a strategy for sustainable development for the UK, published by The Stationery Office, May 1999. ISBN 0-10-143452-9. Price £11.80.

⁴ *Quality of life counts* – indicators for a strategy for sustainable development for the United Kingdom: a baseline assessment, published by the Government Statistical Service, 1999. ISBN 1-851123-43-1. Price £22.00.

- 2.18 A number of these indicators (which cover the whole of the UK, not just England and Wales) measure resource use and waste management. These baseline indicators are reproduced in full below. Note that these indicators do not take into account the Environment Agency's recent survey of industrial and commercial waste. The text below is reproduced from *Quality of Life Counts* and does not reflect the policy developments in this strategy.

WASTE ARISING AND MANAGEMENT (Indicator H15)

Objective Move away from disposal of waste towards waste reduction, reuse, recycling and recovery



It is estimated that between 170 and 210 million tonnes of waste are produced each year in the UK by households, commerce and industry, including construction and demolition. Nearly 60 per cent of this is disposed of in landfill sites.

Relevance The types of waste we produce, all forms of waste management, and the transport of waste, have impacts on the environment. Waste is a potential resource and increased levels of reuse, recycling and energy recovery will contribute to achieving more sustainable lifestyles.

Targets and goals Range of targets in draft waste strategies for England and Wales, Scotland and Northern Ireland.

Trends The 1998 estimate is provisional, and will be revised when final information from current surveys is available. For most sectors there are no comparable data for earlier years. Trends in household waste are illustrated in Indicator A5, which shows an increase of 26% in total household waste in England and Wales between 1983/84 and 1997/98.

Background The Government and the National Assembly for Wales are committed to achieving targets derived from European legislation, such as the Landfill

Directive and the Packaging Directive. The Landfill Directive, which requires substantial amounts of waste to be diverted from landfill, will require a step change in the management of municipal waste in the UK.

Strategies *A better quality of life: a strategy for sustainable development in the UK; A Sustainable Wales: Learning to Live Differently – a draft Sustainable Development Scheme for Wales; National waste strategy: Scotland; Waste management strategy 1999-2019 – Northern Ireland.*

UK RESOURCE USE (Indicator A1)

Objective **Greater resource efficiency**

An indicator showing, for example, UK consumption of materials by weight or volume per unit of Gross Domestic Product, and identifying broad resource groups separately, such as metals, fossil fuels, minerals and renewables (for example cereals, timber).

Relevance A key sustainable development objective is to use natural resources more efficiently. The rate of consumption of resources should not reduce their availability for future generations, and producing more with less means reducing environmental pollution and degradation caused by the extraction, use and disposal of natural resources.

Targets and goals There are no specific resource efficiency targets for the UK but there is a commitment to promote continual improvements in resource efficiency.

Background Specific aspects of efficiency are dealt with by other indicators such as energy efficiency of the economy, and competitiveness/ productivity.

Research will be carried out to identify suitable measures, consistent as far as possible with work which is being carried out by other countries and international bodies such as the Organisation for Economic Cooperation and Development (OECD) and the United Nations (UN) to produce first estimates for the UK.

One approach is to estimate Total Material Requirements (TMR). This looks at the use of resources, in weight or volume terms, for broad resource groups; identifies separately, direct material inputs (both renewable and non-renewable natural resources), and hidden or ancillary flows such as excavated or disturbed material from mining; and identifies consumption using imported materials.

WASTE BY SECTOR (Indicator A4)

Objective **Move away from disposal of waste towards waste reduction, reuse, recycling and recovery**

An indicator showing waste produced by different sectors, possibly in relation to GDP or output. The indicator will be developed when final figures are available from the Environment Agency's survey of industrial and commercial waste.

Relevance Sustainable development requires an improvement in resource efficiency. Waste reduction will contribute to this.

Targets and goals The draft waste strategy for England and Wales *A Way With Waste*, and the draft waste strategy for Northern Ireland *Waste Management Strategy 1999 – 2019*, both propose a target of reducing industrial and commercial waste to landfill to 85% of 1998 levels by 2005. The draft waste strategy for Scotland *National Waste Strategy: Scotland* proposes a target of reducing industrial waste arisings by 3-5% by 2005.

Background In the UK around 400 million tonnes of waste a year are produced from different sources. About 20-25% of this is from industry and commerce.

HOUSEHOLD WASTE AND RECYCLING (Indicator A5)

Objective Move away from disposal of waste towards waste reduction, reuse, recycling and recovery



In England and Wales, amounts of household waste generated have increased steadily to nearly 500kg per person per year in 1997/98. This represents an increase of 26% in total household waste and 20% in household waste per head. About 8% of this waste is recycled or composted.

Relevance Household waste reduction and increased recycling would lead to a reduction in the environmental impact of waste disposal.

Targets and goals The draft waste strategy for England and Wales *A Way With Waste* sets a goal of 30% recycling and composting by 2010. Options for introducing a household waste reduction target will be considered. The draft waste management strategy for Northern Ireland sets a target of 25% recycling

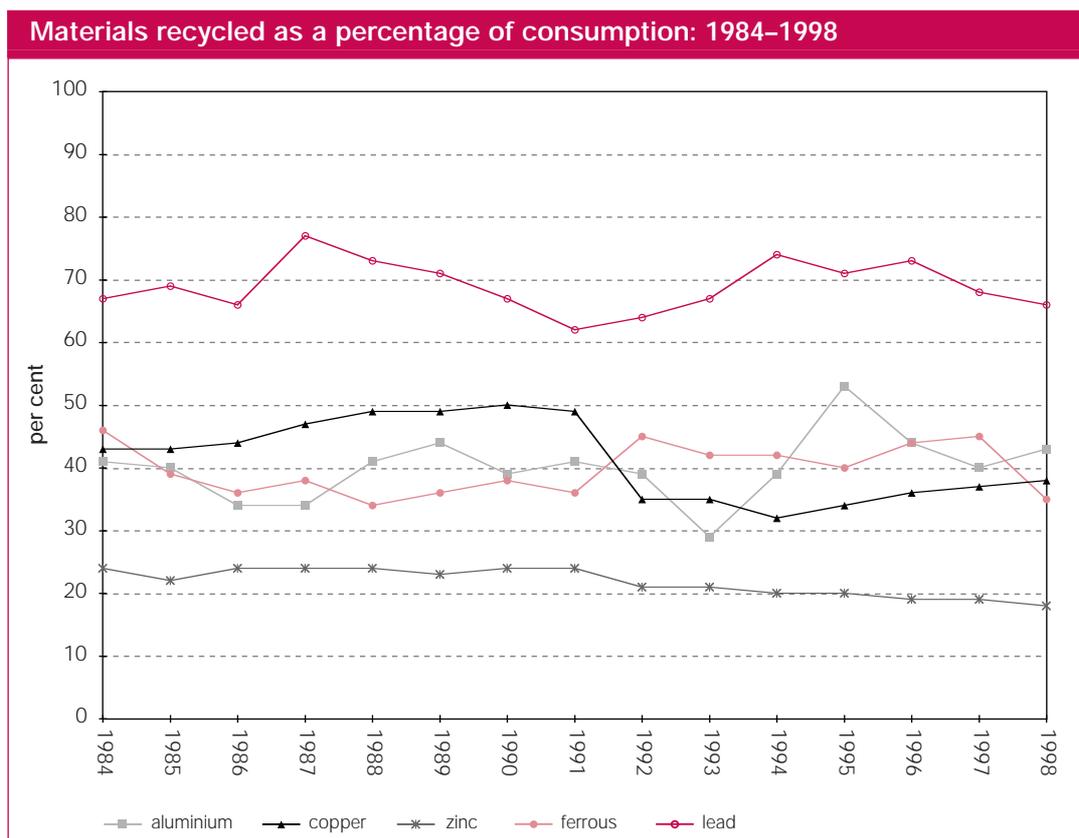
or composting by 2010, and also includes a target of reducing household waste to 1998 levels by 2005 and thereafter by at least 1% annually. The Scottish draft waste strategy proposes a target for a 2-4% reduction in municipal waste between 1994 and 2016.

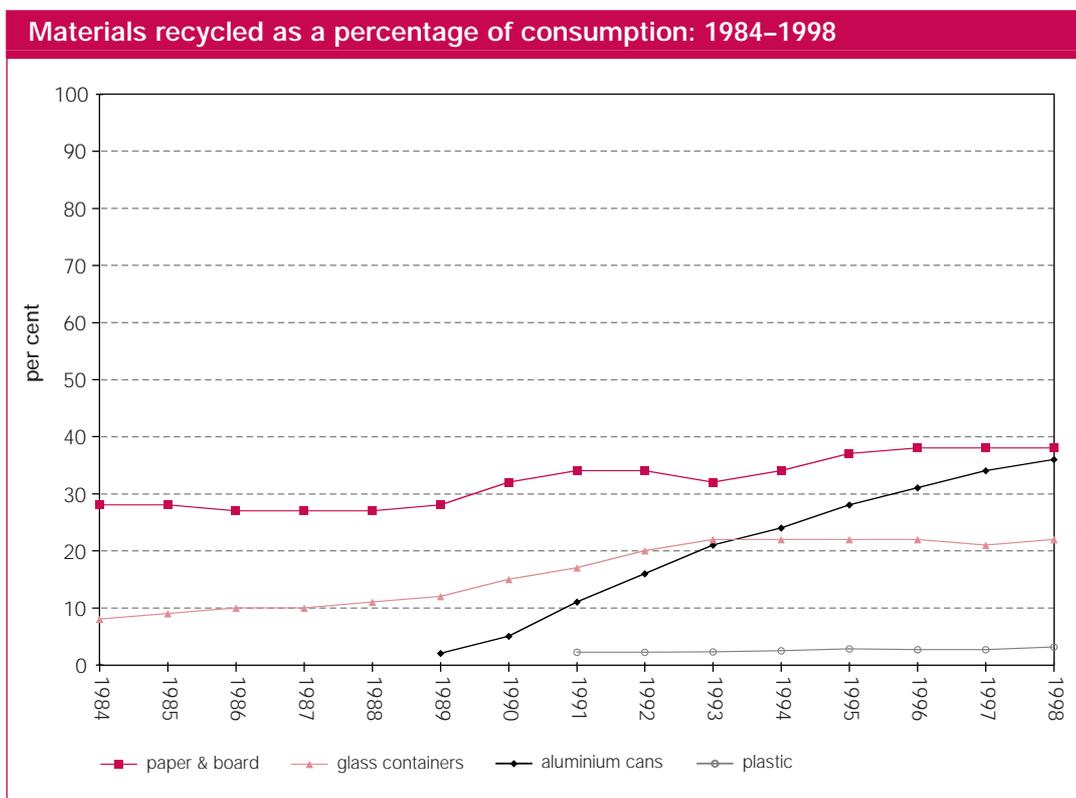
Trends It is difficult to compare long-term changes because of differences in data sources and definitions. The increase in levels of household waste is likely to be linked to a number of factors, including the increase in number of households and changes in the pattern of consumer spending. There may also be an increase in the amount of commercial waste mixed in with household waste. Improved recycling rates reflect improved provision of recycling facilities.

Background Household waste includes household bin waste and also waste from civic amenity sites, other household collections, recycling sites, litter collections and street sweeping. Household waste represents about 90% of municipal waste, which is collected and managed by local authorities. Most recycling of household waste comes from “bring” sites such as bottle and paper banks, and increasingly from kerbside collections.

MATERIALS RECYCLING (Indicator A6)

Objective Move away from disposal of waste towards waste reduction, reuse, recycling and recovery





The average recycling rate for metals has been fairly stable between 1984 and 1998 at around 40%. In 1998, about 40% of paper was also recycled, but the level of glass recycling is lower, at around 22%, and only 3% of plastics are recycled.

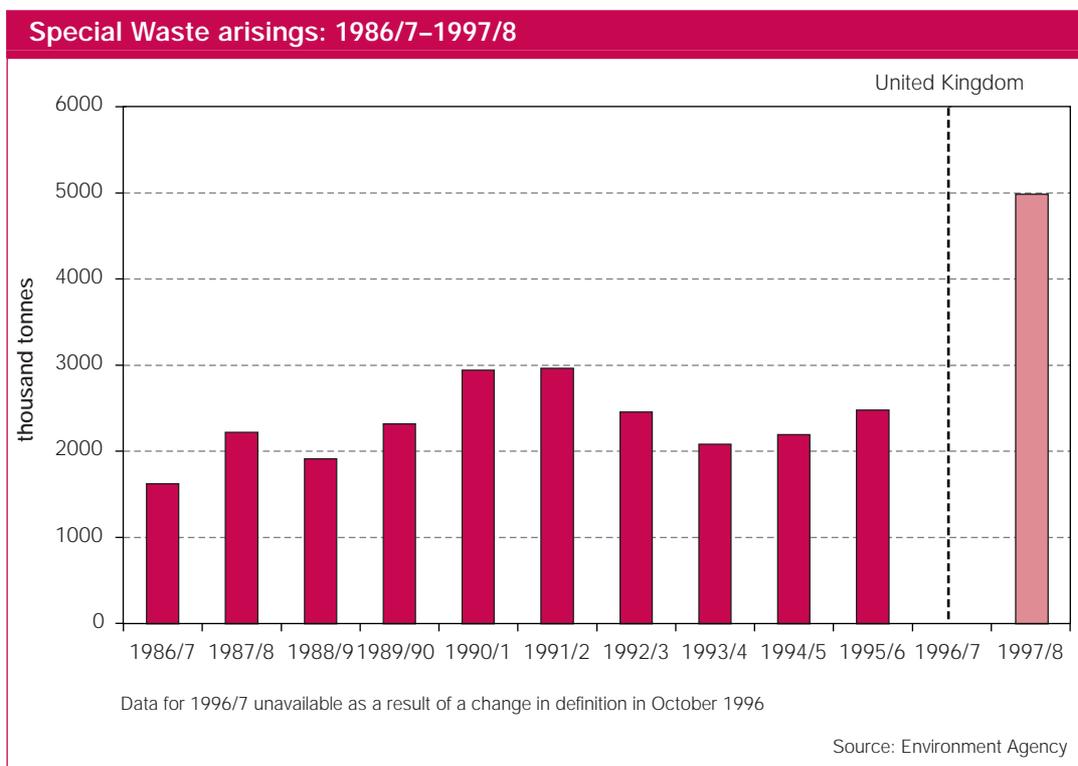
Relevance Increased levels of recycling ensure that waste is used as a resource, and value is obtained from it.

Trends Recycling rates for industrial process waste are generally high. Recycling of paper increased steadily between the mid-1980s and mid-1990s, encouraged by improved recycling facilities, but showed no further increase up to 1998. After earlier improvements, the rate of glass recycling has also stabilised.

Background For many materials, the scope for recycling is limited by the size of the markets for secondary materials. The level of recycling can also be constrained by lack of clear standards, poor consumer awareness and the volatility of prices for recycled materials.

HAZARDOUS WASTE (Indicator A7)

Objective Move away from disposal of waste towards waste reduction, reuse, recycling and recovery



Up to 1995/96, around 2 to 3 million tonnes of special waste were reported each year. Following an extension of the definition in 1996 to include some further waste types, such as waste oils, total special waste was around 5 million tonnes in 1997/98.

Relevance Managing and disposing of hazardous waste has a particularly high impact on the environment.

Trends Amounts fluctuate from year to year, partly due to variations in amounts of contaminated soil removed for remediation purposes. There is no clear trend.

Background Before 1996, special waste was defined by the Control of Pollution (Special Waste) Regulations 1980. The Special Waste Regulations 1996 defined a wider range of hazardous wastes as special. Following the introduction of these regulations, all movements of special waste are tracked until they reach a waste management facility.

It is anticipated that further changes will be made to the list of special wastes over the next few years. These additions may substantially increase the tonnage of wastes defined as special, regardless of trends in the overall volume of waste generated. The amount of special waste produced will also be affected by any new measures taken to remove hazardous chemicals from the utility chain. Further work will be needed to develop this indicator so that it reflects trends in the amount of hazardous waste generated, independent of the definition of special waste.

Waste research, advice and information sources

- 2.19 The Government and the National Assembly recognise the need to work in partnership with a wide range of other groups, if we are to achieve the vision, objectives and targets set out in the Waste Strategy. Part of this dialogue with other groups includes coordinating and rationalising our mutual efforts on waste research, and promotion and information campaigns.
- 2.20 The move towards sustainable waste management relies on our ability to make rational decisions about the Best Practicable Environmental Option for local waste at the local level. The ability to make the best decision depends on having good data on which to base the decision-making process. Decisions will also be influenced by facts determined and underpinned by scientific research. Furthermore, it is not enough to obtain the data and undertake the research. The results of these efforts need to be disseminated to all those organisations and communities involved in making decisions on waste. Information and promotion campaigns become essential once a local sustainable waste management strategy has been agreed on and implemented – everybody needs to know what actions they need to take in support of the new system.
- 2.21 The Waste Action and Resources Programme, the new sustainable waste management programme, is designed to coordinate data generation and dissemination, and will have the resources to initiate research, and to offer advice on re-use and recycling best practice. But the new programme will not replace existing activities on waste research and promoting waste-awareness – rather it will complement and extend these existing initiatives.

WASTE AND RESOURCES ACTION PROGRAMME

- 2.22 The Government and the National Assembly are determined to overcome the market barriers to promoting the re-use and recycling of waste materials. To that end, a new programme – the Waste and Resources Action Programme – is being established and developed in 2000, to promote more sustainable waste management through an integrated approach to materials resource use, extensive development of markets and end-uses for secondary materials.
- 2.23 The central goals of the Programme will be to:
- achieve a significant increase in waste reduction and re-use, to help meet the vision of the waste strategy
 - double the present recycling and composting rates, to help meet the targets and goals set out in the strategy
- 2.24 Both in its ethos and its structure, the Programme will take a partnership approach involving DETR, DTI, the devolved administrations and the private sector, with contributions from each partner. In order to achieve its goals, the Programme will need to quickly develop its expertise and information management capabilities, and draw up plans for commissioning research and development to support its activities.
- 2.25 Further details of the Programme can be found in Chapter 3 of Part 1 of this strategy.

OTHER WASTE RESEARCH INITIATIVES

- 2.26 Research plays an important part in our understanding of waste issues and a number of key organisations undertake and support research into waste related issues. Within Government waste related research is carried out by DETR, DTI, MAFF and the Environment Agency. The National Assembly for Wales also undertakes research.
- 2.27 The Department is aware that there are a number of organisations who also promote research through Environmental Bodies, these include the Environmental Services Association's research trust ESART and the new body set up by the Institute of Wastes Management. To ensure that DETR's research does not duplicate such activity it will be considering the aims and objectives of its own programme and links with others.
- 2.28 The current objectives of DETR's waste research programme are to support:
- the development of sustainable waste management with an emphasis on reducing waste, optimising re-use and recovery of materials
 - the development of an integrated strategy for waste management
 - measures to ensure that waste is properly controlled so as to protect human health and the environment
 - our waste interests internationally

DISSEMINATION OF WASTE FACTS, INFORMATION AND BEST PRACTICE

- 2.29 Informing businesses, consumers and waste stakeholders is a vital element of the waste strategy. Ensuring that the messages being disseminated do not conflict with each other means that Government dissemination and promotion strategies need to be discussed and (when possible) coordinated with the efforts of other groups.
- 2.30 In particular, DETR is involved in three waste related promotions in 2000:
- **'are you doing your bit?'** – DETR through its 'are you doing your bit?' campaign is encouraging people to take on board environmental considerations in their every day lives. The aim is to encourage people to understand that small actions undertaken by them can make a difference, thus overcoming the feeling that a number of environmental issues are too large for them to do anything about. Waste is one of the themes of the 2000/01 campaign. Adverts will appear in magazines and newspapers, and on television. Messages include: re-use; recycling and buy recycled.
 - **National Waste Awareness Initiative** – seeks to raise awareness about waste issues and to create long term changes in attitudes and behaviour in the way waste is dealt with across the UK. The aim is to persuade people to take more responsibility and ownership of the waste they create and to deal with it in ways that are more sustainable. The Initiative is planning to launch its image and key campaign messages during 2000, and aims to start the campaign itself in 2001. DETR sees this as an important initiative and in recognition of that has provided funding for administration of the Initiative. The Government would like to see clear links between the Initiative and *are you doing your bit?*

- ***Going for Green Waste Theme Month*** – The aim of this particular initiative is to conduct a month long campaign (in October) to raise the profile on issues around the need to reduce, re-use and recycle waste. Activities are undertaken in conjunction with partners especially local authorities. Activities undertaken include national and regional events, a children's Activity Book, supporting newspaper articles and a national seminar at the end of the month.

CHAPTER 3

The decision-making framework

3.1 The Government and the National Assembly for Wales believe that the most effective waste management decisions can be taken by adopting an integrated approach to waste management. Integrated waste management can be considered to be a number of key elements working in concert, in particular:

- *recognising each step in the waste management process as part of a whole* – decisions should take account of the collection, transport, sorting, processing and recovery or disposal of wastes; and in the case of recovery, identification of end uses or markets for the resulting materials and energy
- *involvement of all key players* – an integrated approach to waste management should also define the contributions which all interested parties (which might include waste producers and managers, waste reprocessors, waste regulators, waste management planners, community groups, consumers and householders, and Government) can make in the development and achievement of common goals and objectives
- *a mixture of waste management options* – those planning the management of significant quantities of various wastes should avoid over-reliance on a single waste management option. It is unlikely that one approach will represent the Best Practicable Environmental Option (BPEO) for all elements of the waste stream
- *formal and informal partnerships* – especially between those organisations obligated with legal responsibilities for managing waste that they generate or that arises in their areas. In particular this means Waste Collection and Waste Disposal Authorities within a particular area. Local authorities within a region who will also need to take a collective view of the more strategic regional implications of their various policies towards waste management issues

Hampshire's Project Integra

Councils in Hampshire have recently been awarded Beacon Council status for their work on integrated waste management. The councils, in partnership with the private sector, are reducing dependency on landfill through a combination of recycling and composting techniques, planned energy from waste, and a strong emphasis on community consultation and education on waste issues.

The consortium has invested significant sums in research into waste analysis and public attitude surveys. Clear development plans exist for the expansion of recycling infrastructure with an aim of recycling 40% of municipal waste, alongside the provision of energy from waste capacity. The project partners have also displayed a welcome emphasis on disseminating good practice in the process of developing integrated waste strategies, and a willingness to share failures as well as successes.

- 3.2 The technique that should be used for making waste management decisions is known as Best Practicable Environmental Option (BPEO), and the simplest way to encourage integrated waste management is to structure the implementation of BPEO with the above key elements in mind. The following section gives some further detail on determining BPEO. Subsequent sections in this Chapter consider the impact of land use planning, waste management licensing, integrated pollution prevention and control regulation, and the Duty of Care, which all have a role to play in determining and implementing optimum waste management solutions across England and Wales. Decisions on how to treat or dispose of waste should be taken locally, taking account of local circumstances and the nature of particular waste streams. When taking waste management decisions on suitable treatment options, sites and installations, local authorities must follow the framework set out below. This framework should also act as a guide for other decision-makers, including business waste managers.

The precautionary principle

Any integrated waste management system must make allowance for the precautionary principle, which states that where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Determining the Best Practicable Environmental Option

- 3.3 If we are to manage our waste more sustainably, decision makers need the tools to move us in that direction. Waste is not a single substance, and its management is not a series of simple choices. Rather it is, for the most part, a complex mixture of different materials, in differing proportions. Each of these materials has the potential to impact differently on the environment. Environmental impact can also be influenced by the collection system used, the locations where waste is generated, managed and disposed of, and the resources consumed through managing our waste. In a sustainable and integrated system all these factors must be taken into account when making decisions on how best to manage waste.
- 3.4 The process that should be used for considering the relative merits of various waste management options in a particular situation is the Best Practicable Environmental Option (BPEO). This was defined in the 12th Report of the Royal Commission on Environmental Pollution as:
- the outcome of a systematic and consultative decision-making procedure which emphasises the protection and conservation of the environment across land, air and water. The BPEO procedure establishes, for a given set of objectives, the option that provides the most benefits or the least damage to the environment as a whole, at acceptable cost, in the long term as well as in the short term.*
- 3.5 We have long sought to protect the local environment and human health from the adverse effects of waste management through a comprehensive system of planning and pollution control legislation. Sustainable development challenges us to develop more integrated systems for managing waste that are environmentally effective (both locally and globally), economically affordable and socially acceptable.

- 3.6 When considering the BPEO, decision makers need to have regard to international obligations (such as the biodegradable municipal waste diversion targets in the Landfill Directive), the national policy framework as set out in this strategy (including the waste hierarchy), and policy guidance at regional and local level. The concept of BPEO means that local environmental, social and economic preferences will be important in any decision. These may well result in different BPEOs for the same waste in different areas, or even different BPEOs for the same type of waste in the same area but at different times (for example, when the economy is growing or in recession).

The proximity principle

The proximity principle suggests that waste should generally be disposed of as near to its place of origin as possible. This is in part to ensure that we do not simply export problems to other regions or countries. It also involves recognition that the transportation of wastes can have a significant environmental impact. A network of facilities would enable these environmental impacts – and in many cases financial costs – to be reduced.

The proximity principle has two important functions:

- it is a tool for planning authorities and businesses when considering the requirements for, and location of, waste management facilities and regional self-sufficiency
- it helps raise awareness in local communities that the waste they produce is a problem with which they must deal

The proximity principle can make the link between the waste hierarchy and BPEO. Where the BPEO for a waste stream is towards the lower end of the waste hierarchy, this can often be because the environmental impact or cost of transport to a distant reprocessing facility or market outweighs the benefit of recovering the waste. Planners should consider the mode of transport and not just the distance: a longer journey by river or rail may be environmentally preferable to a shorter road journey.

In some respects, the proximity principle is particularly applicable to hazardous wastes, as they are intrinsically hazardous and moving them over long distances may increase the risk of damage arising.

However, it is also important that hazardous wastes are dealt with at a facility at which they can be treated in an environmentally sound manner. Because of the relatively low level of arisings of some of these wastes, there are likely to be relatively few suitable facilities for their disposal. Thus, the need for appropriate treatment should be considered alongside the proximity principle when considering where hazardous wastes should be disposed of.

It is therefore important that waste planning authorities and businesses consider the need for a network of specialised disposal facilities for hazardous wastes produced across England and Wales, and collaborate accordingly. This will become even more important with the implementation of the provisions of the Landfill Directive which will limit the disposal of hazardous wastes to landfill.

- 3.7 The waste hierarchy provides a theoretical framework which should be used as a guide for ranking the waste management options being considered as part of the BPEO assessment. It offers an order which can be used when considering various waste management options, starting with a review of how less waste might be produced. Once this has been carried out, all options in the hierarchy should be considered for each component material within the waste stream, and for waste which cannot be reasonably separated out. For different materials, different options are likely to prove more environmentally effective and economically affordable. Thus the BPEO for a waste stream is likely to be a mix of different waste management methods.

The waste hierarchy

The waste hierarchy is a conceptual framework, which acts as a guide to the framework that should be considered when assessing BPEO. It can also be a useful presentational tool for delivering a complex message in a comparatively simple and accessible way:

- the most effective environmental solution is often to reduce the generation of waste – *reduction*
- products and materials can sometimes be used again, for the same or a different purpose – *re-use*
- value can often be recovered from waste, through *recycling, composting or energy recovered*
- only if none of the above offer an appropriate solution should waste be disposed of.

3.8 To make rational decisions on waste management, we need to consider a number of subsidiary objectives. These might include social, economic, environmental, land use, and resource use impacts, each of which will have its own set of criteria.

3.9 The judgement about which mix of waste management options provides the BPEO can be resolved by analysing the trade-offs between objectives or criteria. This can show the extent to which one objective is sacrificed in order to achieve another (for example, how much costs could rise to reduce the impact on global warming). Formally, this can be resolved using decision techniques such as *multi-criteria analysis* (MCA). These entail the systematic modelling of decision-makers' preferences, to resolve the choice between several options involving a number of objectives or criteria. By aggregating disparate information onto a common index of value they provide a rational basis for classifying choices.

3.10 Even where such a formal methodology is not adopted, there are considerable advantages in using an approach that is:

- *comprehensive*: ensuring that all concerns regarding waste management alternatives can be seen to have been identified and addressed
- *flexible*: allowing the robustness of potential decisions to be thoroughly explored
- *iterative*: enabling development and refinement of the options
- *transparent*: so that the reasons behind a particular choice are made clear

Identifying waste management options – step-by-step

Identifying the most sustainable mix of waste management options, environmentally, economically and socially, can be a daunting task. However, the process can be simplified by breaking it down into smaller, more manageable tasks:

- Step 1: set the overall goals for making the waste management decision, subsidiary objectives and the criteria against which the performance of different options will be measured
- Step 2: identify all the viable options
- Step 3: assess the performance of these options against the criteria
- Step 4: value performance
- Step 5: balance the different objectives or criteria against one another
- Step 6: evaluate and rank the different options
- Step 7: analyse how sensitive the results are to variations in the assumptions made or the data used.

LIFE CYCLE ASSESSMENT

- 3.11 Determining the financial costs of waste management alternatives is relatively straightforward, but assessing environmental and social performance is much more complex. Indicators can include the conservation of non-renewable resources, release of greenhouse gases, emissions which may impact on air quality, noise, visual intrusion and traffic congestion. All could have an impact on communities, the local economy or the environment.
- 3.12 A further complication is that our choice of waste management options can have a substantial impact outside the waste management system. This could be, for example:
- changes in the amount of a particular fuel consumed in power stations and a consequent change in pollution levels, as a result of decisions made about implementing waste management options which include generating electricity from waste
 - a decision to recycle aluminium cans will have impacts on the bauxite mining industry, the aluminium processing industry, and on the energy and resource use by each affected sector
- 3.13 To find an overall, optimal, environmental solution for managing waste, without the risk that our decision will result in a worsening of the overall impact, we need to adopt a life cycle approach. Life cycle assessment (LCA) is the systematic identification and evaluation of all the environmental benefits and disbenefits that result, both directly and indirectly, from a product or function throughout its entire life – from extraction of raw materials to its eventual disposal and assimilation into the environment.
- 3.14 Life cycle assessment can provide a basis for making strategic decisions on the ways in which particular wastes in a given set of circumstances can be most effectively managed. Even where a comparison of different systems does not show a clearly preferred option in terms of quantifiable environmental flows, this indication of environmental performance can be of value to decision-makers.
- 3.15 Life cycle assessment also takes account of the proximity principle – that waste should be dealt with as close to the point of its generation as practically possible. The transportation of waste (both in terms of distance travelled and the mode of transportation) from the point at which waste is generated, through the collection and sorting of waste, to where it is treated, recovered or finally disposed are included within the life cycle.

Life cycle assessment tools

- 3.16 Life cycle assessment can be a time-consuming process. The Environment Agency (together with the Scottish Environmental Protection Agency and the Northern Ireland Environment and Heritage Service) is carrying out a programme of research into the environmental burdens, and related impacts, of waste management options from cradle to grave. Data has been collected on the environmental flows (known as *burdens*) of household waste associated with each of the following key areas of waste management:
- Waste transport and other vehicle use
 - Waste collection and separation
 - Incineration

- Landfill
 - Composting and anaerobic digestion
 - Recycling of materials
- 3.17 The combined inventory of environmental data encompasses the burdens associated with all operations undertaken between the point of waste production and its ultimate reduction to inert material, including any burdens that can be offset against materials and energy recovery.
- 3.18 The inventories of data are being made publicly available, and the Agencies have produced a software tool (WISARD) which incorporates the data, to enable waste managers (in local authorities and in businesses) to model waste management systems from components representing individual operations. The software will also calculate the environmental flows and the associated impacts resulting from different parts of the system, and allow different systems to be compared for their relative environmental performance.
- 3.19 As well as the Agencies' software, others have produced tools applying life cycle techniques to waste management in the UK. The Integrated Waste Management tool¹ allows the user to develop life cycle inventories of municipal waste management systems in the same way as WISARD. A much improved version of this software is expected to be publicly available in 2000.

EXTENDING THE RATIONALE OF DECISIONS

- 3.20 Although the life cycle assessment approach ensures all quantifiable impacts are taken into account, the concept does not address all of the criteria that need to be taken into account in any decision-making process. To extend beyond the present boundaries, the Government has begun research into developing a structured framework for waste planning authorities that takes into account wider environmental and social factors. The outcome of this research is expected to be available by early 2002 and will, together with life cycle assessment, help decision-makers identify the most appropriate waste management options.

Land use planning and waste

- 3.21 The Town and Country Planning system regulates the development and use of land in the public interest, and has an important role to play in achieving sustainable waste management. It needs to be ready to deal with the challenges in the new waste strategy through national and regional planning guidance, policies contained in development plans, consideration of individual planning applications, and underpinning research and monitoring.

¹ *Integrated Solid Waste Management: A Life Cycle Inventory*. White, Franke and Hindle, 1995. Blackie Academic and Professional. ISBN 0-7514-0046-7.

KEY PLAYERS

3.22 A number of key players are involved in developing waste related plans:

- *central Government*, and the *National Assembly* in Wales, have an important part to play by ensuring that adequate national planning policies are in place in order that sustainable waste management practices can be exercised at the regional and local levels in terms of the location and use of facilities
- *Regional Planning Bodies* in England will need to apply national policies as part of the process of drawing up regional planning guidance. In Wales there are no formal arrangements for regional planning, although there are voluntary groupings of local planning authorities for collaborative working on issues including waste management
- *Waste Planning Authorities* are responsible for ensuring that an adequate planning framework exists. They are required to prepare a waste development plan which has to take account of national and regional planning policy guidance. Waste Planning Authorities also have responsibility for determining planning applications for waste management facilities. In Greater London and the metropolitan areas, Waste Planning Authorities are the London borough councils and the metropolitan district councils. Outside Greater London and the metropolitan areas, Waste Planning Authorities comprise County Councils, National Park Authorities and the newly created unitary authorities. In Wales, the unitary authorities are responsible for local waste planning policy and for determining planning applications for waste management facilities. The Unitary Development Plans will incorporate waste policies which will take account of national planning policy guidance
- *the Environment Agency* is responsible for environmental regulation of developments under the Environment Act 1995. Whilst this is separate to the planning regime both may need to consider common issues. It is essential therefore that there is good, effective liaison between waste planning authorities and the Environment Agency. Planning Authorities should not seek to make judgements on pollution control matters that are the proper responsibility of the Environment Agency, and visa-versa. The Government and the National Assembly support the Agency's work to develop twin tracking of planning and pollution control applications, to ensure that applications are dealt with as speedily as possible, and that all the information required to make a reasoned decision is available
- *the waste management industry* has an important role to play in achieving sustainable waste management, by providing the full range of facilities required to deal with existing and projected waste streams and meeting goals set out in the waste strategy. Waste management companies should work closely with local authorities to develop more integrated waste management facilities
- *environmental organisations* (including voluntary and community groups, and not-for-profit organisations) aim particularly to secure improved protection of the environment and can bring useful views and advice to the planning process

NATIONAL PLANNING GUIDANCE

- 3.23 Planning policy guidance on waste management in England is set out in Planning Policy Guidance Note 10 *Planning and Waste Management* (PPG10). The guidance provides advice about how the land-use planning system should contribute to sustainable waste management through the provision of the required waste management facilities in England. It explains how this provision is regulated under the statutory planning and waste management systems. It also defines the roles of the various parties and emphasises the importance of liaison and consultation at all levels. Furthermore, it provides general advice for site selection, and matters which need to be taken into account when preparing waste development plans and considering planning applications for waste management facilities.
- 3.24 In Wales, guidance on waste is set out in *Planning Guidance (Wales) Planning Policy First Revision 1999*, which is supplemented by a series of Technical Advice Notes (TANs). A draft Technical Advice Note – *Planning, Pollution Control and Waste Management* – was issued in 1996, but a final version was not published. The National Assembly intends to prepare a revised Technical Advice Note for waste by the end of 2000.

REGIONAL PLANNING GUIDANCE

- 3.25 New arrangements in England for Regional Planning Guidance are being put in place through a revision of Planning Policy Guidance Note 11 *Regional Planning Guidance* (PPG11). This proposes that Regional Planning Guidance will be prepared by Regional Planning Bodies, in collaboration with Government Offices for the Regions and other organisations. This is of particular significance in planning for waste management since Waste Planning Authorities cannot consider the needs of their own areas in isolation. Waste management solutions may sometimes cross planning areas, as well as regional boundaries. In some circumstances, local options for the management of some types of waste may not be available.
- 3.26 The Government has recommended, therefore, in PPG10 the setting up of Regional Technical Advisory Bodies. These will advise the Regional Planning Bodies and provide specialist advice on options and strategies for dealing with the waste that will need to be managed within each region. The preferred option or strategy will be reflected in Regional Planning Guidance. It is important that appropriate preferred options should be incorporated into the Regional Planning Guidance at the earliest opportunity.

Regional self-sufficiency

In England, PPG10 makes clear the Government's view that most waste should be treated or disposed of within the region in which it is produced. Each region should provide for facilities with sufficient capacity to manage the quantity of waste that they expect to have to deal with in that area for at least ten years.

- 3.27 There are no formal arrangements in Wales for regional planning although there are voluntary groupings of local planning authorities for collaborative working on issues including waste management.

DEVELOPMENT PLANS

- 3.28 In London and the metropolitan areas, and in Wales, Part I of the Unitary Development Plan sets out the broad framework and overall land use planning strategy for waste management within the regional context. Part II of the Plan gives detailed expression to the policies by, for example, identifying sites or areas within which specific types of development may be acceptable or, if that is not possible, criteria against which the suitability of planning applications will be assessed.
- 3.29 Outside of these areas the development plan for waste generally comprises the Structure Plan and the Waste Local Plan. The functions of these two plans are analogous to Parts I and II of the Unitary Development Plan. In preparing development plans Waste Planning Authorities have to take account of government policies as set out in Planning Policy Guidance notes and Regional Planning Guidance.
- 3.30 It is important that provisions in development plans should reflect the new waste strategy and Regional Planning Guidance as soon as possible, in practice at the early stages of plan preparation or when a plan is subject to review.
- 3.31 Whilst provision for dealing with waste streams is widely included in waste development plans, these have less commonly considered the implications for local waste management of major proposals for development such as housing or commercial centres. There is a need to consider the broader context of how waste might be collected efficiently and effectively and dealt with, as far as possible, nearby. In the case of major housing development, for instance, the feasibility of community heating schemes might be considered. This could also bring other local environmental benefits such as a reduction in traffic carrying wastes.

Getting the public involved in the planning process

DETR has published a Code of Practice on the preparation of various waste and minerals development plans, called *Local Plans and Unitary Development Plans – a Guide to Procedures*. The document (product code 99PD0724) is available from the DETR Free Literature Unit at Wetherby (PO Box 236, Wetherby L23 7NB, telephone 0870 1226 236 or fax 0870 1226 237). It is designed as a simple guide to help the public take part in local plan inquiries, and sets down the procedures from plan deposit to adoption.

In Wales, guidance on the procedures for the preparation of unitary development plans is provided in *Planning Guidance (Wales) Unitary Development Plans 1996*, which sets out the requirements for publicity and consultation to ensure the local people and interested bodies are fully involved in making decisions on the policies and development proposals in their area. Further information is provided in the booklet *Development Plans: what you need to know* published by the former Welsh Office in 1997 which includes a revised Code of Practice from the deposit of a development plan through to its adoption by the local planning authority. The *Town and Country Planning (General Development Procedure) Order 1995* sets out the procedures connected with planning applications and appeals including the requirements for publicising applications for planning permission through site notices, serving notices on adjoining owners or occupiers and local advertisement, for consultations to be undertaken before the grant of permission and for representations to be taken fully into account by local planning authorities in determining planning applications for planning permission.

LGA Publications has issued the Planning Officers Society's good practice guide *Public Involvement in the Development Control Process*. Details of all LGA publications, and information on how to obtain them, can be found on the LGA website at www.lga.gov.uk, or alternatively telephone 020 7664 3131.

PLANNING APPLICATIONS

- 3.32 Since waste management facilities are seldom popular with those who live near proposed sites, it is important that waste management companies should discuss proposals with Waste Planning Authorities at an early stage, and should explain proposals thoroughly to local interests and to community groups. Careful attention should be paid to making proposals as environmentally and socially acceptable, as well as economically viable. Careful liaison is also needed with the local Planning Authority where this is not also the Waste Planning Authority, and with the Environment Agency to make sure that problems are addressed and that planning and licence conditions are complementary.

KEY ACTIONS FOR EFFECTIVE WASTE PLANNING

- 3.33 The drive to a more sustainable waste management system, with its lessening reliance on landfill sites, means that there will be a greater need for waste sorting and bulking depots, and materials and energy recovery facilities, in the future.
- 3.34 Waste management facilities are not popular neighbours. Thus it is essential that the preparation and adoption of waste development plans and their subsequent implementation through the approval of planning applications, is both open and accessible. The Government and the National Assembly are keen to see:
- all relevant organisations implement fully, and as soon as practicable both: the planning guidance contained in PPG10 and PPG11 in England; and in Wales the Planning Guidance (Wales) Planning Policy First Revision 1999 and, when finalised, in the Technical Advice Note for Waste
 - all Waste Planning Authorities and developers thinking more holistically about the need to provide waste management facilities in line with this strategy, including consideration of how facilities can be better co-ordinated in relation to major new developments of, for instance, housing and commercial centres
 - Waste Planning Authorities and the Environment Agency work closely on all planning applications, to ensure that adequate information is available to enable proper decisions to be made, and that planning and licence conditions are complementary and effective
 - the waste management industry acting more proactively to developments in waste policy and waste planning, and in particular thinking more innovatively about new waste management facilities; and to operate these facilities to high standards
 - waste companies consulting the Waste Planning Authority, Environment Agency and especially the local community – businesses and householders – about proposed waste management facilities at the earliest opportunity, in order to better deal with local concerns

Waste regulation and licensing

- 3.35 A waste management licence is required by anyone who proposes to deposit, recover or dispose of waste. Licences are issued by the Environment Agency in England and Wales.

- 3.36 The waste management licensing system under Part II of the Environmental Protection Act 1990 was brought into force for most sectors of industry in May 1994 and extended to the scrap metal industry in April 1995. Before being brought into force the provisions of Part II of the 1990 Act were modified to ensure fulfilment of the requirements of the amended Framework Directive on waste (91/156/EEC). The Waste Management Licensing Regulations 1994 make the necessary modifications and set out much of the detail of the licensing system. A key feature of the Directive, and the licensing system, is the objective of ensuring *that waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment*.
- 3.37 The licensing system is separate from, but complementary to, the land use planning system. The planning system addresses the acceptability of a proposed development in terms of the use of the land. The purpose of a licence and the conditions attached to it is to ensure that the waste operation which it authorises is carried out in a way which protects the environment and human health. In line with the *polluter pays* principle, charges are made for the Agency's consideration of licence applications and an annual subsistence charge is payable by licence holders.
- 3.38 The Environment Agency must be satisfied that a licence applicant is a "fit and proper person" to hold a licence and three criteria are used to make this determination:
- the applicant, or another person involved in his business, has been convicted of an environmental offence. The Environment Agency has some discretion on this criterion and may take into account factors such the type of person convicted (for example an individual or a body corporate), the number of offences committed and the nature and gravity of the offences
 - the management of the activities which are the subject of the application will be in the hands of a technically competent person
 - the person to whom the licence is to be issued has made financial provision adequate to discharge the obligations of the licence
- 3.39 In most cases technical competence is demonstrated by the award of a Certificate of Technical Competence by the Waste Management Industry Training and Advisory Board (WAMITAB). For those waste facilities which are not covered by a WAMITAB certificate the assessment of technical competence is made by the Environment Agency. On the introduction of the licensing system, transitional arrangements were made for those people who applied for a Certificate of Technical Competence before 10 August 1994; these people were given a 5 year period in which to obtain the required qualifications. Most of the transitional arrangements ended on 10 August 1999 although a few exemptions will continue until 2004.
- 3.40 Once a licence is issued the Environment Agency is required to carry out *appropriate periodic inspections* of the site and to take the steps needed to ensure that the environment and human health are protected and that the conditions of the licence are complied with. The Agency has powers to suspend or revoke licences. On application, a licence may be transferred to another person if the Agency is satisfied that the proposed licence holder is a "fit and proper person". An application has to be made to surrender a site licence and the Agency may accept its surrender only if it is satisfied that the condition of the land, resulting from its use as a waste operation, is unlikely to cause environmental pollution or harm to human health.

- 3.41 The 1994 Regulations provide a range of exemptions from waste management licensing. Their main purpose is to encourage the recovery of waste. In each case the activity is exempt only if it is done in a way which complies with the terms of the exemption and does not endanger human health or harm the environment. In most cases, the exemption must be registered with the Environment Agency. The Environment Agency has a duty to carry out appropriate periodic inspections of exempt activities.
- 3.42 The Government is currently reviewing a limited number of the exemptions and we expect to publish a consultation paper in 2000.
- 3.43 There are severe penalties for recovering or disposing of waste without a waste management licence, in breach of licence conditions or the terms of an exemption, or in a way likely to cause environmental pollution or harm to human health. For example, on conviction in a Crown Court, imprisonment for 2 years and/or an unlimited fine.
- 3.44 The Government has asked the Environment Agency to continue a vigorous policy of prosecuting, where it has the evidence, anyone who illegally disposes of waste on sites which have neither a waste management licence nor a licensing exemption registered with the Environment Agency.
- 3.45 The waste management licensing system is supplemented by requirements for persons transporting waste in the course of their business (waste carriers) or acting as waste brokers to be registered with the Environment Agency.

Duty of Care

- 3.46 The Duty of Care applies to anyone who imports, produces, carries, keeps, treats or disposes of waste or, as a broker, has control of it. Everyone subject to the duty of care must take all such measures as are reasonable in the circumstances to:
- prevent contravention by any other person of the waste management provisions of the 1990 Act
 - prevent the escape of the waste from his control or that of any other person
 - ensure that waste is transferred only to an authorised person, such as the holder of a waste management licence, a person operating under the terms of a licensing exemption registered with the Environment Agency or a registered waste carrier
 - ensure that a written description is transferred with the waste
- 3.47 Everyone to whom the Duty of Care applies has a legal obligation to comply with it and there are severe penalties for failing to do so. For example, an unlimited fine on conviction in a Crown Court. Practical guidance on complying with the Duty of Care is provided in *Waste Management, the Duty of Care, A Code of Practice*. The Duty does not apply to householders and household waste produced in the home.

Waste and integrated pollution prevention and control

- 3.48 The Integrated Pollution Prevention and Control (IPPC) Directive (96/61/EC) requires Member States to prevent or, where that is not possible, to reduce pollution from a range of industrial and other installations, by means of integrated permitting processes based on the application of *best available techniques*. The integrated approach takes a wide range of environmental impacts into account. These include emissions of pollutants to air, water and land; energy efficiency; consumption of raw materials; noise and site restoration. The aim is to achieve a high level of protection for the environment as a whole. Permits must take into account local environmental conditions at the site concerned; its technical characteristics and its geographical location.
- 3.49 The IPPC Directive applies to the following operations which are presently subject to control under Part II of the 1990 Act and the waste management licensing system:
- installations for the disposal or recovery of hazardous waste² with a capacity exceeding 10 tonnes per day
 - installations for the incineration of municipal waste with a capacity exceeding 3 tonnes per hour
 - installations for the treatment of non-hazardous waste³ with a capacity exceeding 50 tonnes per day
 - landfills receiving more than 10 tonnes per day with a total capacity exceeding 25,000 tonnes, excluding landfills of inert waste
- 3.50 The transposition of the IPPC Directive has been the subject of a series of consultation papers. It is proposed that key features of waste management licensing should be retained in the regulation of those waste management installations subject to the IPPC Directive. For example, the test of “fit and proper person” and appropriate provisions for the surrender of permits.

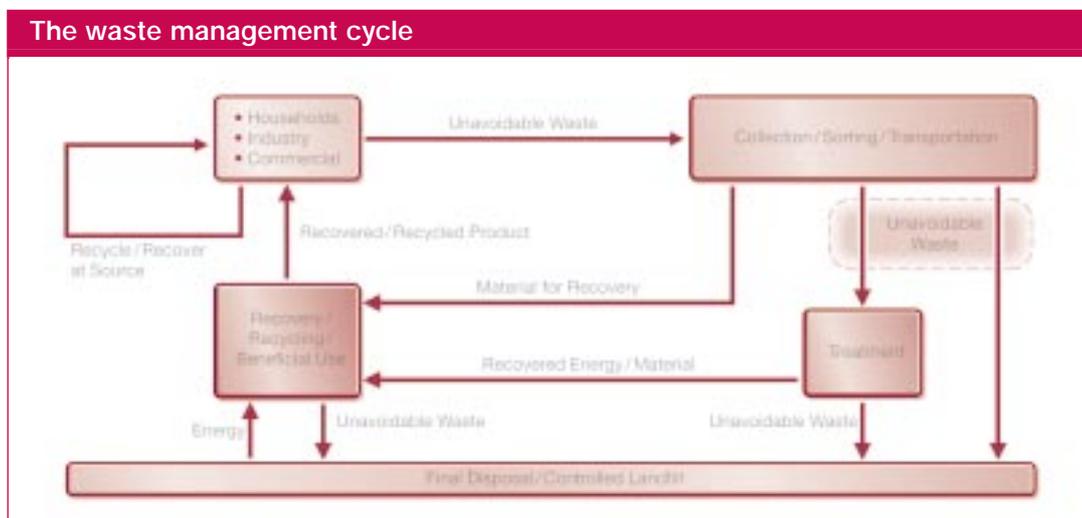
² R1, R5, R6, R8 and R9 of Annex IIB to the Framework Directive on waste

³ D8 and D9 Of Annex IIA to the Framework Directive on waste

CHAPTER 4

Waste stakeholders

- 4.1 Working towards sustainable waste management requires the commitment of all the different groups of waste producers in society, in co-operation with the authorities and businesses responsible for regulating and controlling waste management.
- 4.2 The following diagram of the waste management cycle gives a simple overview of who generates waste, and how that waste is dealt with. A vast quantity of waste is generated in England and Wales – around 400 million tonnes every year. 27 million tonnes of this waste comes from households, with a further 48 million tonnes generated by manufacturers and 30 million tonnes by other businesses.



- 4.3 This chapter focuses on the roles and responsibilities of each sector of society which generates and manages waste. Waste generators (such as businesses, consumers and various Government operations) are considered in the first part of the chapter. This is followed by a closer look at how waste is regulated by the Environment Agency, and at those organisations responsible for collecting, managing and disposing of that waste.
- 4.4 Definitions for the various categories of waste are given in Chapter 2 section 2.2 of this part of the strategy.

Identifying the waste generators

- 4.5 Waste is generated both in the workplace and in the home. This section looks more closely at what businesses and individuals can do both to reduce the amount of waste they generate, and to deal effectively with the waste that is generated. It also considers waste management across Government, including the National Health Service and the Ministry of Defence Armed Services.

BUSINESSES

- 4.6 Waste can be a cost to business which is not always recognised. The true cost of waste is not just the cost of disposing of the waste a company produces, but also the costs of materials, energy, resources and staff input that went into the materials that become waste.
- 4.7 Waste can also be an opportunity for business, with far-reaching environmental and financial benefits accruing from effective waste reduction in the manufacturing process, re-use of refurbished or rescued components, and use of recycled or secondary materials in the manufacture, transportation and use of products. For example:
- recycling metals reduces impacts on the natural environment that would otherwise come from the quarrying, transportation, smelting and processing of virgin ore
 - composting, or recovering energy from, organic waste like food and paper can directly reduce the methane emissions normally produced when such waste is landfilled. It also reduces pressure on natural peat lands, and reduces the greenhouse gas emissions that arise from the exploitation of peat
 - recovering energy from waste can reduce the need to burn fossil fuels, and contributes to the Government's renewable energy programme
- 4.8 Both business and Government have increasingly begun to take advantage of the opportunities offered by waste. Since 1994 the Environmental Technology Best Practice Programme has worked together with business to test out good practice and help apply opportunities for savings through waste reduction.
- 4.9 DETR is developing guidelines to help businesses measure and report on waste, which will be published in 2000. The guidelines will provide step by step advice to help businesses identify and measure key waste streams, to set measurable targets for improvement, and to publish the information as part of an environmental report. They will also provide best practice tips on how to reduce and manage waste, and include case studies from leading businesses. The business waste guidelines will form part of a set of guidelines to help businesses report publicly on environmental performance. Guidelines that have already been developed can be viewed on the DETR website at www.environment.detr.gov.uk/envrp/index.htm .

Waste reduction in businesses

- 4.10 Waste production can be a result of inefficiencies in production or management processes. Many companies in England and Wales may lack the knowledge to tackle the unnecessary waste their activities produce, and may be unaware that they are producing more waste than they need to.
- 4.11 There is one very good reason why companies should be keen to reduce the amount of waste they generate: profit. Companies may not identify the full cost of the waste they produce. Waste disposal may often be a substantial cost for a business. Although these are issues of management time and funds spent on waste reduction, reducing waste can improve profit. Furthermore, the feed-through to lower input requirements can be important; raw materials are often 30 – 60% of turnover.

Business and the Environmental Technology Best Practice Programme

- 4.12 Many companies who have adopted waste reduction initiatives, often as participants in a waste minimisation club, have achieved savings which they did not initially expect. The Environmental Technology Best Practice Programme (ETBPP) aims to demonstrate the benefits of managing resource use and reducing environmental impact to companies across the whole of the UK, building on the lessons of the first waste minimisation clubs.
- 4.13 Information is produced for specific industry sectors such as chemicals, paper and board, textiles, and food and drink manufacture and retail. Guidance also covers generic themes of waste reduction and cleaner technology. This is published in the form of benchmarking guides which enable companies to assess their environmental performance; case studies demonstrating good practice; and guides which show how to implement environmental technologies and techniques.

The North Derbyshire Waste Management Group

Twenty two small and medium sized companies in Chesterfield and the Holmewood Industrial Estate near Clay Cross have joined together to form the North Derbyshire Waste Management Group. As part of their activities, the Group has organised two parallel series of five breakfast workshops. These are broadly based on established workshops developed by ETBPP. The early morning sessions look at:

- an introduction to waste reduction
- gaining commitment and getting started
- process mapping
- energy management
- tracking water use, packaging reduction or solvent management

Of necessity, the sessions are shorter and more focussed than the ETBPP half day workshops, but still provide ample time for companies with similar environmental challenges to discuss important issues across the breakfast table, before and after the delivery of key information.

- 4.14 When the ETBPP started in 1994, there were three waste minimisation clubs: Aire and Calder, Project Catalyst and Leicester. The Programme encourages the establishment of new clubs that are self-sustaining, with members working to help themselves. The clubs offer a good vehicle for engaging business in making environmental improvements, and can form a good route for disseminating information from the ETBPP.
- 4.15 Clubs have involved a variety of supporting partners, including Local Authorities, the Environment Agency, Business Links in England, Business Connect in Wales, and water companies. Clubs have gained income from bodies such as these as well as other sources such as the Welsh Development Agency, Local Challenge and European development budgets. It is estimated that around 100 self-sustaining clubs would make good coverage across the UK. Around 70 have now been established, and at least a further 15 or so are proposed. The ETBPP is continuing to provide advice to potential new clubs, and also trains club participants to hold their own workshops using ETBPP material.

ETBPP Good Practice Guidance

The Environmental Technology Best Practice Programme regularly publishes:

- benchmarking guides which enable companies to assess their environmental performance
- case studies demonstrating good practice
- guides which show how to implement environmental technologies and techniques

The ETBPP also addresses good management practice and raising awareness of the impact of waste on companies within management and staff. All the publications emphasise the practical results of introducing good practice measures, and in particular showcase the cost and resource savings that can be made from introducing more effective waste management practices.

The ETBPP's publications are disseminated through a wide range of channels, including trade associations, Business Links in England, Business Connect in Wales, the Environment Agency and the Wales Environment Centre, which gives detailed advice to business on waste reduction issues.

Information on the current publications list, together with recent publications are available over the internet at www.etbpp.gov.uk and also at www.etsu.com/etbppnews

Encouraging action by business on waste

- 4.16 The primary responsibility for commercial and industrial waste lies with the businesses that produce that waste. Many industry sectors already have an established waste re-use or recycling sub-sector. Companies may not even realise that by selling on waste materials, or using them in a different industrial process, they are in fact re-using and recycling waste.

Schroders

Schroders is a leading investment banking and asset management group. The company has 6,200 employees and offices in 36 countries and territories. Schroders (London Group) has taken a company-wide, strategic approach to identifying their main waste related environmental impacts and setting priorities for improvement. Waste management (in particular waste to landfill) has been identified as a priority action area in its newly revised environmental policy. The company believes that an environmentally responsible business is a well managed business and is committed to adopting best practice in line with Government guidance.

Effective communication is fundamental to Schroders's work and to its environmental improvement plan. The use of technology such as e-mail to communicate both internally and with clients has improved business efficiency and reduced demand for paper. Staff information and notices are now communicated electronically through the organisation's intranet, saving around 9,000 sheets of A4 paper each week.

- 4.17 A number of regulatory and non-regulatory initiatives have been launched over the past few years, the direct or indirect purpose of which has been to make business take its waste more seriously.
- 4.18 The *Landfill Tax* provides a strong economic signal to reduce reliance on landfill. Evidence suggests that the introduction of the tax has increased business interest in recycling and the use of inert waste in construction projects. The standard rate of landfill tax is to increase from the 1999 rate of £10 per tonne, by £1 each year to £15 per tonne of active waste by 2004. This will increase the financial incentive for companies to reduce the amount of waste they produce at source, to keep inert and active wastes separate, to seek out markets and buyers for waste (such as paper, food or plastic) that can be recycled or composted, and to consider the possibility of recovering energy from wastes with high calorific values.

- 4.19 Regulations to ensure *companies meet basic standards of good practice*. Regulation of emissions to the atmosphere and water, and for the safe handling and disposal of hazardous wastes, requires business to manage and dispose of the waste they produce safely and with minimum impact on the environment. Good regulation can be effective in encouraging some movement towards waste reduction, re-use or recovery by businesses. However, the main strength of regulation is to ensure minimum standards are maintained or raised.
- 4.20 Encouragement of *sectoral producer responsibility initiatives*, in which industry takes greater responsibility for their products when these have become waste. Such initiatives can encourage industry, commerce, communities and householders to cooperate to increase the re-use, recycling and recovery of materials. Voluntary producer responsibility initiatives have included nickel-cadmium batteries, and tyres. On packaging more formal, legally binding Regulations were introduced in 1997 to achieve targeted increases in recovery and recycling of packaging waste and to encourage greater re-use of packaging. With effect from 2000, retailers will also have an obligation to inform customers about a range of recycling matters (see Chapter 7 of this part of the strategy for more details on the packaging Regulations).
- 4.21 Provision of *information to business on best practice*, helping companies benchmark their performance in energy and resource use, transferring information and know-how across business sectors, and overcoming the information barriers to the adoption of best practice. A programme to promote sustainable waste management is being established (as detailed in Chapter 2 section 2.22 of this part of the strategy), with an aim of providing this advice to businesses and others. The Environmental Technology Best Practice Programme will also continue to offer advice and information to businesses, in particular through the Environment and Energy Helpline. Additionally, the Environment Agency is able to provide advice to companies (and others) on best practice and waste management reduction and recovery.
- 4.22 The purpose of *sectoral sustainability strategies* is to provide the framework for addressing the “triple bottom line” of economic, environmental and social aspects. Dealing with waste and the issues it raises for a given sector may be more actively addressed by businesses acting in concert, for example in improving the recyclability of products and in organising the recovery and recycling of wastes from the production process.
- 4.23 The Government is encouraging trade associations and other representative bodies to develop and implement strategies within at least six sectors by the end of 2000. The more pro-active sectors to date include: the Aluminium Federation, the British Plastics Federation, the British Printing Industry Federation, the British Retail Consortium, the Chemical Industries Association and the Society of Motor Manufacturers and Traders. The Government has also begun discussions with the British Cement Association.

Dee catchment waste minimisation project

The Dee waste minimisation project involved 13 companies actively participating in waste reduction at source. These companies were from a wide range of industries in the River Dee catchment area (from Snowdonia to Chester). The project was initiated by the centre for the Exploitation of Science and Technology, supported by the BOC Foundation, the Environment Agency and the former Welsh Office. The project, which started in 1995, ran for approximately 18 months during which time the participating companies adopted programmes to reduce waste generation at their sites.

All the participating companies identified opportunities for financial savings and for simultaneously reducing emissions and discharges to one or more of the three environmental media. The Project achieved financial savings amounting to £4.55 million per annum with an additional £1.2 million of potential savings identified. Most of these savings involved zero or low implementation costs and a payback of less than 1 year.

The identified opportunities represented:

- a total potential reduction of 130,000 tonnes per annum to landfill
- a reduction of water consumption of 600,000 cubic metres (with a similar reduction in the volume of liquid effluent)
- energy savings of 35,000 MWh – this was mainly electricity and was equivalent to a reduction of 25,200 tonnes per annum of CO₂ emissions to the atmosphere
- a reduction of 377 tonnes per annum of other emissions to air

Of the total number of opportunities identified, 45% involved technology modifications, 38% were procedural changes and 13% involved recycling or re-using material.

Only three of the participants did not experience significant changes in personnel, organisational structure or ownership during the course of the project. This reflects the changes that are now common throughout industry but also led to some barriers to implementing and maintaining the waste reduction programme. However, these barriers were overcome and almost all of the participants believed that the project met their expectations.

Practically all of the companies believed they would continue with their waste reduction activities after the project finished, For most companies this will be assisted by the implementation of an environmental management system (EMS). By the end of the project four companies had an EMS in place, three were installing a system and the remainder intended to do so sometime in the future.

A list of waste initiatives for business action

- 4.24 The range of initiatives which businesses can undertake on waste reduction and sustainable waste management is growing as companies and consumers become more aware of how, where, when and why waste is generated. A number of these ideas come from manufacturers and retailers themselves, either as part of the manufacturing vision or marketing strategy.
- 4.25 Other initiatives have been championed by consumer groups, community groups or environmental campaigners. But wherever the ideas arise from, they cannot be turned into reality without commitment from businesses to act on them, in partnership with others wherever possible.
- 4.26 **Ecodesign** is the process of producing more goods with fewer resources and less pollution, redesigning and re-manufacturing goods and services to enable recycling, or reducing harmful effects when they are returned to the environment. Producing more with less entails innovating in the way raw materials are extracted from the physical environment and used in the production process. This concept has been used by many companies to develop new working methods resulting in benefits both for their business and the environment.

- 4.27 **Consumer marketing and information programmes.** Retailers are acting to improve the information flow to their customers, so that consumer choices about purchase, use and disposal are better informed about key issues. Product information for consumers is one of the tools that can enable change to happen. By identifying issues for the public, and allowing products to be compared on the basis of environmental performance, it lays a foundation for further action.
- 4.28 **Product labelling.** Many companies already label products that are made from secondary materials or are recyclable. Environmental information on products can have an important role, particularly when used in conjunction with other market measures. The Government is keen to see this information provided to a proper standard. The *Green Claims Code* published in 1998 set out basic principles to help businesses make environmental claims about their products, including claims about their recycled content or recyclability.
- 4.29 More detailed guidance for businesses is now available in the form of a new international standard ISO 14021. The standard explains good and bad practice in making green claims and provides detailed information on claims, symbols, descriptions and verifications. The *Green Claims Code* is being updated to form a user-friendly introduction to it. The Government and the National Assembly want to encourage businesses to make full use of the new ISO standard and the Code, for reasons of competitiveness and good trading practice, as well as the positive effects of a better informed market for good producers.
- 4.30 **Environmental management systems.** Widening the scope of the management system to embrace the many other aspects – including energy and water consumption, emissions, raw material use and product stewardship – provides further opportunities to secure savings and reduce the environmental impacts of business. The international standard for environmental management systems, ISO 14001, and the EU Eco-Management and Audit Scheme (EMAS) are increasingly being seen as valuable tools. This is reflected in their increasing use by business to secure savings, enhance efficiency and demonstrate the commitment of business to manage its impacts and continuously improve its environmental performance.
- 4.31 **Making a Corporate Commitment (MACC).** Whether through the management systems approach or not, the Government is keen to see more businesses measuring, monitoring and setting targets to improve performance in specific areas. To this end it intends to relaunch MACC to focus on resource efficiency. The commitment is to make a public declaration to meet quantified targets within a set period. One of the key areas for demonstrating improvement in resource utilisation is waste. Improved performance in waste is clearly important for any business both for profit efficiency and cost reduction, but it is the environmental benefits that increasingly capture the attention of employees and external stakeholders. MACC provides another practical tool to encourage and maintain commitment to all levels in the organisation to reduce waste. Target setting is central to MACC. But by additionally requiring participants to report on progress against their targets, MACC also links with the drive for wider environmental reporting.
- 4.32 **Business reporting.** Increasing numbers of major companies are reporting publicly on their environmental performance. The most forward looking companies have got well beyond treating this as a public relations exercise (or *greenwash*). They are identifying their major environmental impacts, setting targets for improvement and monitoring performance. Public commitment to improvement is part of motivating real change. Some of the more innovative companies are reporting not just on the waste they produce, and their targets for waste reduction, but on initiatives to redesign production and product management to create opportunities for using recycled materials.

- 4.33 Recent surveys have shown levels of environmental reporting are high in the top utility companies, where 94% of top 350 companies produce a separate environmental report, and in minerals/resource companies where almost half do so. But environmental reporting is still infrequent among other sectors – general industries, consumer goods and retail for instance. All major companies are encouraged to report publicly on their environmental performance, and their reporting should address key environmental impacts, including impacts from waste.
- 4.34 Too few companies set themselves targets for reducing environmental damage and gaining added value from key waste streams. Only 45 companies in the top 350 provide quantified measures of waste products, or of amounts recycled or sent for energy recovery treatment as an alternative to disposal. Again, such reporting tends to be by utilities and resource companies, with too few companies reporting from other sectors.
- 4.35 **Producer responsibility.** If recycling levels for a product or material are low, reflecting market failure, then the Government, or in Wales the National Assembly, will consider whether a producer responsibility approach is likely to be a cost effective way of increasing recovery and recycling levels. Selection of a product or material sector for producer responsibility treatment will be dependent upon an assessment of its end-of-life negative environmental impact (volume, weight or hazardous nature) set against the net costs which would be associated with actions by producers to reduce that impact by recovery or recycling.
- 4.36 A statutory approach will be considered where a voluntary solution would be unlikely to achieve the desired benefits and where those benefits are significant as against the likely costs of regulation; or where there is a need to demonstrate compliance with formal EU requirements. In such circumstances the Government and the National Assembly will consider using the enabling powers contained in the Environment Act 1995.
- 4.37 **Life cycle assessment** (Chapter 3 section 3.12 of this part of the strategy) can be a useful tool to help evaluate the environmental performance of a product *from cradle to grave*. Life cycle assessment identifies the materials, energy and waste streams of a product over its entire life cycle – through manufacture, use and disposal – so the environmental impacts can be identified. It can be used by businesses to help identify changes to their operations which can lead to significant cost savings and environmental benefits.
- 4.38 Life cycle assessment is also one of the principles behind the new more integrated approach to product policy. Integrated Product Policy looks at the relationship between products and their burden on the environment throughout their life cycle, selects the priority areas for improvement and decides on the policy and market measures best suited to deliver the improvement.
- 4.39 **Supply chain management.** Increasingly supply chain pressure is being exerted by business through contract specifications and procurement policies reflecting the need to reduce waste and cut costs, for example by minimising the handling of packaging waste. Equally in trying to meet other targets, producers are stimulating the development of new techniques which use less material – and hence give rise to less waste. So in order to achieve higher fuel efficiencies in their vehicles, motor manufacturers are specifying lighter body parts and engines, using thinner gauged or lighter metal and alloys that can be recycled at the end of a vehicle's life.

- 4.40 **Small business best practice guidance.** A significant amount of commercial and industrial waste comes from small and medium-sized enterprises – with fewer than 250 employees. Best Practice help is available for these companies, and the Government will implement its plans to provide an improved service through the Environment and Energy Helpline. However, many companies face difficulties in accessing the full range of disposal methods. The new Waste and Resources Action Programme will work with the waste management industry and local authorities to explore how the range of services available to smaller businesses – particularly for separate collection of recycled materials – can be extended and improved. It will also consider how best to provide guidance to smaller businesses on identifying the Best Practicable Environmental Options for their wastes.

HOUSEHOLDERS

- 4.41 Approximately 25 million tonnes of household waste is produced in England and Wales each year. The range of materials included in this waste is large. The indications are that household waste typically includes:
- 32% paper and card
 - 21% putrescible wastes
 - 9% glass
 - 8% miscellaneous combustible wastes
 - 7% fines
 - 6% ferrous metals
 - 6% dense plastics
 - 5% plastic films
 - 2% textiles
 - 2% non-ferrous metals
 - 2% miscellaneous non-combustible wastes
- 4.42 We all have a vital role to play in tackling waste. While industrial and commercial activity (which in itself is consumer driven) produces far more waste than we – as individual householders – produce, managing our household waste costs local councils a significant amount of money. Net local expenditure by English local authorities in 1998/99 on waste management was £1.3 billion, with a further £73.7¹ million spent by Welsh local authorities in 1998/99.
- 4.43 There are a number of problems associated with getting people to manage their domestic waste more sustainably. *Lack of information* – a lack of knowledge about where, when, why and how much waste people generate in their own homes represents a real barrier on the path towards sustainable waste management. The Government and the National Assembly for Wales are committed to tackle this problem, in close partnership with local government, organisations and businesses across the spectrum of society.
- 4.44 *Denial of responsibility* – people tend to believe that putting their waste in the rubbish bin is the end of the story. In fact it is the first step in a chain of actions (collection, transportation, sorting, storage, treatment, recovery, disposal) which we as a society must make more sustainable.

¹ Budgeted expenditure estimate

- 4.45 *Denial of power* – even when people do worry about the amount of waste their household generates, there is a belief that they are powerless to stem the flow of waste through their home. This is not the case. Individuals do have power to affect the amount of domestic waste they produce, by choosing more durable products, or those with less packaging. Householders can also help by sorting their waste before it is collected. Finally, individuals can have an impact through using their voice as part of the decision-making process, which is looked at in more detail in the box *Getting the public involved in the planning process* in Chapter 3 of this part of the strategy.
- 4.46 *Lack of supporting infrastructure* – most people are willing to recycle their waste if there is an infrastructure available which makes waste separation and recycling simple for them to do. The lack of infrastructure (such as kerbside collection services and community composting facilities) is a real problem for much of our waste, and one which the Government and National Assembly are committed to tackling in partnership with local councils and businesses. But it can be overcome, and it does not always need Government action to put in place effective local waste recovery schemes, such as the old jumble collection services run by various charity shops in a number of local areas.
- 4.47 Raising waste awareness through publicity campaigns and availability of information is considered in Chapter 2 section 2.29 of this part of the strategy. The following sections concentrate on the actions we can all take to reduce the amount of waste we generate, and the actions we can take to manage our domestic waste more sustainably. (Details of the various household waste incentive schemes we are investigating can be found in Chapter 5 section 5.7 of this part of the strategy).

Household waste reduction

- 4.48 Up until now the majority of waste reduction initiatives have taken place within industry. However, recent developments mean that there is more scope for action by householders and consumers. Waste enters the home in a number of guises. Excessive packaging and junk mail are obvious examples of waste, which normally find their way straight from the front door into the rubbish bin. Other waste is less obvious – leftover food, or household appliances which are greedy for resources but produce more waste than end product. Some packaging is essential to keep products (such as food) safe, and only becomes waste when it has served its purpose. Similarly, some products (such as newspapers) only have a short lifespan and end up in the rubbish bin after a few days. Other products – furniture, interior structures, household appliances, clothes, etc – have a lifespan lasting years, but even these will one day become waste – often before they need to.

Junk mail

- 4.49 Junk mail can be a significant, and often unwelcome element of the household waste stream. The number of items sent to consumers in England and Wales doubled from 1.5 billion in 1990 to 3.28 billion in 1999 (see also Chapter 3 in Part 1 of this strategy).

Reducing the flow of Junk Mail

People can ask to have their names removed from the mailing lists that direct sales companies (and others) use to distribute their literature by writing to the Mailing Preference Service at the following address:

Freepost 22
London W1E 7EZ
Telephone: 0345 034 599

People can also write directly to their bank or other companies that they receive junk mail from, to request that they are taken off mailing lists or that excess promotional material is not included with their statements, and remember to tick the box provided on many forms to tell companies not to send further details of their products and services through the post.

Recycling household waste

- 4.50 The constituents of dustbin waste vary according to the area of population, the relative economic and social factors of that population, and the method of waste collection. In general, recycling is optimised where the waste is composed mainly of one material, although alternative technologies are being proposed which deal with more mixed waste streams. Recycling requires sorting materials to ensure that they are of a quality equal to virgin material. Wastes that can be recycled include:
- paper (newspapers and magazines) and card
 - dense plastics
 - textiles
 - glass
 - ferrous metals (iron and steel)
 - non-ferrous metals (mostly aluminium)
- 4.51 In addition, the organic, biodegradable or putrescible waste (such as peelings and other kitchen waste) can be composted (see Chapter 5 section 5.46 of this part of the strategy).
- 4.52 Furthermore, extra effort should be made to ensure certain products are not thrown away with the general household rubbish. For example, we currently dispose of around 600 million consumer batteries each year, some of which contain hazardous materials (further details on batteries can be found in Chapter 8 section 8.24 of this part of the strategy). Old refrigerators and freezers may also contain some hazardous materials (such as ozone depleting substances), and a number of schemes for collecting old equipment are in operation in various parts of England and Wales. And the substantial rise in home ownership of computers and related equipment has also led to a rise in obsolete or outdated equipment being thrown out alongside the rest of the household waste – yet the circuitry in this equipment can often be put to good use in other products (which do not require overly sophisticated circuitry), if they are recovered in time.

Newport Wastesavers Charitable Trust

Newport Wastesavers Charitable Trust is a good example of the work of the community sector. It comprises a charity and a not-for-profit operating company.

The charity recycles furniture and white goods. During 1999, it assisted over 2,000 families, referred by registered agencies as being in need. The company has established partnerships with Newport County Borough Council and Gwent Probation Service, and operates a *green box* kerbside collection of recyclable material from 20,000 households in Newport. The service has achieved a materials recovery rate of 15% from participating households. By 2003, all of Newport's 50,000 households will be serviced fortnightly. An office paper collection operation is also collecting from over 200 organisations throughout south east Wales.

Community involvement in the decision-making process

- 4.53 The impact of householders (often working together) to influence either a council or a major retailer can be very influential. There are many avenues in place through which people can get their voices heard – such as community groups, parish and district councils and national voluntary groups.
- 4.54 People have a right to take part in the planning process, both at the stage where waste development, management, recycling and composting plans are being drawn up by local councils; and also when planning applications for waste management facilities are made.
- 4.55 Details on the decision-making process, and how individuals and organisations can make their voices heard as local waste management options are being drawn up, can be found in the box *Getting the public involved in the planning process* in Chapter 3 of this part of the strategy.

GOVERNMENT

- 4.56 The Government and the National Assembly have a number of roles to play to establish more sustainable waste management across England and Wales. In addition to their role of encouraging voluntary action, introducing, monitoring and amending various legislative and economic instruments to encourage and enforce the safer and more sustainable management of the waste we all generate, they also have a role in raising waste awareness across all sectors of society, in encouraging the various stakeholder groups to talk (and listen) to each other with the aim of establishing waste management partnerships. They also have a responsibility to ensure the waste they generate themselves is managed as sustainably as possible as an example to others. The following section concentrates mainly on the last of those points.

Greening Government

- 4.57 The Government is committed to improving the environmental performance of its Departments. It is working through the Green Ministers Committee to ensure this happens, and has established the Parliamentary Environmental Audit Committee to audit the Government's performance against its targets.
- 4.58 The Green Ministers Committee has agreed a Greening Operations Model Framework and Improvement Programme which all Departments have used to draw up their own strategies for improving the environmental aspects of their operations, including waste management.

- 4.59 Green Ministers also set out a waste target for 2000/01 in their first annual report published in July 1999². This first Government waste target is: *to aim to recover a minimum of 40% of total office waste, with at least 25% of that recovery coming from recycling or composting*. The report makes clear that this is an initial target and that Green Ministers will want to consider if it can subsequently be extended to non-office waste. The report also sets out the various actions that Departments have taken individually.

Green Guide for Buyers

DETR has issued a *Green Guide for Buyers* which is relevant for all buyers in Government Departments. In addition to covering policy and practice, dealing with for example UK and EC procurement rules, grounds for rejecting suppliers and the importance of reducing waste, the *Guide* contains checklists to help buyers specify goods and services that are environmentally preferable. It has been complimented by a note jointly issued by HM Treasury and DETR on environmental issues in procurement. This reinforces the message that buyers should take account of life cycle costs and quality when determining value for money.

- 4.60 In Wales, the National Assembly will set an example by implementing the principles of sustainable development in its internal operations. One of the proposals in the Assembly's draft Sustainable Development Scheme is an annual review of its green housekeeping plan, which includes policies on waste management. In the current plan, the Assembly aims to reduce the amount of waste it sends to landfill, to improve existing recycling schemes and to look for new recycling opportunities where possible.
- 4.61 DETR has produced guidance to help Departments improve their waste management. This stresses that the main priority for Departments should be to reduce waste by using resources more efficiently, encouraging re-use and improving recycling schemes.
- 4.62 The importance of efficient procurement practices in Departments has been recognised and further guidance has been issued by DETR to help them achieve that. Chapter 3 of Part 1 sets out proposals for piloting a scheme to require procurement of certain recycled products. A joint note with HM Treasury on *Environmental Issues in Purchasing* emphasises the need to take decisions on the basis of whole life costs, rather than initial prices alone, and that this includes factors such as disposal costs. As well as advising public sector purchasers to look to waste reduction and re-use, the guidance recommends that purchasers should not generally look for new items when refurbished parts or products can be used.

Action within the Environment Agency

The Environment Agency has adopted good practice in waste reduction throughout its organisation. It has taken the broad view that waste reduction (or more effective resource management) should cover all the resources used within the organisation and has targeted those with the greatest environmental impact for action. These include:

- *energy use* in transport and in buildings
- *water* – to deliver a national target the Agency cut its water consumption by 30.4% in 1998/99 on a baseline year of 1996/97
- *Construction aggregates* – the Agency uses secondary or recycled aggregates where practicable: last year 38% of the aggregates used by the Agency were taken from secondary or recycled sources

Overall, the Agency is adopting a formal environmental management system. Three pioneer sites have already achieved ISO 14001 and the remaining operating sites are programmed to achieve this over the next 3 years.

In 1999, the Agency became the first Government body to publish an environmental report of its own activities.

² This report can be found on the internet at www.environment.detr.gov.uk/greening/ar9899 – free hard copies can also be obtained by writing to DETR, Zone 5/A1, Ashdown House, 123 Victoria Street, London SW1E 6DE. Product code 99EP0395.

Ministry of Defence and the UK Armed Forces

4.63 The Ministry of Defence (MOD) is undertaking a number of actions in support of the Greening Government initiative and as part of its corporate environmental management system:

- MOD is measuring the level of waste production within a number of different areas rather than across the whole Department
- Phase-out plans for MOD PCBs (polychlorinated biphenyls) have been developed. All PCB waste is to be removed from equipment and destroyed by 2000
- Fluorescent light tubes are being recycled using a contract set up by MOD's Disposal Sales Agency. All expired disposal contracts are considered for the scheme
- Tenders have been sought for a call-off contract for the disposal of all types of MOD special waste

4.64 More generally on waste management issues, the following actions are being actively pursued:

- MOD policy is to reduce the production of waste wherever possible. Line managers are responsible for investigating and implementing opportunities for waste reduction which do not compromise operational requirements
- All procurement decisions should include consideration of potential waste implications and should address: maximum recyclability; maximum use of products based on recycled materials; minimum use of unnecessary packaging; minimum pollutant emissions
- All MOD personnel involved in handling, storing, treating, transferring or disposing of waste must comply with the Duty of Care
- Commanding Officers and Heads of Establishment are responsible for ensuring compliance with legislation, regulations and statutory requirements for waste producers, carriers and disposers
- Units or establishments which have significant quantities of waste (or special waste) should have a designated waste manager
- The waste manager has an audit responsibility for Commanding Officers and Heads of Establishment, and satisfies certain regulatory and licensing requirements
- Waste manager responsibilities vary between individual sites and activities
- It is MOD policy to reduce and re-use packaging wherever practicable and within the constraints of operational effectiveness
- MOD is working on an overall waste reduction strategy. Specific initiatives relevant to waste reduction include the Energy Efficiency Campaign and a Munitions Research Package which aims to improve the disposability of Explosive Ordnance

Department of Health and the National Health Service

- 4.65 The National Health Service can play an important role in sustainable waste management. Since the removal of Crown Immunity under the NHS and Community Care Act 1990, and the implementation of the Environmental Protection Act 1990, the health service has had to become more aware of healthcare waste disposal issues.
- 4.66 Many NHS trusts contract out the disposal of healthcare waste to private sector waste management companies. Trusts are also increasingly aware that technology provides a range of methods for treating healthcare waste, and some are adopting waste management strategies that rely to some degree on these new methods.
- 4.67 If the NHS can reduce the amount of waste produced by NHS trusts, the benefit will be twofold: NHS waste management costs will be contained, and a reduction in environmental impact can be expected. In the NHS, as elsewhere, effective waste management depends on:
- adequate segregation of waste
 - adequate waste awareness (often reinforced by staff training)
 - collecting better data on waste production
- 4.68 Most healthcare wastes represent a low level of threat to the environment. Such threats that may materialise can be managed by established techniques. Sustainability is not undermined by any unusual characteristics in the majority of healthcare wastes.
- 4.69 The NHS can also contribute to sustainability by incorporating environmental design within its specification and procurement techniques. This usually involves:
- discussions between the NHS and manufacturers of medical products about the design and packaging of medical devices
 - the use of new materials for medical products so as to make them less toxic in production, recovery and disposal, and more easily recyclable
- 4.70 Medical products must reflect and satisfy the demands of medical practice and avoid prejudicing clinical outcome. This done, opportunities should be taken to eliminate or reduce clinical waste. The process is iterative and reciprocal: alterations in procedure may change the product and its packaging.
- 4.71 The NHS has to discharge its management responsibilities in accordance with statutory requirements and good practice, while still providing value for money. The NHS Estates Agency provides technical guidance to this end. The latest in the series is *Health Technical Memorandum 2065 – Healthcare waste management – segregation of waste streams in clinical areas*, issued in October 1997, and available from the Agency.

Regulating and managing waste

- 4.72 Even when waste production has been reduced to a practicable minimum, there will still be millions of tonnes of waste produced across England and Wales each year. Much of this will have the potential to damage our environment and has to be managed in accordance with the principles of sustainable development. The management of waste is tightly

controlled, mainly through the provisions of the Environmental Protection Act 1990, overseen by the Environment Agency.

- 4.73 The collection, treatment and disposal of much of the waste generated by businesses and householders is undertaken by the waste management industry, though the collection and management of municipal waste is the duty of local waste collection and waste disposal authorities.

Waste in ports and coastal waters

This strategy refers only to waste generated and managed on land. The following policy documents deal with waste in ports and coastal waters:

- *Port waste management planning: how to do it* – London DETR 1998, ISBN: 1-85112-068-8. Copies are available from local marine offices or direct from DETR Shipping Policy 3, Zone 4/12, Great Minster House, London SW1P 4DR (telephone 020 7944 3898), or the DETR website at www.detr.gov.uk
- *Merchant Shipping (Port Waste Reception Facilities) Regulations 1997* SI 1997 No 3018, available from The Stationery Office, ISBN 0-11-065335-1

- 4.74 The Government's sustainable development strategy, *A better quality of life*, makes it clear that a significant improvement in resource efficiency is needed over the next 20 years. This does not mean making ourselves worse off, or denying others the benefits we already enjoy. But it does mean we need to do things differently. Disposing of products at the end of their lives can often represent a missed opportunity. Many existing products can be re-used, or have value (in the form of materials and energy) recovered from them.
- 4.75 Putting a more sustainable waste management system into place will involve local government, the Environment Agency and the waste management industry. But the need to engage the local community – householders, charities and community groups – and local businesses in the processes of sustainable waste management should never be overlooked or disregarded.
- 4.76 The regulation framework within which waste has to be managed in England and Wales is set out in the Waste Management Licensing Regulations (Chapter 3 section 3.35 of this part of the strategy) and the Integrated Pollution Prevention and Control Regulations (Chapter 3 section 3.48 of this part of the strategy).

THE ENVIRONMENT AGENCY

- 4.77 The Environment Agency was established in April 1996 to regulate emissions of pollutants to air, land and water.

Regulating and monitoring of waste activities

- 4.78 The Agency's main role in the sustainable management of waste is through its regulatory activities to protect the environment and human health. Carrying out its duties in the licensing, monitoring and inspection of waste management facilities is the single most important contribution the Agency makes to sustainable waste management.
- 4.79 To improve targeting of its inspection resources, the Agency shortly intends to introduce a risk-based system for determining the frequencies at which it inspects waste management

facilities (OPRA). OPRA takes account of pollution risk and operator performance, and will enable the Agency to direct its inspections towards higher risk sites and illegal activities.

The Agency's role in promoting waste reduction

- 4.80 The Environment Agency also works with businesses across England and Wales to cut the costs – both financial and environmental – associated with the production of waste. Under the new IPPC regime many of the sites regulated by the Agency have a duty to cut unnecessary waste.
- 4.81 The Agency has supported moves by companies to reduce the waste they generate, through activities such as waste minimisation clubs, and by working with the Environmental Technology Best Practice Programme (ETBPP) to ensure collaboration and coordination of a number of initiatives in waste reduction. Increasingly, the Agency is targeting its waste reduction activities at specific industrial sectors identified from its Waste Production Survey, and specific types of waste (such as hazardous wastes) to achieve the most effective use of its resources in delivering environmental benefit.

Data and information

- 4.82 The Agency is committed to providing assistance to local authorities and the waste management industry, through the provision of relevant and up to date information on the amounts of waste and the management of it. The results of the Waste Production Survey have provided for the first time reliable estimates of industrial and commercial waste, which have informed this waste strategy. The Agency's survey has established a clear relationship between the amount of waste produced and the size of the company.
- 4.83 Additionally, as part of its role in providing information, more detailed information from the survey together with supplementary work being undertaken by the Agency will be published in reports for each region (known as the Strategic Waste Management Assessment) to provide information to the Regional Technical Advisory Bodies in England. These reports will contain information on the wastes arising, the facilities available and some assessments (using the Agency's life cycle tool) of the costs and benefits of different mixes of waste management options for dealing with municipal waste.
- 4.84 Apart from providing the information described above, the Agency has embarked upon a programme to produce the maximum benefit from the Waste Production Survey. During 2000, the Agency will provide key information (known as the Wastes Database) from the survey on its website. This information will be in two parts:
- the amount of waste produced by the best, poorest and average performers in each industry sector – this will enable businesses to compare their waste production with those for similar companies, and is intended to encourage waste reduction
 - the waste materials produced by each industry sector – this will form the basis of a national waste exchange and allow those operating waste exchanges or seeking to re-use waste materials will be able to identify those companies most likely to produce it

THE WASTE MANAGEMENT INDUSTRY

- 4.85 The Government and the National Assembly for Wales believes that the waste management industry will be a primary player in delivering its strategy for waste. There is a lot of common ground between our aims – meeting targets, and where appropriate dealing with waste higher

up the hierarchy – and the industry’s need to meet its customers’ expectations. The industry may be expected to change and develop in a variety of ways, as highlighted below.

- 4.86 It will be increasingly important for the industry to offer a range of local services, rather than just landfill or just incineration, in order that their customers can benefit from a real choice. Satisfied customers will benefit the industry and flexibility will help to meet this strategy’s goals and targets. It is likely that a number of larger more integrated companies will come to dominate the market, although there will always be a place for smaller, localised companies, or specialist facilities such as high temperature incinerators.
- 4.87 Waste companies will need to respond rapidly, and anticipate changes brought about by regulation: slow moving companies will be threatened by changes, whereas companies with foresight are likely to reap commercial rewards. An example is the reduction of biodegradable municipal waste to landfill required by the Landfill Directive. Industry should make good use of the time available to make the necessary planning and investment in alternative treatments for biodegradable waste.
- 4.88 Embracing new techniques and developments, such as anaerobic digestion and pyrolysis, will give the industry a commercial advantage in the future. It is important that there is original thought and innovation in the industry. Increased recovery and reduction at source may lead to smaller quantities of more complex wastes which need technical solutions. The Government and the National Assembly welcome the setting up of an Environmental Body (the Environmental Services Association Research Trust – ESART) for research and development in this area.
- 4.89 Improving public confidence in the industry will be important for the industry’s development, and continued competitiveness, most obviously in the planning process. (For further information on the waste planning process, see Chapter 3 section 3.21 of this part of the strategy).
- 4.90 The waste management industry, with the help of DTI as the industry’s sponsoring department, is making efforts to address the public’s perception of waste issues and management. An industry led group, representing a wide range of interests, has begun to look at this issue with a view to making recommendations on best practice in building public confidence. This is seen as an important step towards achieving more sustainable waste management. This group is working closely with the Environmental Services Association Research Trust, and a research project funded from the Landfill Tax Credit Scheme is now underway.
- 4.91 Providing a high standard of training to employees will be important in the future, for an industry wanting to respond to rapid changes. Companies which fail to train their employees to the relevant level of technical competence will face action by the Environment Agency. The Government and the National Assembly welcome proposals to develop a national training organisation for waste and will work with the industry and the Environment Agency to devise and implement properly accredited training in waste reduction techniques and other sustainable waste management options. The industry is already looking to develop and revise the awards in time for re-accreditation in March 2002.
- 4.92 Improved environmental standards can benefit those companies that practise them in the future. Apart from raising public confidence, these companies will benefit from Environment Agency proposals to move to a more risk based assessment towards waste facilities, as opposed

to their current cyclical approach. The Government and the National Assembly welcome this development, which will help towards its aim of more sustainable waste management.

- 4.93 In all these developments affecting the waste management industry, it will be important to strike a careful balance between supporting the industry and helping to realise the objectives of the strategy, and allowing market forces to apply their own pressures. Although regulation cannot be ruled out, involvement will generally be indirect, for example through encouragement and provision of information, fiscal measures, or incentives such as the Landfill Tax Credit Scheme.
- 4.94 The Landfill Tax Credit Scheme provides a valuable opportunity for the industry to address many of the broad issues mentioned above, such as the need for greater innovation, training and improving public confidence. Industry should continue to make the most of this fiscal incentive.

WASTE COLLECTION ACTIVITY

- 4.95 The key to successful materials (and energy) recovery from waste is to ensure the waste undergoing these processes is as *homogenous* as possible. Homogenous waste can be defined as waste composed mainly of a single material (such as paper waste, or brown glass). Conversely, *mixed* waste can be thought of as waste made up of a wide variety of materials. Unsorted household waste is a good example of *mixed* waste stream.
- 4.96 Before waste can be recycled, it needs to be sorted into its component materials. Manufacturing processes often produce large quantities of waste composed of a single material, which can be recovered fairly easily. In contrast, household waste often has to be delivered to purpose built waste sorting facilities (Materials Recycling Facilities) where it can be separated into its constituent waste streams. It is at this point that waste will be shredded, crushed or bulked up to make its subsequent transport, treatment or disposal simpler, safer and often cheaper.
- 4.97 The method used to collect waste can therefore have a large impact on the practicability (and profitability) of subsequent recycling operations. This section considers the roles and responsibilities of the main players involved in waste collection – including the statutory duties of local Waste Collection Authorities.

Community Recycling Network

The Community Recycling Network is the umbrella organisation for over 250 community groups, co-operatives and not-for-profit businesses in the community waste sector. By providing advice, training, information and practical initiatives it aims to promote community-based initiatives as the most effective way of tackling the UK's growing waste problem. CRN members work in partnership with local authorities and business to develop the best practice in all fields of sustainable waste management including waste reduction and materials recycling. The CRN has links with equivalent organisations in Europe.

CRN represents the community waste sector in the UK, though it has been encouraging the development of regional recycling networks to improve support in some locations. Currently CRN members offer a householder-separated kerbside collection of recycled materials to over 800,000 households in the UK. CRN seeks to empower households and communities to take responsibility for their waste streams, these being the most visible manifestation of the individual's impact on his or her environment.

- 4.98 Waste Collection Authorities have a duty to collect household waste except in certain prescribed circumstances. They also have a duty to collect commercial waste if requested to do so and may also collect industrial waste. Waste collected, other than that which the authority makes arrangements to recycle, must be delivered to the appropriate Waste Disposal Authority.
- 4.99 Since 1 April 2000, local authority waste collection services have been subject to the Best Value duty under the Local Government Act 1999. This requires authorities to deliver their services to clear standards – covering both cost and quality – by the most effective, efficient and economic means available in order to deliver continuous improvements in service provision. Similarly in Wales, the National Assembly has formally repealed Compulsory Competitive Tendering from 2 January 2000 (although the requirement had been subject to a moratorium in Wales since October 1994) and introduced the duty of Best Value from 1 April 2000.

Best Value performance indicators

These indicators have been set up by the Government and reflect the interest in the delivery of local services. The indicators are designed to enable comparisons to be made between the performance of different local authorities and within an authority over time. Local authorities will need to set targets against the indicators to reflect the continuous improvements in performance required under Best Value. To ensure that the indicators give a balanced view of performance the Government has sought to reflect five *dimensions* of performance in the indicators. These are:

- *strategic objectives* – why the service exists and what it seeks to achieve
- *cost/efficiency* – the resources committed to a service and the efficiency with which they are turned into outputs
- *service delivery outcomes* – how well the service is being operated in order to achieve the strategic objectives
- *quality* – the quality of the service delivered, explicitly reflecting users' experience of the services
- *fair access* – ease and equality of access to services

Waste management is a key service provided by local authorities and a number of Best Value indicators have been set for waste management services. These are:

- of the total tonnage of household waste arisings
 - percentage recycled
 - percentage composted
 - percentage used to recover heat, power and other energy sources
 - percentage landfilled
- weight of household waste collected, per head
- cost of waste collection per household
- cost of municipal waste disposal, per tonne
- number of collections missed, per 100,000 collections of household waste
- percentage of people expressing satisfaction with
 - recycling facilities
 - household waste collection
 - civic amenity sites
- percentage of population served by a kerbside collection of recyclable waste, or within one kilometre of a recycling centre

4.100 Waste Collection Authorities also have a duty to prepare and publicise waste recycling plans under section 49 of the Environmental Protection Act 1990 taking account of DETR/Welsh Office guidance to local authorities. A recycling plan is an authority's statement of the arrangements made and proposed for recycling household and commercial waste. It should:

- include information about the kinds and quantities of controlled wastes which the Waste Collection Authority expects to collect or purchase during the period of the plan, and which it expects to deal with by recycling
- explain the arrangements which the Waste Collection Authority expects to make with waste disposal contractors during the period of the plan
- identify the plant and equipment which it expects to provide for sorting and baling of waste

London Borough of Hounslow

The Audit Commission reported that Hounslow showed the fastest growth rate for recycling in London, reaching a level of 17% in 1998/99. This has been delivered through a combination of bring sites, a green waste trial scheme involving 4,000 households, and primarily through a multi-material kerbside recycling collection system.

The council has displayed considerable initiative in working with the community sector, and in making recycling services available to a broad range of their diverse community. This has included communication programmes for *hard to reach* groups, changing contractual arrangements for caretaker duties in high rise flats to facilitate recycling collections, and a neighbourhood intensive home composting programme with support and training.

The council is continually working with local partners, including a joint Real Nappy campaign with five other West London Boroughs, and promotion of the Buy Recycled campaign in conjunction with local supermarkets.

4.101 These plans should be reviewed and updated as necessary and should be taken fully into account by Waste Planning Authorities. Waste Collection Authorities should take account of relevant statutory performance standards and DETR/Welsh Office guidance issued in March 1998 to local authorities on preparing and revising recycling strategies and recycling plans. This guidance encourages close and effective liaison between the relevant Waste Planning Authorities, Waste Disposal Authorities and Waste Collection Authorities on waste management issues. Together with that guidance, the Secretary of State issued a direction that all Waste Collection Authorities in England should investigate if their recycling plan needed updating. As a result of this decision, the majority of Waste Collection Authorities in England are in the process of revising their recycling plans. In Wales, local authorities have been strongly encouraged to update their plans, in particular to take account of local government reorganisation in 1996.

A summary of waste collection routes

The rubbish bin is not the only outlet for domestic waste. While the availability of the following alternatives to the rubbish bin will vary across the country, the Government and the National Assembly are keen to see such initiatives being taken up by local communities more widely.

Almost all local councils have put in place *bring system recycling* banks which include bottle banks and can banks – some bring systems go further and can accept waste textiles, paper and plastic bottles. There are a number of advantages with bring systems:

- they can encourage high participation rates if sufficient banks, bins, etc can be located close to people's homes
- they are cheaper than separate collection from households

However there can also be some disadvantages, for instance badly sited banks can lead to an increase in traffic movements and may deny some people the opportunity to participate, and care has to be taken to ensure people put the right material in the right bin as contamination can damage the value of the collected materials.

An alternative to the bring system is *kerbside collection* of separated materials direct from households. A number of councils have introduced different kerbside collection systems. The most successful systems rely on the council working in close partnership with community groups, local businesses and charities, and others to achieve a good understanding across the local population of how the system operates and to ensure maximum participation rates.

Local authorities also provide *civic amenity sites* where people can bring their household waste – which consists generally of bulkier items such as furniture, DIY waste, kitchen equipment and garden waste, as well as recyclable waste.

People do not need to rely on the council to find alternatives to the rubbish bin: *reselling* things no longer needed at jumble sales and car boot sales remains a popular option, and charity shops often work closely with their local community to source a supply of clothes, textiles, books, toys and other objects for resale.

The possibilities of utilising home – or small community – composting schemes to handle kitchen and garden wastes is examined in more detail in Chapter 5 section 5.46 of this part of the strategy.

Manufacturers and retailers can also play their part – *take back schemes* can often prove to be a profitable addition to a product's marketing strategy, as can a proactive approach towards *goods maintenance* and repair agreements. Other sales techniques include the old-for-new *part-exchange* scheme where discounts are offered on new goods if the customer gives the company the product being replaced at the same time.

- 4.102 Recycling Credits are payments made by Waste Disposal Authorities in England to their Waste Collection Authorities. Payments are equal to avoided disposal costs, and support the Waste Collection Authority's recycling activities. The Government recognises that the current scheme might in some cases work against the closer working relationships which this strategy advocates. The Government is therefore proposing to examine with local government whether the financial incentives for the promotion of recycling are adequate.
- 4.103 For businesses, the Duty of Care requires them to make arrangements for the collection and safe disposal of their wastes. Commonly, companies will contract with waste management companies to collect and dispose of their waste, though on some industrial estates companies have entered into joint agreements with their local authorities to provide these services.

WASTE RECOVERY, TREATMENT AND DISPOSAL ACTIVITIES

- 4.104 Most waste generated in England and Wales is currently disposed to landfill. As the various actions to reduce waste generation, and to recover more materials and energy from the waste we do generate are brought to bear, our reliance on landfill will diminish. Our

goal is to recover value from at least 45% of municipal waste by 2010 and to reduce industrial waste going to landfill to 85% of 1998 landfill levels, by 2005. The various waste management options are considered in more detail in Chapter 5 of this part of the strategy.

- 4.105 Waste Disposal Authorities are responsible for the safe disposal of municipal wastes arising in a particular geographical area. The Environmental Protection Act 1990 required Waste Disposal Authorities to transfer their waste disposal facilities to either an arms length Local Authority Waste Disposal Company or directly into the private sector, and to carry out their waste disposal responsibilities exclusively by means of letting contracts. The majority of Waste Disposal Authorities have now completed the divestment of their waste disposal operations as required by the legislation.
- 4.106 The Local Government Act 1999 applies the duty of Best Value to Waste Disposal Authorities. The Government's initial view is that statutory performance standards for recycling should apply to Waste Disposal Authority areas. The Government has recognised that the divestment provisions of the Environmental Protection Act 1990 do not sit well with the Best Value framework, which leaves the details of service delivery for the local authority to determine based on local circumstances. The Government has therefore announced that it intends to repeal these provisions.
- 4.107 Following the recommendation of the Review Group on the Local Authority Role in Recycling, the Government is actively encouraging Waste Disposal and Waste Collection Authorities to prepare joint Municipal Waste Management Strategies, and proposes to make these mandatory. The purpose of these strategies is to develop a strategic framework for the management of municipal waste. They will therefore set out, particularly in relation to contract specification, policies and proposals for the various collection, treatment and disposal options (such as waste reduction, re-use, recycling, composting, other forms of recovery and landfill). Strategies should take into account sustainability and local circumstances, with the aim of maximising environmental benefits, whilst at the same time minimising overall economic costs. They will also explain how these different practices can be developed in an integrated way.
- 4.108 Local authorities, in preparing these Municipal Waste Management Strategies, should consult with others with a legitimate interest, including the waste management industry, other affected local authorities, the local community and local businesses, and other relevant waste-generators. (One of the advantages of this approach is the extent to which local authorities are entering into partnerships with the private and community sectors). To date, about half of counties in England have already begun to develop Municipal Waste Management Strategies with their district councils, and most intend to have them in place before the end of 2000.
- 4.109 In Wales, authorities have been encouraged to consider wider waste management issues when revising their recycling plans, consulting with other local authorities and relevant organisations in the process. A number of authorities have already decided to incorporate their recycling plan into a broader waste management strategy.

INTEGRATING WASTE COLLECTION AND DISPOSAL ACTIVITIES

- 4.110 The Government believes that the current division of responsibility between Waste Collection and Waste Disposal Authorities can work against an integrated approach to waste management. Ensuring the development of such an integrated approach, and increased cooperation between local authorities (and their constituent communities and local businesses) will be a key factor in delivering both the objectives of this strategy and the challenging targets in the EC Landfill Directive.
- 4.111 Unitary Authorities already combine waste collection and waste disposal responsibilities in one body, and in those two-tier areas where Municipal Waste Management Strategies are being negotiated or have been put in place there is already increasingly close cooperation between collection and disposal authorities. The Government believes there is a need to build on this base, and will promote policies and initiatives aimed at improving cooperation and collaboration between authorities.