

# Review of England's Waste Strategy A Consultation Document

## Annexes

February 2006



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This document supports the *Review of England's Waste Strategy – A Consultation Document* which is available for download on <http://www.defra.gov.uk/environment/waste/strategy/review/index.htm>

## Annex A – Summary of targets and current performance

Target Year	Targets	Progress
Municipal waste	<p><b>Landfill Directive targets</b></p> <p>By 2010 to reduce bio-degradable municipal waste landfilled to 75per cent of that produced in 1995</p> <p>By 2013 to reduce bio-degradable municipal waste landfilled to 50per cent of that produced in 1995</p> <p>By 2020 to reduce bio-degradable municipal waste landfilled to 35per cent of that produced in 1995</p>	<p>The amount of biodegradable municipal waste sent to landfill should be no more than 11.2 million tonnes by 2010. In 2003-04, it is estimated that around 14.7 million tonnes was disposed of in this way. Local authorities across England have been set limits on the amount of biodegradable municipal waste they can dispose of. Allocations totalling 15.2 mtonnes have been set for the first year of the Landfill Allowance Trading Scheme launched on 1 April 2005.</p>
	<p><b>Waste Strategy 2000 targets</b></p> <p>To recover value from 40per cent of municipal waste by 2005</p> <p>To recover value from 45per cent of municipal waste by 2010</p> <p>To recover value from 67per cent of municipal waste by 2015</p>	<p>In 2003/4, 28 per cent of municipal waste had some sort of value recovered from it in 2003-04. Despite expected further increases in recycling the 2005 target seems unlikely to be met.</p>

<p>Household waste</p>	<p><b>Waste Strategy 2000 targets</b>                  To recycle or compost at least 17per cent of household waste by 2003/04                  To recycle or compost at least 25per cent of household waste by 2005/06                  To recycle or compost at least 30per cent of household waste by 2010                  To recycle or compost at least 33per cent of household waste by 2015                  Statutory recycling and composting targets were set for 2003/04 and 2005/06 for each local authority in England to ensure that each authority contributes proportionately to the achievement of the national target. Government is consulting on statutory recycling and composting targets for 2007/08.</p>	<p>In 2003-04 17.7 percent of household waste was collected for recycling or composting, exceeding the target of 17 per cent. Provisional estimates for 2004-05 indicate nearly 23 per cent of household waste was collected for recycling/composting. These figures suggest we are on track to meet the 2005/06 target.</p>
	<p><b>The Household Waste Recycling Act 2003</b>                  English waste collection authorities to collect by 31 December 2010 at least two types of recyclable waste together or individually separated from the rest of the household waste</p>	<p>In 2003-04 around 62per cent of households received a kerbside collection for 2 or more materials</p>
<p>Commercial and Industrial Waste</p>	<p>Waste Strategy 2000 target                  By 2005 to reduce the amount of industrial and commercial waste sent to landfill to 85per cent of that landfilled in 1998.</p>	<p>In 2002-3 the amount sent to landfill represented 87per cent of the 1998-9 figure. [This target is likely to be met]</p>

<p>Packaging</p>	<p><b>Directive Targets</b>                  By 2008 to recycle /recover 55/60per cent of all packaging entering UK waste stream.                  Material specific recycling targets:-                  Paper 60per cent                  Glass 60per cent                  Metals 50per cent                  Plastic 22.5per cent                  Wood 15per cent  <b>By 2010 to recycle /recover 57.7per cent/62.7per cent of all packaging entering UK waste stream (indicative target)</b></p>	<p>There are around 10.3 m tonnes of packaging in the wastestream. In 2004 recycling/recovery rates of 49.7per cent/55.6per cent were achieved.                  Material specific recycling performance:                  Paper 68per cent                  Glass 44per cent                  Metals 42per cent                  Plastic 19per cent                  Wood 57per cent</p>
<p>WEEE</p>	<p><b>Directive Targets</b>                  By 2006 to recover a min of 70-80per cent of total WEEE and reuse/recycle 50-80per cent of components. by weight of average appliance)                  Cat. 1 and 10 - Min 80per cent recovery                  75per cent reuse or recycle (component, material and substance)                  Cat. 3 and 4 - Min 75per cent recovery                  65per cent reuse or recycle (component, material and substance)                  Cat. 2,5,6,7,9 - Min 70per cent recovery                  50per cent reuse or recycle (component, material and substance)                  Gas dis-charge lamps -80per cent reuse or recycle (component, material and substance)                  By end 2006 to collect a min of 4kg/head of WEEE;</p>	<p>Accurate data not available as the regulations are not in force yet, there is not yet any data about whether producers have met targets.                  Industry estimates about 1m tons of WEEE in household waste stream.</p>

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End of Life Vehicles	By 2006 of 80/85per cent recycling/ recovery. 2015 targets still to be agreed – currently 95per cent	Of 2 million vehicles, 1.2 million undergo treatment and recycling the remainder go straight to scrap. Current recycling 70- 75per cent (most metals – owing to high metal value)
Batteries	Proposed Directive targets under discussion	180,000 tonnes of batteries produced per annum Current recycling performance: Automotive 70per cent Industrial 60per cent Portables 40-50per cent
Newspapers	Voluntary Agreement: Recycled content of new newsprint <ul style="list-style-type: none"> <li>• 60per cent by end 2001</li> <li>• 65per cent by end 2003</li> <li>• 70per cent by end 2006</li> </ul>	2.5m tonnes produced per annum 76per cent recycled content achieved by end 2004
Magazines	Voluntary Agreement: recycling of post consumer magazines – <ul style="list-style-type: none"> <li>• 50per cent by 2007</li> <li>• 60per cent by 2010</li> <li>• 70per cent by 2013</li> </ul>	0.6m tonnes estimated in the waste stream. 40per cent of post consumer magazines currently recycled
Direct Mail	Voluntary Agreement: Of total direct mail produced the following recycling targets to be achieved:- <ul style="list-style-type: none"> <li>• 30 percent by end 2005</li> <li>• 55 percent by end 2009</li> <li>• 70 percent by end 2013</li> </ul>	0.55m tonnes estimated in the waste stream. 13per cent recycling achieved In 2003 The DMA estimated that the percentage of direct mail recycled was 25per cent in 2004, on track for meeting their 2005 target.
Farm plastics (non packaging)	Statutory producer responsibility : no target set yet	Currently about 20per cent recycling Around 60 thousand tonnes of non packaging farm plastics in waste stream and a further 32 thousand tonnes of packaging waste.

## ANNEX B - Progress in policy implementation

### Government objectives

1. WS2000's overall aim is to protect human health and the environment by ensuring waste is minimised where possible, and where it does occur it is used as a resource through re-use, recycling or recovery of energy.
2. The detail of the commitments and the actions with respect to specific objectives are tabulated in Tables 1-4. Key achievements are summarised below.

### Government action on Regulation

3. The **Integrated Pollution Prevention & Control** Directive has been implemented through the Pollution Prevention and Control (PPC) Regulations 2000 (and amendments). Some 4,500 operators of major industrial processes requiring authorisation under the PPC regime are now required to abide by the general principle that waste production should be avoided; and that where waste is produced it should be recovered unless technically and economically impossible. Failure to do so may result in refusal of a permit or enforcement action if in breach of permit conditions.
4. The requirements of the Landfill Directive have been implemented through the **Landfill Regulations 2002** (as amended). This has resulted in the classification of all landfill sites as hazardous, non-hazardous or inert, which ended the practice of co-disposing of hazardous and non-hazardous wastes. Additional obligations have been imposed on waste producers and landfill operators to characterise and in some cases test waste destined for landfill. The **Waste Acceptance Criteria** (WAC) have set limit values for physical and chemical components of the leachate generated in hazardous waste landfills. The landfilling of liquid hazardous waste was banned from July 2004 and this will be followed by a ban on the landfilling of non-hazardous liquid wastes at all sites. It will further end the landfilling of whole (save for engineering purposes) and shredded used tyres from July 2006, and end the landfilling of all liquid wastes from October 2007.
5. Statutory recycling targets (**Best Value Performance Standards**) were introduced for local authorities for 2003/04 and 2005/06. Targets were set at a level to ensure that each authority contributed to the achievement of the national household waste recycling and composting targets. See Annex A for progress against these targets. Government has recently

consulted on options for local authority recycling and composting targets for 2007/08.

6. The Landfill Allowances Trading Scheme (LATS) has been introduced under the **Waste and Emissions Trading (WET) Act (2003)** as the primary mechanism for achieving the Landfill Directive targets for the amount of biodegradable municipal waste (BMW) disposed to landfill (Box 1). In the first six months of the scheme, over 15 trades have taken place for both current and future years resulting in excess of 286,000 allowances (with one allowance being equivalent to one tonne) being traded for a total value in excess of £5.8m. The WET Act also contains two measures to promote **joint working between authorities in two-tier areas**; a requirement for authorities in two-tier areas, with some exemptions, to have in place a joint strategy for the management of municipal waste and a power for waste disposal authorities (WDAs) to direct a waste collection authority (WCA) to deliver waste in a separated form.

**Box 1: Landfill Allowance Trading Scheme**

WDAs have been set limits (an 'allowance') on the amount of BMW they can dispose of in landfill sites. These allowances are tradable through the **Landfill Allowance Trading Scheme (LATS)** administered by the Environment Agency. Each WDA can determine how to use its allocation of allowances in the most effective way. It will be able to trade allowances with other WDAs, save them for future years (bank) or use some of their future allowances in advance (borrow). The scheme is effective from April 1<sup>st</sup> 2005, and it should help to ensure that the targets in Article 5 of the Landfill Directive are met in the most cost efficient and effective way for England as a whole.

Penalties may be incurred if a WDA breaches its landfill allowance. In a scheme year a fixed penalty of £150 per tonne will apply for every tonne of BMW landfilled in excess of allowances held. In a (Landfill Directive) target year (2010, 2013, 2020) the Government will reserve the right to pass some or all of any fine imposed by the European Court of Justice to the WDA. In addition, if a WDA fails to provide monitoring information a fixed penalty of £1000 will apply.

7. The **Household Waste Recycling Act 2003** provides that where WCAs have a general duty to collect waste they shall ensure that by 31 December 2010 they collect at least two types of recyclable waste together or individually separated from the rest of the household waste stream. Kerbside collection schemes are growing in popularity, in 2003/04 62 per cent of households received a kerbside collection for 2 or more materials. Almost all authorities (over 95 per cent) now collect some waste for recycling through kerbside schemes.
8. The Government has updated the framework for **strategic and spatial planning for waste management**. Defra and ODPM published on July 21<sup>st</sup> 2005 a new framework, encompassing a new Planning Policy Statement 10 *Planning for Sustainable Waste Management* (PPS10), new

**guidance** for local authorities on the preparation of **Municipal Waste Management Strategies**, minor changes to **Waste Strategy 2000** to underpin the new policy, and proposals for the periodic provision of national data and advice on waste arisings, recycling potential and any national capacity needs. A crucial element of the new framework is an emphasis on early and continuous engagement with local communities. The new documents provide the necessary policy framework and focus for local authority decision makers to prepare effective plans and strategies that deliver the comprehensive network of waste facilities we need to meet our Landfill Directive obligations.

9. In response to recommendations made in the Strategy Unit Report "Waste not want not" Government revised the **Building Regulations** to require the allocation of space in housing developments for recycling facilities. . The Government's Code for Sustainable Homes aims to set a level above the Building Regulation requirement for storage in homes.
10. The Government has implemented a number of EU **Producer Responsibility** Directives that address specific product waste streams (packaging and packaging waste, end-of-life vehicles (ELVs), waste electrical and electronic equipment (WEEE). These Directives place responsibility on the producer to reduce the environmental impact of the product concerned and set targets for the recovery and recycling of products at end of life. The Directives also require producers to minimise the use of hazardous materials, thus influencing the design phase of products.
11. Government has undertaken a review of the Special Waste Regulations and introduced new **Hazardous Waste Regulations**<sup>1</sup> on 16 July 2005. The new regime includes a requirement for most producers of hazardous waste to notify their premises to the Environment Agency and enable and promote greater hazardous waste minimisation at source.
12. Government implemented the **Waste Incineration Directive**, which prevents and limits the negative environmental effects and resulting risks to human health from the incineration of waste. Government also established the **OPRA risk based assessment** for waste inspection, carried out by Environment Agency. This aims to make regulation more effective and efficient; reduce complexity and target those activities that pose the greatest risks to the environment.
13. Government issued Draft Regulations for consultation on 9 December 2004, aimed at bringing **agricultural waste** under waste management

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<sup>1</sup> Hazardous Waste (England & Wales) Regulations 2005 and the List of Wastes (England) Regulations

control in order to better protect public health and the environment. The Regulations will come into force from early 2006<sup>2</sup>.

### Government Financial Action

14. Local authority waste management costs have been rising steadily due to the continuing increase in waste arisings and the need to fund new infrastructure to divert waste from landfill due to national and legally binding EU targets.
15. The main source of funding for local authority waste services is through the Environmental, Protective and Cultural Services (**EPCS**) Relative Needs Formula (**RNF**). The EPCS block provides for a wide range of local authority services including libraries, local transport and flood defence, as well as waste. The continued funding requirements of local authorities were factored into the Spending Review 2004 (SR04), which is injecting an additional £888 million into the Environment, Protective and Cultural Services (EPCS) block grant that provides core funding for local authority services including waste. This includes provision to ensure that increases in landfill tax (Box 2) are revenue neutral to local authorities as a whole.
16. The **National Waste Minimisation and Recycling Fund** (NWMRF, also known as the "Challenge Fund"), together with the London Recycling Fund (LRF), will have provided funding totalling £270m over the four years to 2005/06 for specific projects designed to minimise the amount of household waste generated, and provide more extensive collection and sorting facilities for re-use, recycling and composting. Current data on projects funded outside of London indicates that local authorities have collected approximately 450,000 tonnes of MSW for recycling/composting through projects supported by the fund in its first 2 years<sup>3</sup>. An estimated 600 collection vehicles and over 10 million containers will be purchased over the lifetime of the fund<sup>4</sup>. Partly as a result of this funding, it is estimated that around 50per cent of English households will benefit from access to either new or additional recycling/composting services<sup>5</sup>. In addition, funding has been provided for over 50 projects involving the development of Materials Recovery Facilities (MRFs), Household Waste Recycling Centres (HWRCs) and composting facilities. In total over 300 projects have been supported outside of London since the fund was first established.

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<sup>2</sup> For more information on agricultural waste management see: <http://www.defra.gov.uk/environment/waste/topics/agwaste.htm>

<sup>3</sup> Figure based on data supplied to WIP by local authorities through quarterly monitoring returns.

<sup>4</sup> Based on planned figures supplied to WIP by local authorities.

<sup>5</sup> Based on mid-2002 household estimates (ODPM)

17. In the Spending Review 2002 (covering 2003-04 to 2005-06) Government provided £355 million towards funding waste **Private Finance Initiative** (PFI) projects to support investment in value for money waste disposal facilities and further encourage a shift away from landfill. Spending Review 2004 (covering 2006-07 to 2007-08) provided an extra £255 million of PFI credits (which contribute to payments for contracts) for waste PFI projects in 2006-07 and £280 million in 2007-08. So far, 21 authorities have benefited, or will shortly do so, from support through waste PFI funding. Nine of these projects are already operational and the remainder are at various stages of procurement. In total, waste PFI projects represent £1.5 billion of investment with a total contract value of more than £15 billion.

**Box 2: Landfill Tax Escalator**

The Landfill Tax Escalator was introduced as the main financial instrument to divert both municipal and non-municipal waste from landfill by increasing the cost of landfilling active waste relative to the alternatives higher up the waste hierarchy (recycling, composting, energy from waste). Since 1999/2000, the landfill tax has risen by £1 per tonne per year. Following Government analysis and the recommendations made by the Strategy Unit, the decision was taken to increase the escalator. The Government announced in the 2003 budget that the rate of landfill tax for active waste would increase annually by at least £3 per tonne from 2005/06 to a medium term target of £35 per tonne. The new Escalator was introduced on April 1<sup>st</sup> 2005 increasing the rate of tax for active waste to £18 per tonne. The tax for inactive waste remains at £2 per tonne.

**Box 3: Landfill Tax Escalator (continued)**

The Government has decided that the increases in the standard rate of landfill tax will be revenue neutral. Additional revenues from the Landfill Tax Escalator will be returned to local authorities via the Environmental, Cultural and Protective Services revenue support block grant and to Business through the Business Resource Efficiency and Waste (BREW) programme.

18. As announced in Budget 2003, Defra's NWMRF has been reformed into a new three-year **Waste Performance and Efficiency Grant** (WPEG) to support new and more efficient ways to deliver waste reduction, increase recycling and diversion from landfill. In 2005-06, the WPEG is running in parallel with the NWMRF and will have £40m available to support waste management performance, rising to £105m in 2006/07 and £110m in 2007/08. This funding is not ring fenced for waste management purposes. The remaining £5m of the 2005/06 allocation is funding local authorities to pilot householder **incentive** schemes (see below on influencing).

19. The Landfill Tax Credit Scheme was reformed in 2003 with a proportion of the funding<sup>6</sup> being redirected to the new **Waste Implementation**

<sup>6</sup> £84m in 2003/04; £92m in 2004/5; £92m in 2005/06

- Programme** (WIP) to deliver a package of measures designed to accelerate progress towards the Landfill Directive targets (see also Box 4). By 2007-08 the WIP programme will help local authorities to deliver around £300 million worth of efficiency gains on waste services mainly by more effective joint working, promoting best practice, and standardisation of procurement operations.
20. The community sector has an important role as an innovative service provider, and as a stimulus to changed attitudes and behaviour. In May 2004 Government announced a £4m **Community Sector Support Programme**, delivered through WIP. This includes £3m for the sector to develop joint projects with local authorities. Funding has been made available through a bidding process, and in April 2005 Defra announced 36 successful projects<sup>7</sup>. The Programme also includes a separate scheme to establish regional co-ordinators in four pilot regions to raise awareness of community-sector activities with local and regional government and spread best practice.
21. Government has undertaken a review of the **recycling credit scheme** and following consultation new provisions were included in the Clean Neighbourhoods and Environment Act 2005. These provisions are intended to provide more flexibility in respect of recycling credit payments and encourage greater **partnership working** between local authorities and with third parties (e.g. profit and non-for-profit organisations). The new legislation further clarifies credit payment made for re-use activity. Government has consulted on the method by which the value of recycling credits should be calculated and an announcement on changes from April 2006 will be made shortly.
22. The **Aggregates Levy** was introduced in 2002 to encourage the use of alternatives to virgin materials in construction. At the same time the Aggregates Levy Sustainability Fund, which aims amongst other things to overcome market barriers to increased recycling of aggregates, was established.

### **Government action on changing behaviours**

23. Alongside the regulatory and economic framework several mechanisms have been put in place to influence key aspects of behaviour and help to meet the commitments made in WS2000:
24. The **Waste and Resources Action Programme** (WRAP) was set up in 2001 to develop markets for recyclates by stimulating demand for recycled materials among industries and end-users, while improving the range,

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<sup>7</sup> <http://www.defra.gov.uk/news/2004/041125a.htm>

quality and quantity of recycled materials and products available. WRAP has taken forward work on six material streams (aggregates, glass, organics, paper, plastics and wood), supported by work in three generic areas (financial mechanisms, procurement and standards). These activities have had considerable success in developing markets for recycled materials and products, and WRAP's programmes had directly delivered an estimated 3.7 million tonnes of recycling capacity by March 2004<sup>8</sup>.

25. The Strategy Unit report identified a major gap between central policy making and action at a local level, highlighting the need for dedicated support on waste issues for local authorities. As part of its response, the Government established the **Waste Implementation Programme (WIP)** in June 2003 (Box 4)<sup>9</sup>. The programme comprises nine work areas jointly delivered by Defra and WRAP with the objective of stimulating changes in household behaviour and local authority performance through demonstration and support in order to improve the efficiency and effectiveness of local authorities in meeting targets.

**Box 4: Waste Implementation Programme**

1. **Waste Minimisation (WRAP):** This work area has four main initiatives designed to reduce waste volumes, with a target of deflecting the rate of increase in household waste by 1 per cent (equivalent to a reduction of around 745,000 tonnes) by 2006:
  - Home Composting, in collaboration with local authority partners providing subsidised home composting bins and an intensive communications and information campaign to increase the number of households carrying out home composting;
  - Real Nappy Programme, assisting the start-up and promotion of reusable nappy schemes;
  - Retailer Initiative, working with retailers and their supply chains to reduce the amount of packaging and food waste entering the waste stream from supermarket purchased products.
  - Innovation Fund, an £8m fund to support the Retailer Initiative through specific projects to support more efficient packaging designs
2. Local Authority Support Unit (LASU) provides tailored advice and guidance to support local authorities in tackling specific local barriers to improved recycling and waste diversion, including advice on efficient procurement and contracting. It has also distributed over £3.5m to around 300 local authorities to help them to access specialist consultancy advice to support individual or joint projects.
3. **Recycling & Organics Technical Advisory Team (ROTATE)** (WRAP) provides a free

<sup>8</sup> For WRAPs Business Plan and Achievement Report 2003/2004 see: [http://www.wrap.org.uk/about\\_wrap/](http://www.wrap.org.uk/about_wrap/)

<sup>9</sup> For more details see: [http://www.defra.gov.uk/environment/waste/wip/wip\\_twoyearon.pdf](http://www.defra.gov.uk/environment/waste/wip/wip_twoyearon.pdf)

advisory service to support local authorities in the implementation and improvement of kerbside collection schemes (focusing particularly on organics collection systems). To date it has supported around 120 local authorities, with a target to support 200 local authorities by March 2006.

4. **New Technologies Programme** addresses the barriers to implementing both near market and proven technologies that are new to the UK for treating municipal waste as the landfill of BMW diminishes in importance. Initiatives within this work area include:
  - Waste Technology Data Centre, to provide facts on how waste treatment technologies work, as well as how much they cost to build and maintain
  - Technology Research & Innovation Fund (TRIF), which is allocating around £2m for R&D projects into new technologies.
  - Demonstrator Programme providing around £30m to help set up new waste-treatment technologies that need pilot or demonstration plants to help with testing and development, and to show that they are practical.
  - Education – to provide an M-level module and VRQs for Waste Professionals.
5. **Waste Awareness Programme (WRAP)** delivers national and targeted local campaigns to promote waste minimisation and recycling and increase participation in recycling and waste minimisation initiatives. There are two initiatives within this work area:
  - “RecycleNow” – the national advertising campaign to bring about behavioural change by encouraging householders to recycle more (£10m)
  - Direct funding (£20m) for local communication campaigns, primarily those developed and delivered by local authorities
6. **Local Authority Funding, WIP’s funding and scrutiny team is responsible for managing the NWMRF, the PFI credit scheme and WPEG (see Municipal Waste – financial). This includes work to improve the suitability of PFI for waste contracts to support better, faster delivery of new waste infrastructure.**
7. **Data**, the aim of this workstream, which is being taken forward jointly with the Environment Agency, is to provide a sound evidence base for improved policy development, implementation, monitoring and evaluation at both national and local levels. Industry and local authorities will benefit from access to high quality and timely waste management data (across all waste streams), which can help to support planning applications, facility expansions, investment decisions and marketing activities.
8. **Research**, development and implementation of a forward looking waste-related research strategy to address information needs and identify effective ways of advancing scientific knowledge on managing wastes (£15m).
9. The Efficiencies work stream aims to assist Local Authorities to deliver targeted efficiency gains for waste management activities. It does so through offering help to identify savings which can be used to support front line services.

26. A **pilot programme** was announced on 31 March 2005 to encourage local authorities to investigate **household incentive schemes**. Over 50 local authorities launched household incentive pilots in October, supported by up to £3.5m. The pilots will enable local authorities to evaluate the efficacy of different incentives in encouraging householders to minimise, re-use, recycle and compost their waste. The evidence from the pilots will be used to provide best practice guidance for local authorities, and inform future development of policy in this area.
27. WRAP is undertaking a research project to evaluate the effectiveness of a range of approaches to **front of store recycling** at supermarkets in encouraging more people to recycle more of their waste. The research will inform development of policies aimed at encouraging retailers and local authorities to work in partnership.
28. The **Business Resource Efficiency and Waste (BREW)** programme has been established to support business in improving resource efficiency, including waste minimisation and diversion from landfill and as such complements WIP in tackling municipal waste. This will be achieved primarily through developing and expanding existing programmes that have proven success.

**Box 5: Business Resource Efficiency & Waste (BREW) Programme<sup>10</sup>**

Under BREW Defra has been allocated £284m<sup>11</sup>. The funding available for 2005/06 has been allocated as follows:

**Envirowise**, to increase the provision of free advice to businesses on resource efficiency; and support for Business Resource Efficiency Clubs. (£12m)

**WRAP**, expansion of market development programme to cover tyres, plasterboard and batteries, as well as a feasibility study on the collection and recycling of waste from small businesses and the expansion of the existing Business Development Scheme (£4m)

**National Industrial Symbiosis Programme (NISP)**, expansion of the programme that creates linkages between different industries to enable previously unwanted or low value output resources to become useful and competitively priced inputs for others. (£2m)

**Carbon Trust**, expansion of existing free services that help businesses improve their carbon efficiency, as well as encouraging and supporting the development and deployment of new more efficient products and technologies on to the market. (£3m)

**Market Transformation Programme (MTP)**, to develop forward-looking market projections

<sup>10</sup> <http://www.defra.gov.uk/environment/waste/brush/factsheets.htm>

<sup>11</sup> £43m in 2005/06, £95m in 2006/07, £146m in 2007/08

and action plans on technological, market and policy developments related to reducing the environmental impact of products. (£2m)

**Environment Agency**, to help tackle waste crime for the benefit of legitimate businesses (£2m).

**Box5: Business Resource Efficiency & Waste (BREW) Programme** (continued)

**Regional Development Agencies** (RDAs), to co-ordinate delivery of the BREW programme measures at the regional level and to carry out strategic resource efficiency projects in the regions. (£5m)

**DTI Technology Programme**, for further research and development related waste minimisation and resource efficiency (£10m)

In addition, Defra's **Waste Data Strategy** (delivered through WIP) has benefited from an additional £1m, and £2m has been allocated to support the development of initiatives to assist the sustainable management of **agricultural waste**. (£2m)

29. The **Envirowise** programme is the main UK-wide Government funded initiative for promoting resource efficiency to business. The programme enables business simultaneously to make cost savings and reduce its environmental impact. It is helping businesses to make savings of some £300 million per year whilst reducing the amount of business waste sent to landfill by over 1.9 million tonnes per year. Its funding has been increased by over £12 million from the BREW programme (Box 3) to enable more businesses to access its services.
30. Under the **Constructing Excellence** programme (previously the construction best practice programme), Government published voluntary guidance for construction contractors and clients in July 2004. The guidance addresses waste minimisation on construction sites, and the need to reduce waste material going to landfill sites. Drawing on powers in the Clean Neighbourhoods and Environment Act 2005, Defra is now drafting regulations to make Site Waste Management Plans a statutory requirement.
31. The **Hazardous Waste Forum** was established by Government in December 2002 to bring together key stakeholders to advise on the way forward on the management of hazardous waste. In February 2004, Defra established with the Environment Agency a dedicated joint implementation programme for the Landfill Directive and other changes to hazardous waste legislation (**Landfill and Hazardous Waste Implementation Programme**).

32. The Government consulted in June 2005 on **environmental reporting** guidance for UK companies. The Guidelines, published in early 2006, will assist Company Directors in preparing Business Reviews under the EU Accounts Modernisation Directive, where environmental issues are material to an understanding of their business. This guidance will be finalised early in 2006. In addition, a number of initiatives have been taken forward to increase the take up of **environmental management systems** in the public and private sectors, including publication of a Government position statement in September 2005.

**Table 1: Government Action on waste reduction and reuse**

Objective (WS2000)	Instruments/Actions	
	What we said we would do	What we have done
Reduce the amount of waste produced	<b>Municipal Waste</b>	
	Increase opportunity cost of disposing waste by increasing the rate of landfill tax	Announced Landfill tax escalator for active waste of £1 per tonne per year in 1999 with a review in 2004. Further increase of £3 per tonne from 2005/6 announced in SR 2004, with an increase of at least £3 per tonne each year thereafter up to a medium to long term level of £35 per tonne
	The increase in the tax will be revenue neutral to local authorities	Announced in SR2004 that the additional revenue from increased landfill tax will be recycled back to local authorities via revenue support grant (ECPS).
	Achieve a significant increase in waste reduction and reuse through WRAP	WRAP's initial focus has been on market development for recycled materials and products, to help create stable and efficient markets. Following the introduction of the WIP programme, WRAP has taken forward a targeted programme of work on waste minimisation.
	Increase WRAP's role in waste reduction through four programmes aimed at household waste minimisation	<p>Provided WRAP with £50m of additional funding to take forward the four programmes:</p> <ol style="list-style-type: none"> <li>1. Home composting programme established in 2003 (£28m)</li> <li>2. Real Nappies established in 2003 (£2m)</li> <li>3. Organics established in 2003 (£10m)</li> <li>4. Retail Initiative and Innovation Fund established in 2003 (£10m)</li> </ol>

<p>Create a new funding team under WIP to be responsible for the implementation of a number of programmes that deliver additional central government funding to local authorities including the Challenge Fund</p>	<p>Established the WIP Programme in 2003. Distributed a total of £270m through the Challenge Fund since 2002-03 to support 300 new projects enabling local authorities to collect about 450,000 tonnes of household waste for recycling or composting. Replaced the Challenge Fund with a new non-ring-fenced Waste Performance and Efficiency Grant. This will support new and more efficient ways to deliver waste reduction and increase recycling and diversion from landfill. Under the WPEG, local authorities will receive £40m in 2005/06, £105m in 2006/07 and £110m in 2007/08.</p>
<p>Provide funding for <b>waste awareness and education</b> to encourage consumers to take ownership for the waste they generate, buy recycled and to deal with it in a more sustainable way</p>	<p>Provided £30m to WRAP to launch a campaign to raise consumer awareness of recycling and to encourage people to take action and recycle now. £10m was allocated to a national campaign and £20m was allocated to Local Authorities to fund their own campaigns. The emphasis is on recycling, following research that indicated that the campaign should focus on one message and then expand. WRAP are now considering how to bring re-use messages into the campaign.</p>
<p>Introduce <b>EU Producer Responsibility</b> legislation to increase producers' awareness of the environmental impact of their products at the end of their life (often when it ends up in household waste stream)</p>	<p>Implemented Producer Responsibility legislation for Packaging, ELV; and taken an active role in negotiating WEEE Directive, with DTI leading on implementation. WRAP (funded through BREW money) to run a series of nationwide trials on household battery collection starting in Jan 06, in light of the forthcoming Batteries Directive (expected to come into force mid 2006). Currently being negotiated for farm plastics</p>
<p>Develop voluntary initiatives on producer responsibility</p>	<p>Introduced voluntary PR initiatives for newsprint and direct mail and magazines.</p>

<p>Investigate options to <b>incentivise householders</b> to change their behaviour, such as reducing the amount of waste they put out for collection. Initiate pilot schemes to encourage householders to reduce waste (e.g. performance rewards coupled with intensive education)</p>	<p>The Government is continuing to investigate options for influencing household behaviour. Research on international schemes and the current extent of incentive schemes in England has recently been completed. The Government has introduced a £3.5m programme to pilot household incentive schemes during 2005/06. This is currently in progress with preliminary reports due Spring 2006.</p> <p>WRAP's communications and awareness work is directly focused on increasing participation in recycling and waste minimisation initiatives.</p>
<p>Encourage LAs to consider targets under Best Value to reduce the growth in household waste per head. Review with ODPM the complete set of <b>BVPIs</b> to ensure they set the right incentives for local Government to reduce waste</p>	<p>Collaborated with the Audit Commission to develop CPA2005. In particular it is proposed to utilise BV84 (kilograms of household waste collected per head of population) to set minimum and maximum thresholds for waste collected from waste collection, disposal and unitary authorities.</p>
<p>Implement <b>Article 5 of Landfill Directive</b> and introduce tradable permits for local authorities to restrict the amount of biodegradable municipal waste (BMW) landfilled. Continue to consult on preferred option with regards to allocation of permits and method of trading.</p>	<p>Undertook 3 consultations on achieving the Landfill Directive targets culminating in Regulations introducing the Landfill Allowances Trading Scheme (LATS) under the Waste and Emissions Trading Act 2003. Introduced the Landfill (Scheme Year and Maximum Amount) Regulation 2004 in July 2004. Introduced the Landfill Allowance and Trading Scheme (England) Regulations January 2005.</p>
<p>Implement a Communications Strategy to promote the Landfill Allowance Trading Scheme and ensure that local authorities understand how the scheme will operate.</p>	<p>Held two series of regional roadshows with the Environment Agency in July 04 and March 05. These were designed to increase local authority understanding of the scheme, encourage participation and to provide a forum for discussions with stakeholders.</p>
<p><b>Commercial &amp; Industrial Waste</b></p>	
<p>Increase opportunity cost of disposing waste by increasing the rate of <b>landfill tax</b></p>	<p>Announced Landfill Tax escalator for active waste of £1 per tonne per year in 1999 with a review in 2004. Further increase of £3 per tonne from 2005/6 announced in SR 2004, with an increase of at least £3 per tonne each year thereafter up to a medium to long term level of £35 per tonne</p>

<p>The increase in the tax will be revenue neutral to businesses</p>	<p>Announced in SR2004 that the additional revenue from increased landfill tax will be recycled back to businesses via the BREW programme.</p>
<p>Introduce <b>EU Producer Responsibility</b> legislation to increase producers' awareness of the environmental impact of their products at the end of their life</p>	<p>Implemented Producer Responsibility legislation for Packaging, ELV and soon WEEE. Reduction is driven through tonnage recycling targets.</p>
<p>Develop further initiatives on producer responsibility</p>	<p>Voluntary PR agreements have been introduced for direct mail, newsprint and magazines</p>
<p>Implement <b>Article 3 of IPPC</b> (integrated Pollution and Prevention and Control) Directive to minimise waste production of large scale industrial installations</p>	<p>Implemented the IPPC Directive (1996) through the Pollution Prevention and Control (England and Wales) Regulations 2000 and subsequent amendments.</p>
<p>Provide support and funding for <b>ENVIROWISE</b> (previously Environmental Technology Best Practice Programme) to facilitate waste minimisation and resource efficiency in small to medium sized enterprises.</p>	<p>Increased funding for Envirowise through the BREW Programme. This will enable Envirowise to expand the range of its support and significantly increase its coverage including extending the role of Resource Efficiency Clubs (formerly Waste Minimisation Clubs).</p>
<p>Promote environmental <b>reporting</b> to businesses and publish guidance to assist businesses when reporting</p>	<p>From April 2006, listed and quoted companies are required to produce a Business Review under the Accounts Modernisation Directive, where Directors will need to report on environmental matters significant to their companies performance. t.</p>
	<p>"Environmental Key Performance Indicators: reporting guidelines for UK business" [to be published in Jan] ). This will help companies identify and address their environmental impacts, and will inform Directors of significant impacts to include within their Business Reviews. The guidelines can also be used to assist companies in producing sustainability, CSR and environmental reports. There is a specific KPI on waste.</p>

<p>Promote use of <b>Environmental Management Systems</b></p>	<p>Established ISO 14001 database, developed EMAS web site, published guidance on the technical aspects of EMAS and an introductory guide on business benefits of EMAS, developed guidance and case study material under Project Acorn, and launched new British Standard BS 8555 allowing phased implementation of an EMS. Launched joint promotional strategy aimed at increasing take up of EMS in private and public sectors. Published Government Position Statement on EMSs in September 2005. Text on EMSs and BAT included in European BREF Notes. EMAS included in guidance on Climate Change Agreements Environment Agency achieved corporate registration for EMAS in April 2005. Environment Agency incorporated EMSs into risk based regulation in OPRA (Operator and Performance Risk Appraisal)</p>
<p>Investigate potential gains for waste reduction and reuse through <b>Industrial Symbiosis</b></p>	<p>Allocated £13 million over 3 years through the BREW programme to the National Industrial Symbiosis Programme (NISP) to allow its development into a truly national programme</p>
<p>Place greater emphasis on <b>ecodesign</b>.</p>	<p>Provided funding for the Market Transformation Programme (MTP) under the BREW programme to investigate how the role of eco-design of products can be better used to reduce the amount of waste generated by products.</p>
<p><b>Construction &amp; Demolition Waste</b></p>	
<p>Introduce <b>the Aggregates Levy</b> in 2002 to reflect the environmental costs of aggregates extraction and encourage use of alternatives to virgin materials.</p>	<p>Introduced Aggregates Levy at £1.60 per tonne in 2002</p>
<p>Increase efficiency in the extraction of aggregates through the <b>Aggregates Levy Sustainability Fund (ALSF)</b></p>	<p>Introduced ALSF in 2002 with £35m. This is funding WRAPs work on aggregates.</p>

<p>Increase awareness of waste prevention through the <b>Construction Best Practice Programme</b> (now known as the Constructing Excellence programme)</p>	<p>Published voluntary guidance on Site Waste Management Plans for construction contractors and clients in July 2004. It addresses the issues of waste minimisation on construction sites, and the need to reduce waste material going to landfill sites. Envirowise began a programme of activities targeting the construction sector in 2004. Drawing on powers in the Clean Neighbourhoods and Environment Act 2005, Defra is now drafting regulations to make Site Waste Management Plans a statutory requirement.</p>
<p><b>Hazardous Waste</b></p>	
<p>Promote <b>environmental reporting</b> as a means of increasing awareness of hazardous waste generation by business</p>	<p>Published "Environmental Key Performance Indicators: reporting guidelines for UK business", following consultation. All large private and quoted companies, will have to produce a Business Review under the EU Accounts Modernisation Directive. For the Business Review, Directors will need to consider what non-financial key performance indicators (KPI) are relevant to their business, including information relating to environmental matters.. There is a specific KPI on waste.</p>
<p>Review the regime for the management of special waste, in order to put greater emphasis on reduction</p>	<p>Introduced new Hazardous Waste Regulations for England and Wales on 16 July 2005. These put greater focus on the waste producer and enable greater hazardous waste minimisation at source.</p>
<p>Provide support to <b>Envirowise</b> to promote cleaner technologies and better product design</p>	<p>Increased funding for Envirowise through the BREW Programme. This will enable the programme to expand the range of its support and significantly increase its coverage.</p>

**Table 2: Government Action on recycling and composting**

Objective	Instruments/Actions	
	What we said we would do	What we have done
Increase the supply of materials for recycling and composting	<b>Municipal Waste</b>	
	Introduce <b>statutory Best Value performance standards</b> for recycling by local authorities. These will be reviewed in light of progress by local authorities in 2004.	Introduced targets for local authorities for 2003/04 and 2005/06. Targets were set at a level to ensure that each authority contributes to the achievement of the national targets. Consultation on recycling targets for 2007/08 issued on 26 October 2005. A longer-term review of targets will take into account the various policy levers designed to drive the management of waste up the hierarchy (e.g. LATS, the landfill tax escalator, recycling of packaging materials and WEEE). All waste BVPIs will be examined to ensure that they focus on the key indicators of local authority performance on waste management.
	Propose to use the <b>Landfill Tax Credit Scheme</b> to help deliver an increase in recycling, in particular of household waste. Extend the range of activity eligible for support, to include recycling projects carried out by the voluntary sector.	Allocated approximately £84/92/92m for the financial years 2003/04, 2004/05 and 2005/06 as part of the reform of the LTCS to the Waste Implementation Programme (WIP) to accelerate progress and support local authorities in meeting recycling and EU Landfill Directive targets. Established a £4m Community Sector Support Programme with WIP to support recycling and other projects within this sector.
	Provide funding through the <b>National Waste Minimisation and Recycling Fund</b> (Challenge Fund) for local authority recycling/composting schemes	Allocated over £275m between 2002/03 - 2005/06 to 300 plus projects.
	Increase opportunity cost of disposing of waste by increasing the rate of <b>landfill tax</b> and making recycling more attractive.	Announced Landfill Tax escalator for active waste of £1 per tonne per year in 1999 with a review in 2004. Further increase of £3 per tonne from 2005/6 announced in SR 2004, with an increase of at least £3 per tonne each year thereafter up to a medium to long term level of £35 per tonne

	Increase in the tax will be revenue neutral to local authorities	Additional revenue from landfill tax is recycled back to local authorities via revenue support grant (EPCS)
	Reconsider the case for a <b>ban</b> on disposing of recyclable products or materials	On hold until 2006/07.
	Revise ODPM <b>Building Regulations</b> to include space for recycling containers in new housing developments	Building Regulations revised.
	Provide funding for <b>waste awareness and education</b> to encourage consumers to take ownership for the waste they generate, buy recycled and to deal with it in a more sustainable way	Provided £30m to WRAP to launch a campaign to raise consumer awareness of recycling and to encourage people to take action and recycle now. £10m was allocated to a national campaign (Recycle Now) and £20m was allocated to local authorities for local campaigns.
	Examine with local government whether the financial incentives for the promotion of recycling are adequate and encourage <b>joint working</b>	Gained Royal Assent to the Waste and Emissions Trading Bill, which includes measures to promote joint working between authorities in two tier areas, a requirement for the preparation of joint municipal waste management strategies and a power for WDAs to direct a WCA to deliver waste in a separated form. Reviewed the recycling credits scheme in 2004 and following consultation included revised proposals in the Clean Neighbourhoods and Environment Act 2005, due to come into effect in April 2006. Defra and ODPM are jointly supporting a project on joint working in waste management being run by West Sussex County Council under the auspices of the Innovation Forum. This is helping spread best practice and will work with central Government to tackle remaining barriers to effective joint working.
	Investigate options to <b>incentivise householders</b> to change their behaviour. Initiate pilot schemes to encourage householders to recycle more of their waste.	The Government is continuing to investigate options for influencing household behaviour. Research on international schemes and the current extent of incentive schemes in England has recently been completed. The Government has introduced a £3.5m programme to pilot household incentive schemes during 2005/06. This is currently in progress with preliminary reports due Spring 2006.

<p>WRAP to set up a <b>kerbside taskforce</b> to significantly expand and improve the performance of collection systems for dry recyclables and organic wastes.</p>	<p>WRAP has established under WIP, a kerbside recycling taskforce (ROTATE) to provide local authorities with free practical support and advice in the implementation and improvement of kerbside collection systems. This focuses particularly on organics collection systems and also provides complementary support on civic amenity site, bring site and other kerbside recyclables development.</p>
<p>Encourage greater household waste recycling</p>	<p>Published Household Waste Recycling Act 2003. This requires all WCAs to collect at least two types of recyclable waste from all households in their area by 2010. Guidance published on the Act on 1st April 2005.</p>
<p>Introduce <b>Producer Responsibility</b> initiatives to make producers take responsibility for the recovery of their products at the end of their lives.</p>	<p>Implemented Producer Responsibility legislation for Packaging . Taken an active role in negotiating WEEE Directive, with DTI leading on implementation. WRAP (funded through BREW money) to run a series of nationwide trials on household battery collection starting in Jan 06, in light of the forthcoming Batteries Directive (expected to come into force mid 2006).</p>
<p>Develop a voluntary initiative on producer responsibility for direct mail.</p>	<p>Agreed voluntary PR initiative introduced for direct mail and magazines.</p>
<p>Take part in EU discussions on increasing the <b>Packaging</b> targets post 2001</p>	<p>Completed. There is a new Directive in place and new targets were published in the Official Journal at the beginning of last year. These will have to be met by 31 December 2008.</p>
<p><b>Commercial &amp; Industrial Waste</b></p>	
<p>Increase opportunity cost of disposing of waste by increasing the rate of <b>landfill tax</b> and making recycling more attractive.</p>	<p>Announced Landfill Tax escalator for active waste of £1 per tonne per year in 1999 with a review in 2004. Further increase of £3 per tonne from 2005/6 announced in SR 2004, with an increase of at least £3 per tonne each year thereafter up to a medium to long term level of £35 per tonne</p>

	Increase in the tax will be revenue neutral to businesses	Announced in SR2004 that the additional revenue from increased landfill tax will be recycled back to businesses via the BREW programme.
	Introduce <b>Producer Responsibility</b> initiatives to make producers take responsibility for the recovery of their products at the end of their lives.	Implemented Producer Responsibility legislation for Packaging and ELV, and taken an active role in negotiating WEEE Directive, with DTI leading on implementation.
	Take part in EU discussions on increasing the <b>Packaging</b> targets post 2001	Completed. There is a new Directive in place and new targets were published in the Official Journal at the beginning of last year. These will have to be met by 31 December 2008.
	Publish regulations implementing the <b>ELV</b> Directive	Regulations published.
	Used <b>Tyre</b> Working Group is exploring options for delivering necessary increase in recycling to deal with Landfill Directive requirements	Launched Responsible Recycler Scheme which is a voluntary pilot scheme that supplements the duty of care for tyres to ensure they are disposed of correctly. There will be consultation to explore whether the scheme should be made statutory. New material stream programme on tyres managed by WRAP under the BREW programme.
<b>Stimulate investment in reprocessing capacity</b>	Facilitate investment in reprocessing through <b>WRAP</b>	Launched WRAP in 2001 to develop stable and efficient markets for six material streams initially, subsequently increased to nine. As part of these programmes WRAP has supported significant capital investment in reprocessing facilities, including Shotton newsprint mill and Delleve plastic bottle sorting plant. WRAP also offers advice and finance facilities to reprocessors/recyclers through its Business Development Service.
	<b>Packaging Waste Recovery Notes (PRN)</b> introduced under the Packaging (Producer Responsibility) Regulations	PRN revenue intended to be used by reprocessors to develop reprocessing and collection capacity and end-use markets for recyclates.

	Ensure that adequate national <b>planning</b> policies are in place in order that sustainable waste management practices can be exercised. Review PPG10 to ensure the planning system can deliver the required facilities for recycling, composting and waste management.	New Planning Policy Statement 10: Planning for Sustainable Waste Management, together with changes to decision making principles in WS2000 and revised Guidance on Municipal Waste Management Strategies were published on 21st July 2005. Practice Guidance on these has also now been published.
	Work with WRAP and 4P's to complete <b>PFI procurement toolkit</b> for local authorities. Increase speed of delivery of PFI funding for waste projects	Published the PFI procurement pack in July 2004. Increased the resources provided for PFI waste projects, and implemented measures to accelerate delivery which have led to a significant increase in the number of projects coming forward.
<b>Increase demand for secondary materials and waste derived compost</b>	Set up a dedicated body to overcome market barriers to promoting re-use and recycling (WRAP)	Launched WRAP in 2001 to develop stable and efficient markets for six material streams initially, subsequently increased to nine. WRAP also runs wider programmes on business advice, finance, procurement and awareness raising to help overcome market barriers to use of recycled materials.
	Run a pilot scheme under which environmental policy will require <b>public procurement</b> of certain recycled products, initially paper goods. If successful, we will move to extend the range of products. OGC to include reference to sustainability in its objectives	From 1 November 2004, all new central government department contracts must apply the minimum environmental standards when purchasing certain types of product, which cover aspects such as energy efficiency, recycled content and biodegradability. To assist in achieving this standard, the inter-departmental Sustainable Procurement Group has identified a number of environmental "Quick Wins". To further support this, OGC Buying Solutions has published on its website a list of "Quick Wins" products and services included in its Framework agreements.

<p>Publish waste section of the <b>Framework for Sustainable Development on the Government Estate</b> (July 2004).</p>	<p>The Framework for Sustainable Development on the Government Estate (2002) sets targets to be met by Government Departments and their executive agencies in a number of areas including waste and procurement. Reports of progress against these targets are published each year and they demonstrate that performance, although improving, is still patchy. We want departments to do better and to set an example for the rest of the public sector and businesses. The Government is reviewing the framework, to be sure that we adopt the right approach for the future, and will make proposals during 2006 for achieving a significant change in its own performance.</p>
<p>Support for WRAP in developing improved quality and <b>standards</b> for recycled materials. Continue to fund WRAP's work on compost standards, building on BSI PAS 100 published in 2002.</p>	<p>In response to the SU report WRAP received £10m additional funding under WIP to develop a comprehensive organics market development programme building upon the BSI PAS 100 standard.</p>
<p>Set Regulations under the EU Animal By-Products Regulation setting out rules for composting catering waste</p>	<p>Applied and enforced the Animal By-Products Regulation (EC) No. 1774/2002 since July 2003 by the Animal By-Products Regulations 2003. This Regulation controls the collection, handling, processing, use and disposal of animal by-products and requires premises which handle, treat or dispose of animal by-products to comply with specified standards and to be approved. Guidance on the treatment in approved composting or biogas plants of animal by-products and catering waste published December 2004.</p>
<p>Review targets for the level of recycled content of <b>newsprint</b> as agreed with Newspaper Publishers Association in 2001 and 2003</p>	<p>Defra will review the targets in 2006</p>
<p><b>Introduce Aggregates Levy Sustainability Fund</b> to address technical and economic constraints on increased recycling of aggregates</p>	<p>Introduced ALSF in 2002 with £35m.</p>

**Table 3: Government action on recovery (use of waste as a fuel)**

Objective	Instruments/Actions	
	What we said we would do	What we have done
<b>Increase use of waste as a fuel</b>	Introduce <b>appropriately sized energy recovery facilities</b> with consideration given to the potential for incorporating combined heat and power	The consultation on the review of the Renewables Obligation closed on 9 December. It encourages the development of renewable energy sources for electricity. It is proposed to extend eligibility to electricity generated from the biomass fraction of waste in facilities using good quality combined heat and power.
	Implement and enforce <b>tight controls on incinerator emissions</b> . (The setting and enforcing of high environmental protection standards is a priority for Government.)	Implemented Waste Incineration Directive to prevent and limit the negative environmental effects of emissions to air, soil and surface and ground-water, and the resulting risks to human health, from the incineration and co-incineration of wastes.
	Require <b>all landfill sites accepting biodegradable waste to capture and use methane</b> .	The Environment Agency's re-permitting of landfill sites under the PPC regime (to be completed by October 2007) introduces the use of Best Available Techniques.
	Report on <b>review of health and environmental effects of waste disposal</b> and management options	Published in May 2004
	Consider case for an <b>incineration tax</b>	Reviewed the case for incineration tax. This review was informed by the health and environmental effects study and an assessment of the costs of the impacts identified in the study. Currently the Government is not convinced that there is a strong case for the introduction of a tax on incinerated waste.
	Support development of <b>innovative technologies</b> that if they prove to be safe, viable and competitive, might take their place alongside the more traditional options. Initiate programme for <b>new technologies</b> under WIP	New Technologies programme established under WIP. This includes targeted research, a higher-education and vocational training programme, a £30m programme to establish 10 pilot or demonstration plants to help with testing and development of new waste-treatment technologies, and a data centre and dissemination programme to share information and facts on how these technologies work, and how much they cost to build and maintain.

**Table 4: Government actions on disposal**

Objective	What we said we would do	What we have done
<b>Effective protection of human health &amp; the environment</b>	Review <b>waste permitting</b> with the aim of developing a new system that is more proportionate to the risk involved and less burdensome on regulators and regulated.	The waste permitting system was reviewed in 2003/04 and considerable stakeholder support was secured for a more proportionate risk-based system. The results of the review are to be taken forward in the Environmental Permitting Programme which aims to reduce red tape without compromising environmental standards and is expected to replace the PPC and waste licensing systems.
	Support Environment Agency proposals to move to a more <b>risk based assessment of waste management facilities</b>	Established the OPRA risk based system of inspection for waste which is being extended to other activities regulated by the Agency. Currently revising guidance given to the Agency (WMP4) to promote a risk based approach to all aspects of licensing and inspection.
	Bring all landfill sites under an integrated system of controls under the <b>PPC</b> (Pollution Prevention and Control) Regulations by July 2001.	The Environment Agency's re permitting of landfill sites under the PPC regime is due to be completed by October 2007.
	Implement <b>Waste Incineration Directive</b>	Implemented in 2002
	Publish report on review of <b>health and environmental effects</b> of waste disposal and management options	Published review in May 2004
	<b>Transpose the Landfill Directive</b> into UK law by July 2001. This will implement requirements such as banning the co-disposal of hazardous and non-hazardous wastes; banning landfill of tyres; banning landfill of liquid wastes, infectious clinical waste and certain hazardous waste; and introduce provisions for the control, monitoring, reporting and closure of sites.	Implemented the regulatory and engineering requirements of the Directive and Council Decision in England and Wales by three sets of Regulations - The Landfill Regulations 2002, The Landfill (Amendment) Regulations 2004 and the Landfill (Amendment) Regulations 2005. These aspects of the Directive and Council Decision have been subject to four sets of consultations.

	Ensure that adequate national <b>planning</b> policies are in place in order that sustainable waste management practices can be exercised. Review PPG10 to ensure the planning system can deliver the required facilities for recycling, composting and waste management.	New Planning Policy Statement 10: Planning for Sustainable Waste Management, together with changes to decision making principles in WS2000 and revised Guidance on Municipal Waste Management Strategies were published on 21st July 2005. Practice Guidance on these has also now been published.
	Review by 2003 the WS2000 targets for reducing the volume of non-municipal waste sent to landfill.	C&I targets are under review in light of the Commercial and Industrial Waste Survey 2002/03 recently published by the Environment Agency <sup>12</sup> and covered in this consultation document in Chapter 2.
	Establish a system for data returns on <b>flytipping</b> to enable national reporting (Government response to SU Report)	Developed 'Flycapture', a national fly-tipping database with the Environment Agency and the LGA. This has been operational since April 2004. All WCAs in England and Wales are now registered with around 90per cent regularly submitting returns.
<b>Reduce the quantity and hazardous-ness of hazardous waste, &amp; improve the management of that which is produced</b>	Conclude <b>research project</b> which will clarify the impact of the Landfill Directive on hazardous waste management in the UK and the options for complying with the required changes	Published Babbie report in July 2000. This is now taken forwarded by the Hazardous Waste Forum and Landfill and Hazardous Waste Implementation Programme (LHIP)
	<b>Publish new Hazardous Waste Regulations</b> , which will set up a system to encourage the proper handling of waste and increase the number of items classified as hazardous waste in order to safeguard the environment and human health.	New Hazardous Waste Regulations for England and Wales came into force on 16 July 2005. These put greater focus on the waste producer and enable greater hazardous waste minimisation at source.
	Work with the EA and others to <b>improve the amount and quality of available data</b> regarding the generation and disposal of hazardous waste	Incorporated in the Hazardous Waste Regulations. Implemented new regime in July 2005. Data will follow in future years.

<sup>12</sup> See <http://www.environment-agency.gov.uk/subjects/waste/1031954/315439/1173610/?version=1&lang=e>

	Revise the UK Management Plan for <b>Exports and Imports</b> of Waste to minimise transfrontier movements of waste for disposal, consistent with the principle of self-sufficiency, proximity and priority recovery.	Agreement has been reached on revisions to the Waste Shipments Regulation, which will be printed in the Official Journal early in 2006. The UK Plan will be revised in 2006 to take account of the revised WSR.
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## Annex C - The Current Framework for Delivery

### The European Union and waste management

35. Waste management activity in England, is now to a considerable extent governed, directly or indirectly, by European and wider international law. Waste policies are developed at EU-level because:

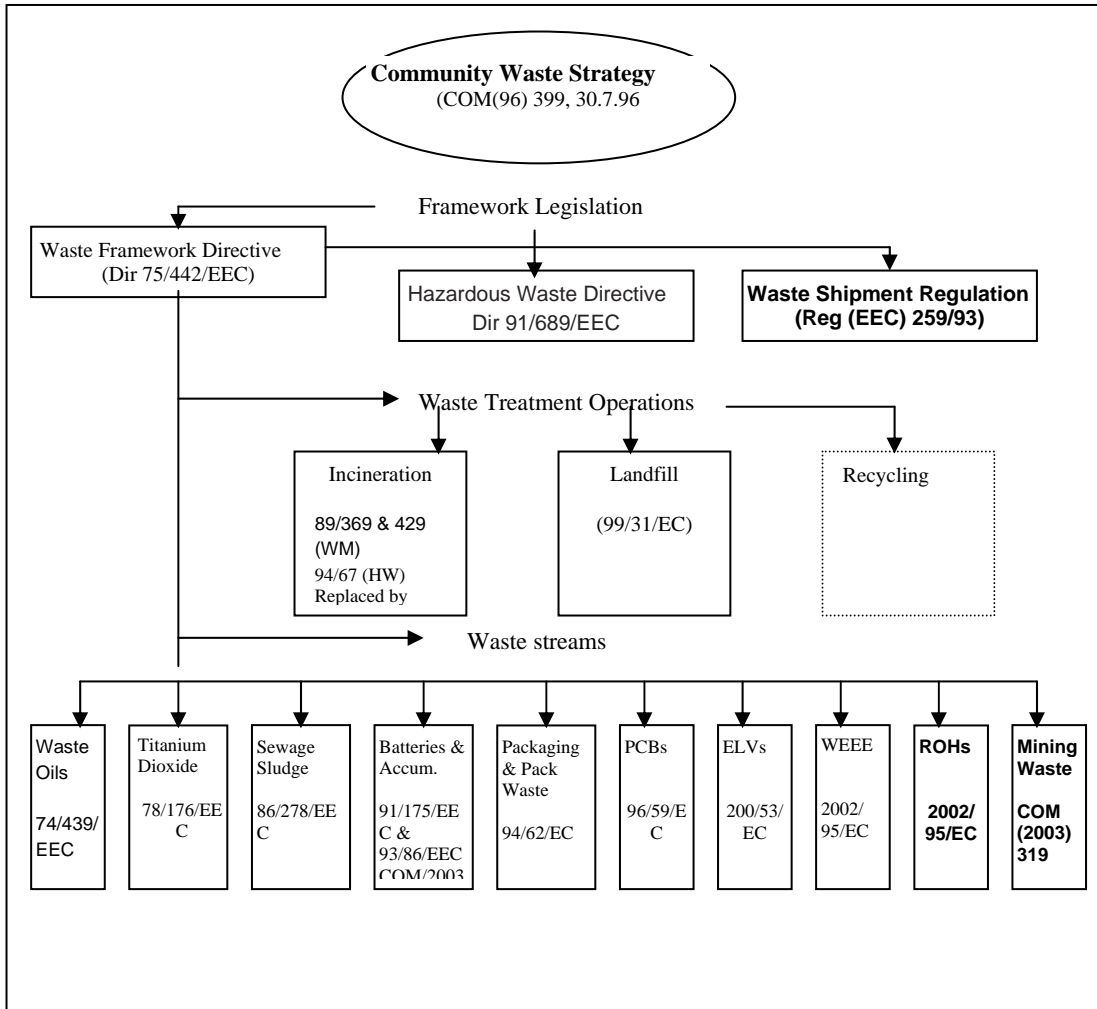
- pollution does not respect national boundaries; and,
- countries that allow producers and businesses to reduce their costs by adopting inadequate environmental standards give them an unfair advantage when it comes to international trade.

36. The EU's legal framework provides the backbone of waste management practices across the Community, and waste policies in England have largely been developed and implemented in parallel with EU-wide policies. Controls on the import and export of waste stem from the UN Basel Convention, the only legally binding international instrument on waste, which is implemented in the EU through the Waste Shipments Regulations.

37. The EU's approach to waste management – which sets out to ensure a high level of protection of the environment and human health throughout the Community – is based on 3 principles:

- **waste prevention** (reducing the amount of waste generated and its hazardousness);
- **recycling and reuse** (encouraging the recovery of materials, preferably through recycling); and,
- **optimum final disposal and improved monitoring** (effective monitoring and policing of waste disposal options to minimise their potential for causing damage to the environment and human health).

**Figure: Current EU legislation**



38. Horizontal EU legislation (i.e. the Waste Framework Directive and its supporting Directives and Regulations) establishes the overall framework for the management of waste, including definitions and general principles that apply to all waste management operations. These include:

- a preferred hierarchy of waste management options;
- the precautionary principle and,
- the polluter pays and producer responsibility principles (those who contaminate the environment or put products on the market should pay the full costs of their actions including when the product becomes waste);

the proximity principle (waste should be disposed of as closely as possible to where it is produced).

39. This legislation also sets out the overall requirements that apply to all waste management operations, such as permitting, registration and inspection requirements for waste management facilities, and controls on the transfrontier shipment of waste.

40. The general principles and requirements of horizontal waste legislation are complemented by more detailed legislation in two areas:

- legislation concerning specific waste operations, such as the Landfill Directive and the Waste Incineration Directive; and,
- legislation to regulate the management of specific waste streams (e.g. packaging, end-of-life vehicles, batteries and waste electrical and electronic products), because of their hazardousness, volume or complexity.

41. EU legislation is binding on all Member States.

## **Responsibility for waste management in England**

### Government's role

Under the Waste Framework Directive the Government's main role is to take necessary measures to ensure that waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment. The Department for Environment, Food and Rural Affairs (Defra) leads on the development and implementation of waste policy and the statutory framework. The department also leads on most waste negotiations at EU-level, although the responsibility for responding to some EU waste directives is split between Defra and the Department of Trade and Industry (DTI) as both departments have major interests. For example, DTI's lead on producer responsibility directives reflects its focus on businesses as producers of waste and its wider objectives on productivity and competitiveness. Similarly, ODPM leads on planning for waste management facilities and waste from the extraction industries as part of its wider responsibility for planning policy. HMT, ODPM and Defra also have responsibility for adequately funding waste management.

Essentially, government's role is to:

- set the strategic and policy direction on waste management in England;
- provide legislative framework
- put in place the statutory framework, delivery structures and contribute appropriately to the funding needed to deliver the outcomes we are seeking;
- disseminate information, raise awareness and provide clear leadership; and
- minimise and recycle its own waste, and procure recycled goods.

### The Environment Agency

The Environment Agency (EA) is the regulatory body for most waste management activities in England, including the collection, treatment, recovery and disposal of wastes:

- the EA's main regulatory role is to protect the environment and human health through a system of waste permitting (Waste Management Licensing and Pollution Prevention And Control Permits), compliance assessment and monitoring and enforcement (targeting those activities that pose the greatest risks to the environment). On enforcement the EA is responsible for ensuring regulated facilities comply with legislative requirements.
- the EA also provides technical guidance on regulatory compliance and good practice;

- it provides information and data on waste and trends; and
- advises Government.

### Waste and Resources Action Programme

The Waste and Resources Action Programme (WRAP) is a not-for-profit company limited by guarantee. The Programme focuses on developing stable and efficient markets for recyclates. It also works with local authorities to improve the operation of local recycling schemes, co-ordinates national awareness campaigns on waste, and is taking forward a range of waste minimisation programmes (including with the retail sector);

### Local authorities

Local authorities are independent and autonomous bodies answerable to the local electorate as well as to central government. They have a wide range of responsibilities that relate to waste. Their main responsibilities are to act as:

- waste collection authorities (responsible for collecting waste from each household in their areas on a regular basis, including street sweepings and litter). These authorities can also collect, if requested, commercial and industrial wastes from the private sector. These services can be carried out by an authority's own workforce, or by contractors acting on an authority's behalf; WCAs are also responsible for enforcement of flytipping offences, the vast majority of which consist of household waste and are committed by householders and small businesses/traders.
- waste disposal authorities (responsible for managing the waste that is collected by waste collection authorities, including providing disposal sites and civic amenity facilities). In practice, many waste disposal facilities are privately owned;
- unitary authorities (which combine these waste collection and disposal roles in one body); and,
- waste planning authorities (responsible for identifying suitable site opportunities for waste treatment or disposal installations).

### Regional bodies

Regional planning bodies have principal responsibility for the preparation of regional spatial strategies (RSS) and their waste management content. In London the Mayor is responsible for strategic planning and the preparation of the 'London Plan'. Regional planning bodies are expected to work alongside their constituent planning authorities to develop a realistic and responsible approach

to future waste management in their regions (see PPS10<sup>13</sup>). The regional planning body is supported by a broadly-based regional technical advisory body (RTAB) which provides advice on the preparation of the strategy for waste management in the RSS and its implementation.

The Government Office Network assists with the delivery of a range of Government services and programmes. In the waste area, Government Offices bring together key regional stakeholders, influencing what they do to meet the Government's waste strategy, and interpreting and explaining the Government's policies. They work with Local Authorities who may have difficulty in meeting recycle targets. Government Offices also have a key role through the planning system in identifying sites. More widely, Government Offices engage with partners to encourage business to be more resource efficient.

### Producers and retailers

The main responsibility for commercial and industrial, construction and demolition and agricultural wastes lies in the private sector, with the businesses (including manufacturers, farms and retailers) that produce it (in the case of food waste for example) or that put goods on the market that become waste. Producer responsibility initiatives, such as the producer responsibility obligations placed on business to meet target levels of recycling of packaging waste, are important drivers of behaviour in this area. Instruments such as the landfill tax also aim to provide a further economic lever to divert these wastes from landfill. It will be increasingly important for businesses to seek to minimise their own wastes, or the material they use to manufacture their products they put on the market throughout their lifetime, including when they become waste.

### The waste management industry

The management of wastes in England is primarily in the private sector. The waste management industry comprises all those businesses (including not-for-profit organisations and the community sector) that are involved in the collection, management, recovery and disposal of waste. Waste companies are central to delivering changes in the way that waste is managed, and in helping to protect the environment and safeguard human health. There is a good deal of common ground between Government's aims – meeting targets and managing waste in a more sustainable, integrated fashion – and industry's need to meet its customers' and business expectations.

To be successful in the future, the waste management industry and the public sector need to work closely together to produce a range of facilities that serve our current and future needs – including those of local communities. But there is

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<sup>13</sup> Planning Policy Statement No. 10

evidence already of a "shift of focus" amongst industry as a whole towards recovering value from waste, in which the waste industry is recognised as a key player. It would appear that the waste industry is demonstrating greater flexibility in its management techniques, aiming increasingly to reduce wastes and then to manage them responsibly.

### Householders

Large quantities of household waste are produced in England each year. And we all have a vital role to play in tackling this waste, for example by:

- minimising our own waste (for example, leftover food) and encouraging manufacturers to do so by purchasing goods that involve less packaging or are designed to last longer;
- home composting and using recycling facilities;
- accepting a greater degree of responsibility for more sustainable management of our waste, including accepting local waste management facilities where they are needed; and,
- avoiding litter and not being involved in flytipping.

### The devolved administrations

Scotland, Wales and Northern Ireland have their own waste strategies as waste policy, with the exception of most economic instruments, is devolved. However, there is regular joint discussion of the positive steps underway or needed to tackle waste, particularly when regulations are joint ones.

### **List of EU waste-related legislation**

**Waste Framework Directive (75/442/EEC)** of 15 July 1975, as amended by Directive 91/156/EEC of 18 March 1991 and Decision 96/530/EC, [1975] OJ L 194/39 and [1991] OJ L 78/32.

**Hazardous Waste Directive (91/689/EEC)** of 12 December 1991, amended by 94/31/EC, [1991] OJ L 377/20.

**European Waste Catalogue (2000/532/EC)** - Commission Decision of 3 May 2000 establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, amended by 2001/573/EC - OJ L 226 , 06/09/2000 P. 0003 – 0024.

**Shipments of Waste Regulation (259/93/EEC)** of 1 February 1993 on the Supervision and Control of Shipments of Waste within, into and out of the European Community, as amended, [1993] OJ L 30/1. - *Revision proposed*

**Waste Oils Directive (75/439/EEC)** of 16 June 1975, [1975] OJ L 194/23.

**Sludge used in Agriculture Directive (86/278/EEC)** of 12 June 1986 on the protection of the environment and in particular of the soil, when sewage sludge is used in agriculture, [1986] OJ L 191/23.

**Disposal of PCBs and PCTs Directive (96/59/EC)** of 16 September 1996 (disposal of polychlorinated biphenyls and polychlorinated terphenyls), [1996] OJ L 243/31.

**Batteries and Accumulators Directive (91/157/EEC)** of 18 March 1991 on batteries and accumulators containing certain dangerous substances, [1991] OJ L 78/38. - *Under review*

**Packaging and Packaging Waste Directive (94/62/EC)** of 20 December 1994, [1994] OJ L 30/1. - *Amended by 2004/12/EC*

**Landfill Directive (1999/31/EC)** of 26 April 1999, [1999] OJ L 182/1.

**End-of Life Vehicles Directive (2000/53/EC)** of the European Parliament and of the Council of 18 September 2000, [2000] OJ L 269/34.

**Incineration Waste Directive (2000/76/EC)** of the European Parliament and the Council of 4 December 2000, [2000] OJ L 332/91.

**Waste Electric and Electronic Equipment (WEEE) Directive (2002/96/EC)** of the European Parliament and the Council of 27 January 2003 on Waste Electrical and Electronic Equipment, [2003] OJ L 37/24.

**RoHS Directive (2002/95/EC)** of the European Parliament and of the Council of 27 January 2003 on the Restriction of the use of certain Hazardous Substances in electrical and electronic equipment, [2003] OJ L 37/19.

**Framework Directive for Energy-using Products (EuP) -**

**Proposed Mining Waste Directive** - proposal for a Directive of the European Parliament and of the Council on the management of waste from the extractive industries (COM(2003) 319 final - 2003/0107 (COD)).

**SEA Directive (2001/42/EC)** of the European Parliament and of the Council of 27 June 2001 (on the assessment of the effects of certain plans and programmes on the environment) - OJ L 197 , 21/07/2001 P. 0030 – 0037.

**Public Participation Directive (2003/35/EC)** of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC – OJ L 156 , 25/06/2003 P. 0017 – 0025.

**Animal by-products Regulation (1774/2002/EC)** of the European Parliament and of the Council of 3 October 2002 (laying down health rules concerning animal by-products not intended for human consumption) - OJ L 273, 10/10/2002 P. 0001 – 0095.

**Waste Statistics Regulation (2150/2002/EC)** of the European Parliament and of the Council of 25 November 2002 - OJ L 332 , 09/12/2002 P. 0001 – 0036.

**IPPC Directive (96/61/EC)** of 24 September 1996 concerning integrated pollution prevention and control - OJ L 257 , 10/10/1996 P. 0026 – 0040.

**Biowaste Directive** (*forthcoming*) and **EuP Directive** on the Setting of Eco-design requirements for Energy using Products (*forthcoming*)

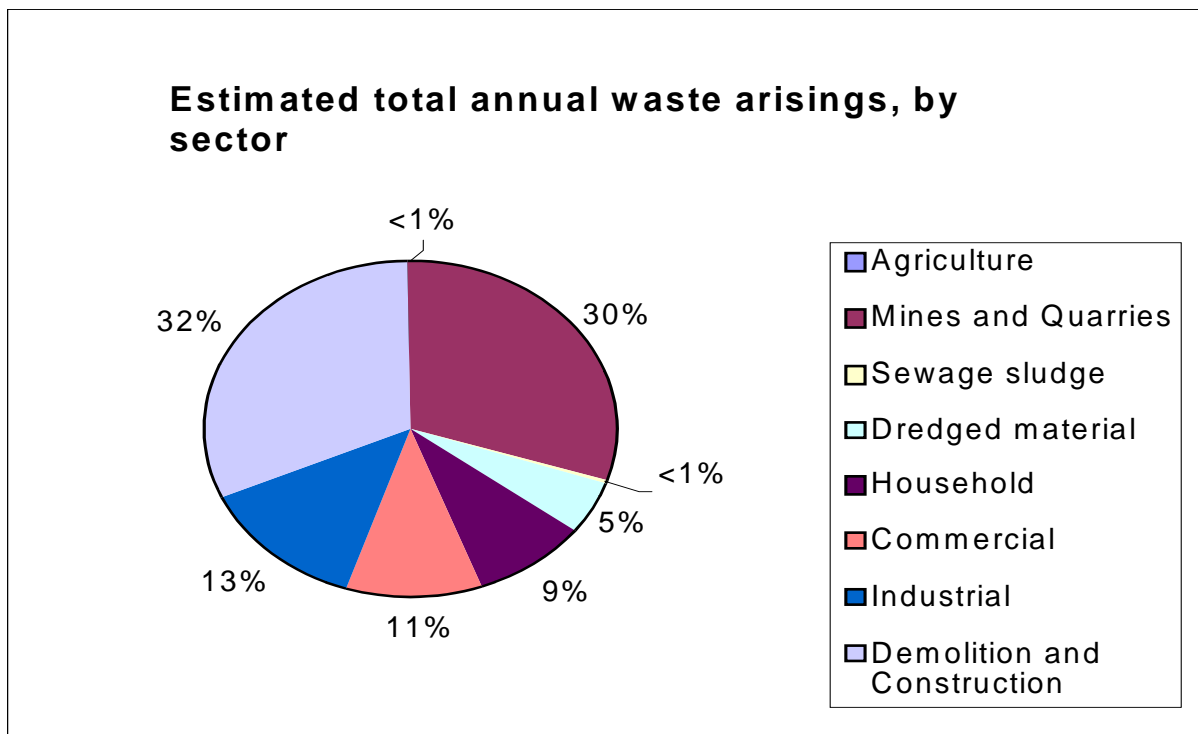
## ANNEX D - OVERVIEW OF WASTE ARISING AND TRENDS

1. The Strategy Unit report *Waste Not, Want not* noted the limitations in the available data on waste. These are being addressed by Defra's Waste Implementation Programme through the preparation of a waste data strategy (Annex E). This Annex reviews the current data on waste arisings and progress since 1998/99.

### Total waste arisings

2. In 2002-03, England produced about 280 million tones of waste. Chart1 below shows the estimated proportion produced by each sector.

Chart 1

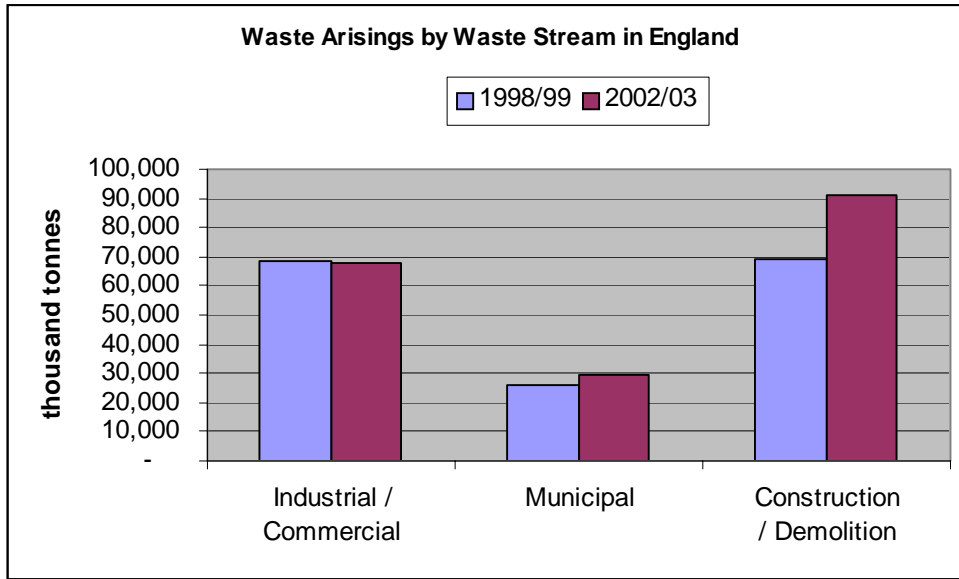


Source: DEFRA, Environment Agency, Water UK, ODPM

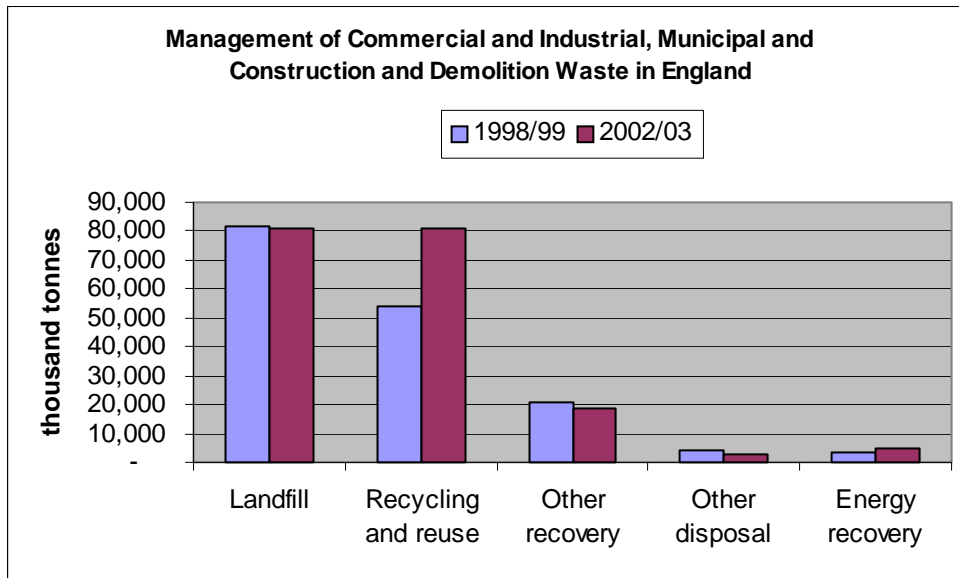
3. This includes about 90 million tones of minerals waste from mining and quarrying, which is not subject to control under the EU Waste Framework Directive, and about 190 million tonnes of controlled wastes from households,

commerce and industry (including construction and demolition wastes<sup>14</sup>). Household wastes represent about 9 per cent of the total and wastes from the agricultural sector (excluding manure or straw) represent less than 1 per cent.

**Sustainable Development Framework Indicator on Waste**  
**Chart 2a**



**Chart 2b**



Source: DEFRA, Environment Agency, ODPM

<sup>14</sup> The figure for construction and demolition wastes includes excavated soil and miscellaneous materials as well as hard materials, such as brick, concrete and road planings

4. The UK Government sustainable development strategy framework indicator on waste (Chart 2a/b) shows that in 2002-03, around 190 million tonnes of waste were produced in England by households, commerce and industry (including construction and demolition), 25 million tonnes more than in 1998-99. In 2002-03, municipal waste (household and other waste collected by local authorities) made up about a sixth of this waste, industry and commerce accounted for just over a third, and construction and demolition made up nearly half.

5. However the indicator suggests that waste is being managed more sustainably. In 2002-03, the proportion of waste disposed of in landfill sites fell to 43 per cent, although the actual amount disposed of in this way did not change significantly compared with 1998-99. The proportion of waste being recycled or reused increased to 43 per cent in 2002-03, with actual tonnage increasing by 50 per cent between the two years.

### **Municipal waste**

6. In 2003-04, local authorities collected an estimated 29.1 million tonnes of waste in England<sup>15</sup>. Around 87 per cent of this municipal waste came from households, a total of 25.4 million tonnes. The rest came from sources such as shops and small trading estates, council office waste and local parks and gardens.

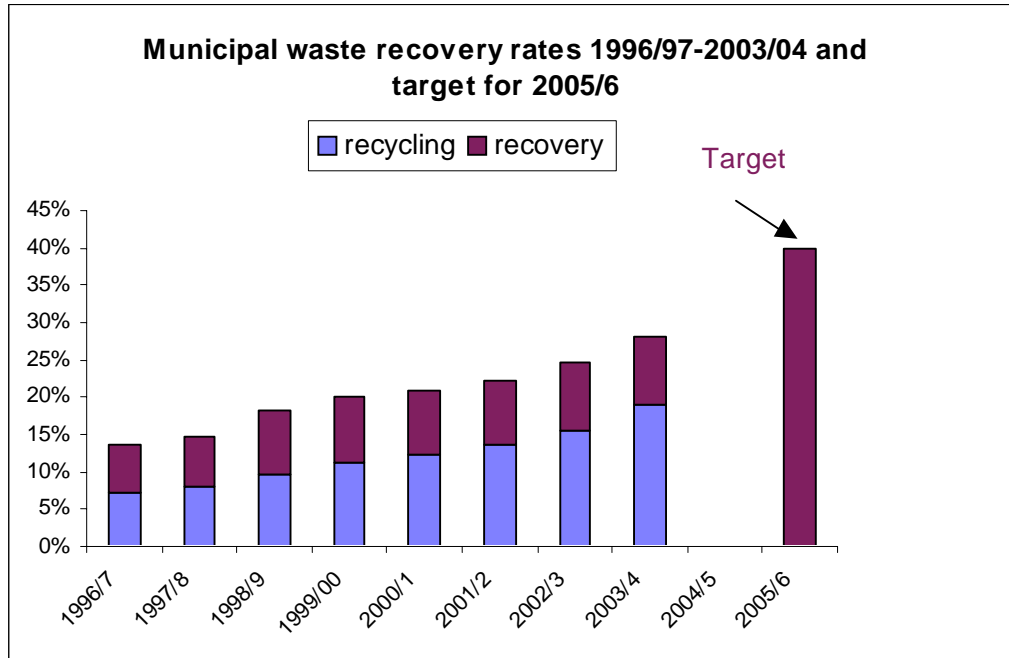
7. The total amount of municipal waste has increased steadily since 1998-99 by an annual average of 2.0 per cent, although 2003-04 saw the first decrease in recent years (by 1.0 per cent). Over the same period, the proportion of municipal waste sent to landfill has declined from 82 per cent to 72 per cent in 2003-04. And, for two years in a row, the actual tonnage of waste being disposed of at landfill has also decreased to 20.9 million tonnes in 2003-04.

8. About 8.1 million tonnes, 28 per cent, of municipal waste had some sort of value (recycling, composting, energy recovery, manufacture of refuse derived fuel) recovered from it, up from 4.8 million tonnes or 18 per cent in 1998-9. Over that period, the amount of municipal waste incinerated with energy recovery has remained roughly constant at about 9 per cent while the amount recycled or composted increased from 10 to 19 per cent. This compares with a target to recover value from 40 per cent of municipal waste by the end of 2005/6.

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<sup>15</sup> Municipal Waste Management Survey 2003/04, Defra. to be replaced by the more comprehensive *WasteDataFlow* database from 2004-05 <http://www.defra.gov.uk/environment/statistics/wastats/index.htm>

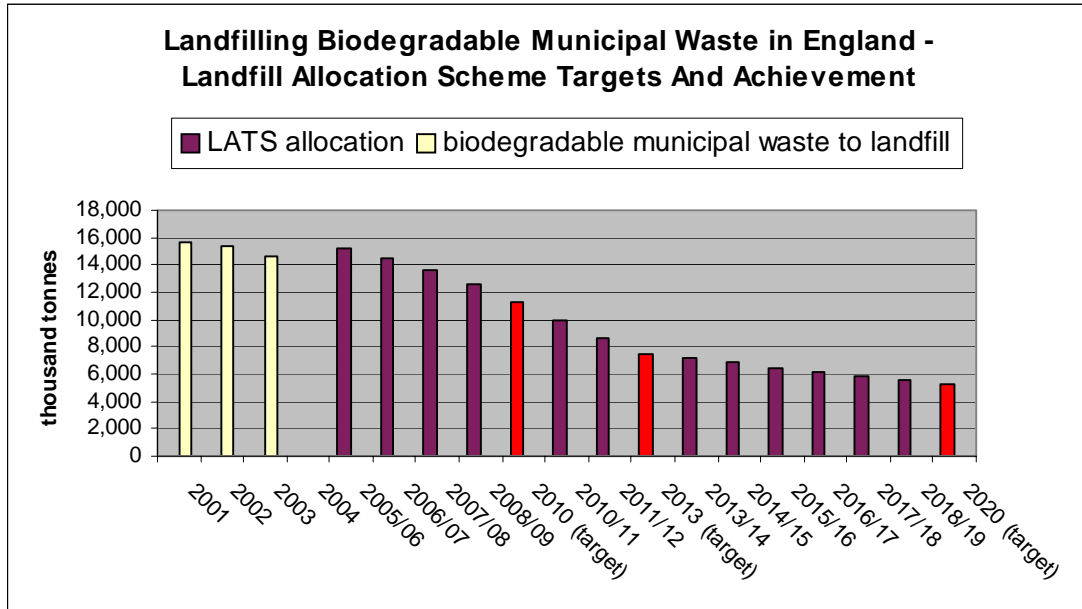
**Chart 3**



Source: DEFRA/EA

9. Article 5 of the EU Landfill Directive includes targets aimed at reducing the amount of biodegradable municipal waste sent to landfill. In England, about 68 per cent of municipal waste is biodegradable. The amount of biodegradable municipal waste sent to landfill should be no more than 11.2 million tonnes by 2010 (75 per cent of the amount produced in 1995). In 2003-04, around 14.7 million tonnes was disposed of in this way (Chart 4).

**Chart 4**



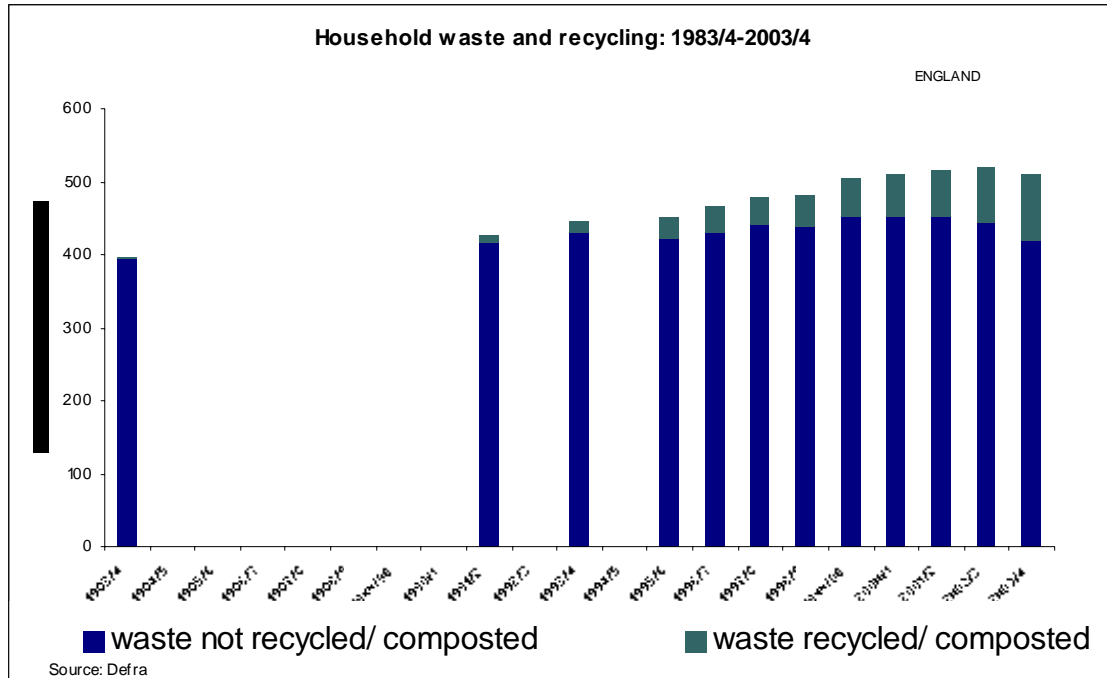
Source: DEFRA/EA

**Household waste**

10. Total household waste (including bin waste, waste from civic amenity sites, and other household collections and recycling sites) has increased steadily since 1998-99 by an annual average of about 1.6 per cent. 2003-04 saw the first decrease, by 1.5 per cent. Early indications suggest household waste will increase again in 2004/5. Since the late 1990s household waste has generally grown more slowly than the economy (household final consumption).

11. 25.4 million tonnes of household waste were collected in England in 2003-04, which represents 510 kg of waste per person. Over half of this consists of garden waste, waste paper and board and kitchen waste. The sustainable development indicator, Chart 5 below, shows changes in household waste and recycling per capita. Population growth accounts for about 0.3-0.4 per cent of the annual growth in household waste.

**Chart 5**

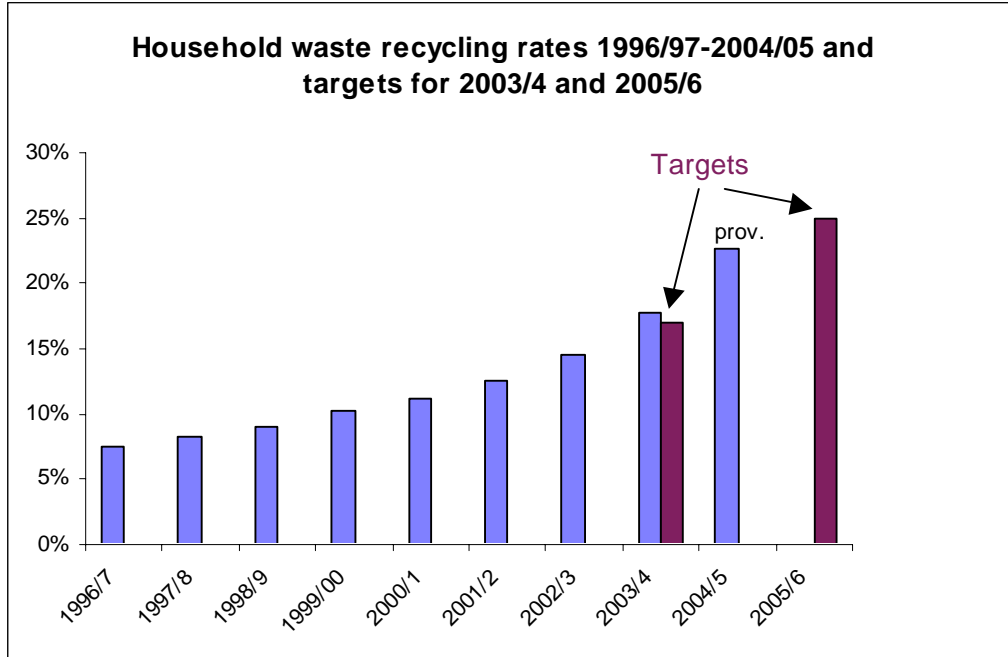


Source: DEFRA

12. In 2003-04 17.7 percent of household waste was collected for recycling or composting, exceeding the target for that year to recycle/compost 17 per cent of household waste. Provisional estimates for 2004-05 based on Best Value Performance Indicators (BVPI) submitted by local authorities to the Audit Commission suggest around 23 per cent of household waste was collected for recycling/composting. This means household waste recycling/composting has doubled in the last four years. These figures suggest we are on track to meet the 2005/06 target to recycle/compost 25 per cent of household waste (Chart 6).

**Chart 6**

**Household waste recycling rates 1998/99 to 2003/04 and targets for 2003/04 and 2005/06**



Source: DEFRA

13. Statutory recycling and composting targets were set for each local authority in England to back up the national waste recycling targets. These targets have been set at a level to ensure that each authority contributes proportionately to the achievement of the national target. The household recycling rates of individual local authorities range from 6 to 51 per cent.

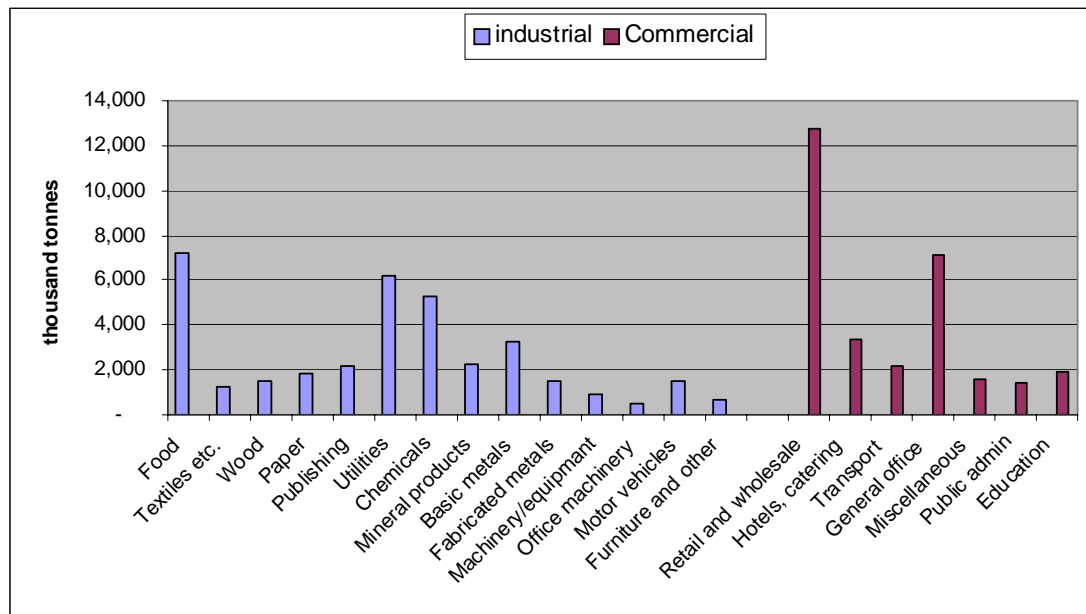
14. Kerbside recycling collections have continued to grow and now account for 42per cent of household recycling. The remaining 58per cent of material is collected for recycling through civic amenity sites and 'bring' sites such as bottle banks. Almost all authorities now collect some waste for recycling through kerbside collection recycling schemes and around 80per cent of households received such a collection in 2003/04. Around 62per cent of households received a kerbside collection for 2 or more materials.

## Industrial and commercial waste

15. 67.9 million tonnes of commercial and industrial waste<sup>16</sup> were generated in England in 2002/03 – down about 1per cent from the 68.8 million tonnes generated in 1998/99. Due to the statistical uncertainty associated with survey data this implies here has been no significant change in the amount of waste generated. Waste has not risen in line with the economy; GDP has risen by about 10per cent over this period. Industrial waste has reduced by about 6per cent from 40.1 million tonnes in 1998/9 to 37.6 million tonnes in 2002/03, declining faster than the fall of 3.5per cent in industrial GVA. Commercial waste has grown about 6per cent over this period from 28.6 to 30.3 million tonnes – less than the 29per cent growth in commercial GVA. These changes reflect increased employment in the service sectors, the decrease in industrial activity and increasing reliance on goods from overseas.

### Chart 7

#### Total waste production, by business sector: 2002-03



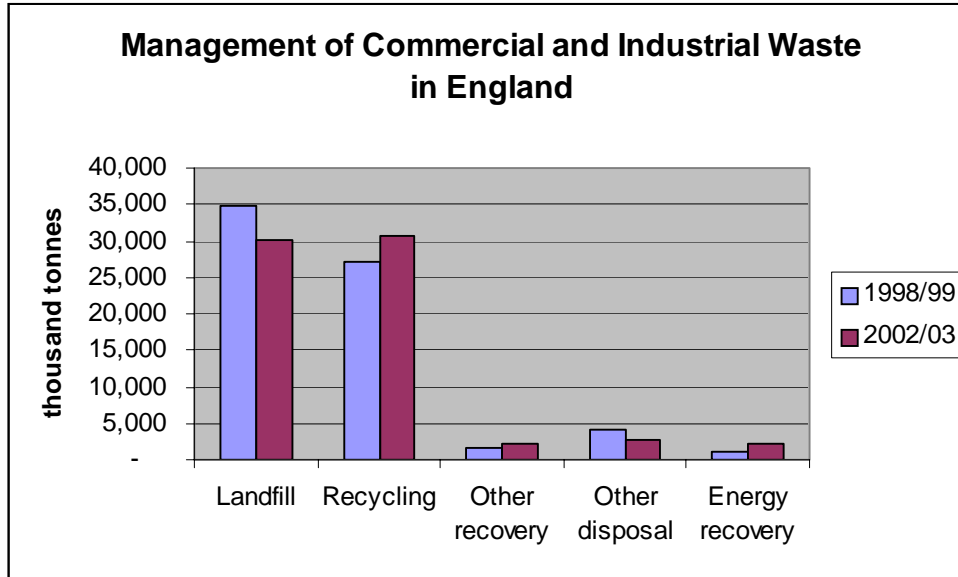
Source: Environment Agency

16. Retail is a large sector, producing the most waste - over 12 million tonnes in 2002 –03 (Chart 7) – a third more than 1998/9. The retail sector also diverts a large proportion of waste away from landfill. The food and drink industry was the largest manufacturing waste producer, generating around 7 million tonnes. There is a clear divide between manufacturing and commerce in terms of waste per unit of GVA (or per employee) with manufacturing being much more waste intensive - several sectors produce several hundred tonnes of waste per £million, whereas

<sup>16</sup> Environment Agency Commercial and Industrial Waste Survey 2002-03 [http://www.environment-agency.gov.uk/subjects/waste/1031954/315439/1173610/?version=1&lang=\\_e](http://www.environment-agency.gov.uk/subjects/waste/1031954/315439/1173610/?version=1&lang=_e)

professional services and public administration produces only around 20 tonnes per £million, for example. Small and medium size companies (less than 50 employees) produced around 40 per cent of total commercial and industrial waste in 2002-3.

**Chart 8**



Source: Environment Agency

17. In 2002-03 disposal of commercial and industrial waste to landfill fell to 44 per cent, from 50 per cent in 1998-99. For the first time, recycling (including reuse) overtook landfill as the most common method of waste management (Chart 8)<sup>17</sup>. Recycling rose to 45 per cent in 2002-03 from 39 per cent in 1998/9. In 2002-3 the amount sent to landfill represented 87 per cent of the 1998-9 figure, compared to the target for 2005-6 of 85 per cent.

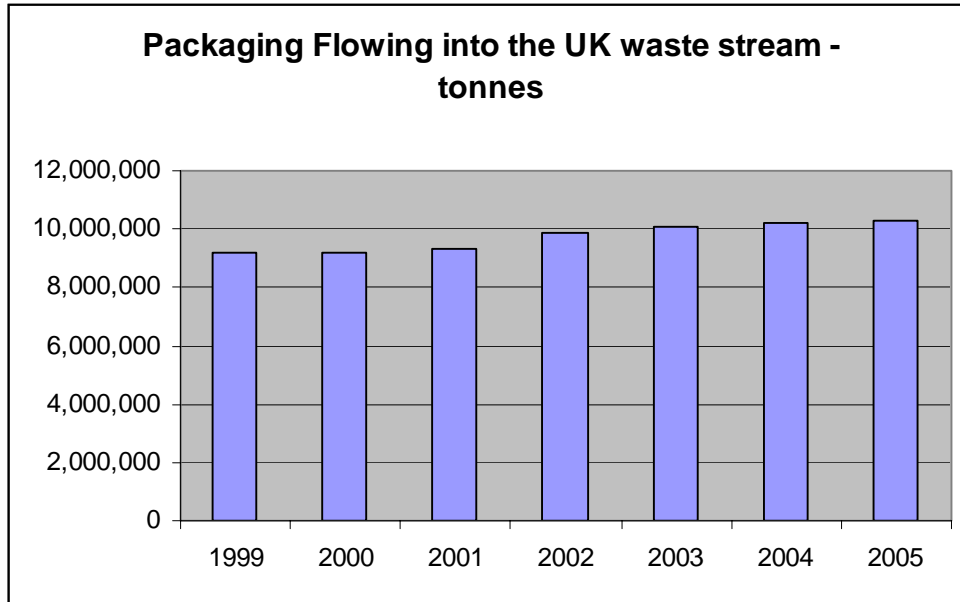
## Producer Responsibility

### Packaging

18. The amount of packaging entering the waste stream is estimated to have grown steadily to around 10.3m tonnes in 2005 (Chart 9)

<sup>17</sup> Assumes proportionate re-allocation of waste subject to treatment, transfer and disposal method unknown to categories shown.

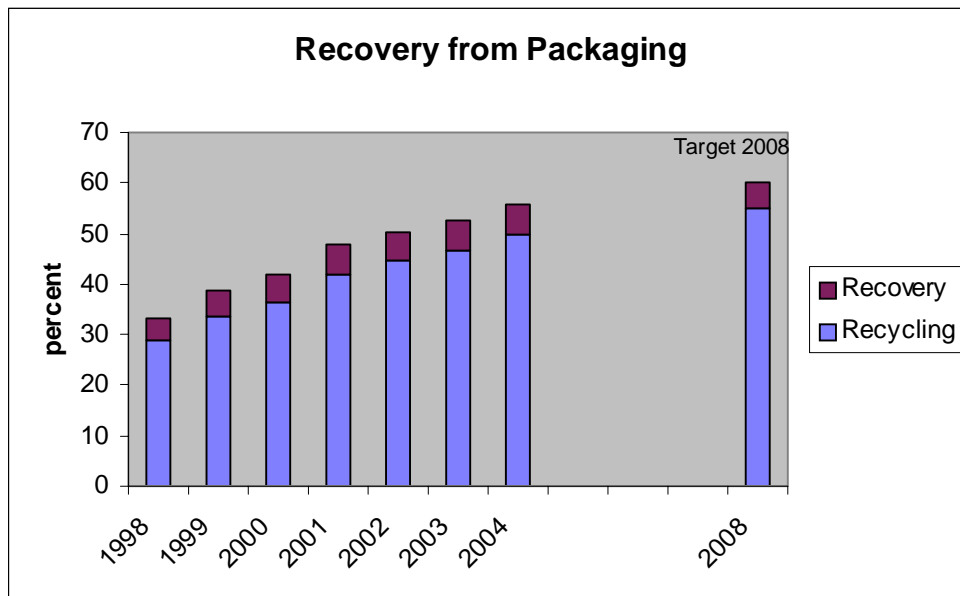
**Chart 9**



Source: DEFRA/EA

19. We are on course to meet 2008 targets - 55.6per cent of packaging waste was recovered in 2004 and 49.7per cent of packaging waste was recycled in 2004 (Chart 10).

**Chart 10**



Source: DEFRA/EA

20. Other areas of producer responsibility are included in Annex A

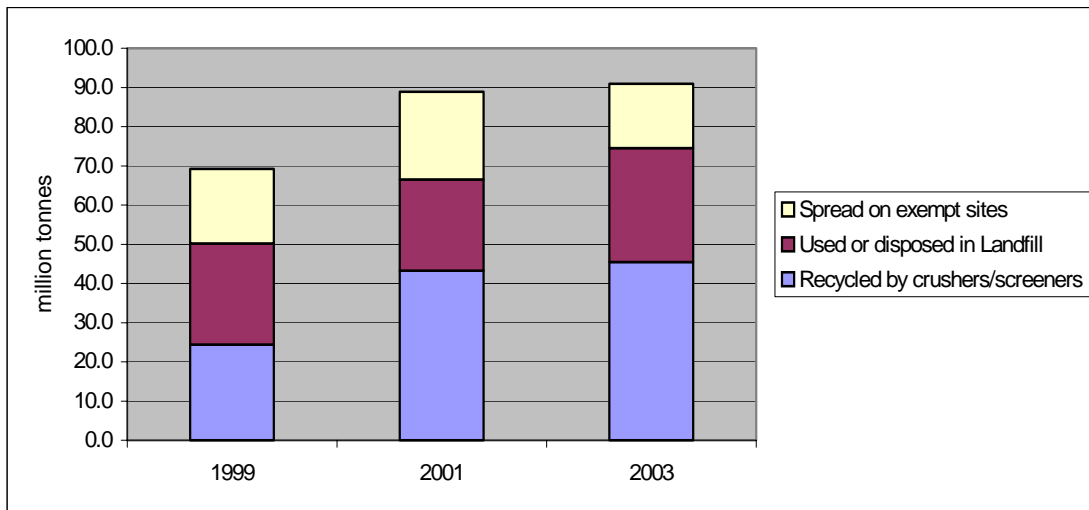
### Construction and Demolition Waste

21. Around 91 million tonnes of construction and demolition waste was generated in England in 2003, 30 per cent more than in 1999<sup>18</sup> (Chart 11). Hard waste (such as concrete and bricks) was the largest component, making up nearly half the total, followed by excavation waste such as naturally occurring soil and stone (38 per cent) and other mixed waste (13 per cent).

22. Around half the construction and demolition waste generated in 2003 was recycled either as aggregate or soil; 18 per cent was spread on land at registered 'exempt' sites; 22 per cent was used for landfill engineering or restoration; and 10 per cent was disposed of at licensed landfill sites. Comparisons between different years should be treated with caution due to uncertainties in the data.

#### Chart 11

Management of construction and demolition waste arisings in England, 1999 to 2003



Source: ODPM

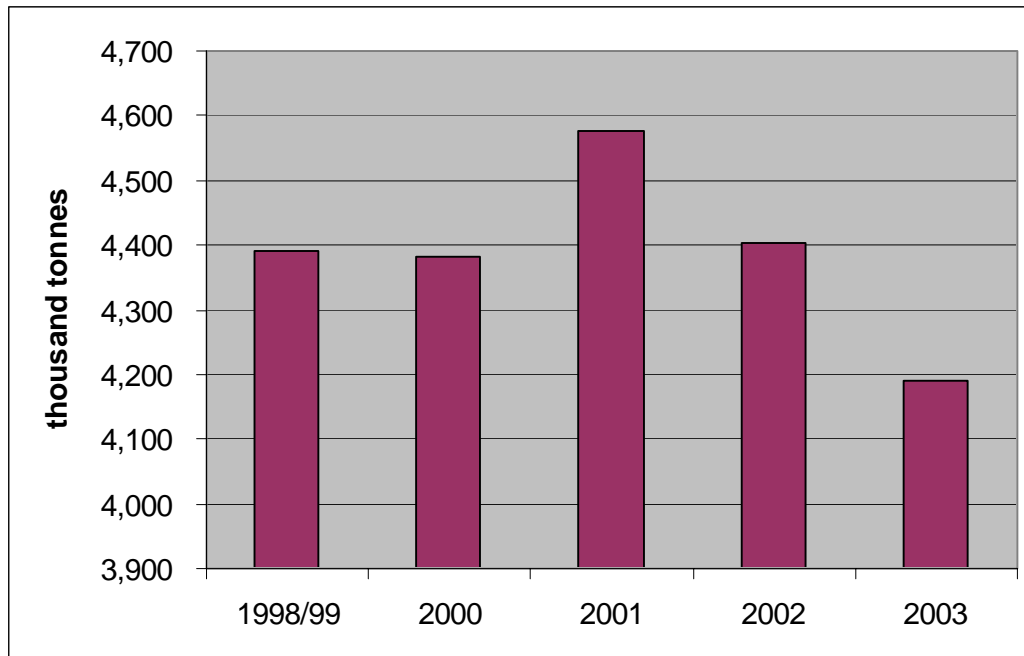
<sup>18</sup> ODPM Survey [<http://www.odpm.gov.uk/index.asp?id=1145607>] This does not include fractions of construction and demolition waste (such as wood, metals and plastics) which are unsuitable for processing into aggregate

## Hazardous Waste

23. In 2003, 4.19 million tonnes<sup>1920</sup> of hazardous waste was managed in England (Chart 12). There has been a fall in the production of oils and oily wastes, waste from chemical processes and hazardous construction and demolition wastes, resulting in an overall reduction of 8per cent in hazardous waste managed since 2001.

### Chart 12

#### Hazardous waste managed in England, 1998/99 to 2003



Source: Environment Agency

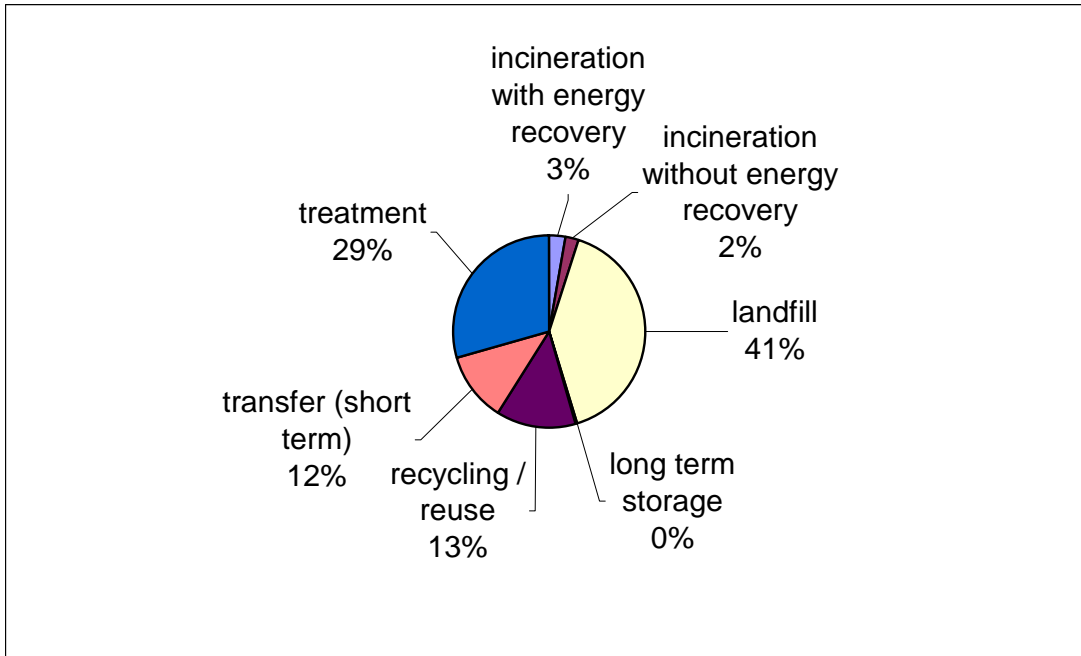
24. In 2003, the three largest categories of hazardous waste were construction and demolition and asbestos waste, oil and oil/water mixtures and waste from organic and inorganic chemical processes. Together these accounted for 63per cent of all hazardous waste managed in England.

25. 40 per cent of hazardous waste was disposed of to landfill, 29 per cent received some kind of treatment, 13 per cent was recycled or re-used and 5 per cent was incinerated (Chart 13).

<sup>19</sup> This includes some waste generated in Scotland and Northern Ireland, since all of this is exported to England and Wales for disposal or treatment. Some waste from Wales is also included since some of this is exported to England

<sup>20</sup> This includes an element of double counting, due to some waste sent for treatment or transferred being subsequently managed by further disposal options.

**Chart 13**  
**Hazardous waste methods of disposal, 2003**



Source: Environment Agency

### **Agricultural Waste**

26. Agricultural waste is currently excluded from national waste legislation, but new regulations were introduced from September 2005 to introduce similar controls that already exist for other forms of waste under the European Waste Framework Directive.

27. Agricultural holdings in England generated about 0.33 million tonnes of waste in 2003 – up from 0.30 million tonnes in 1998. These figures are based on estimates and exclude manure or straw.

28. Presently, much of this waste is treated on farm using a variety of disposal methods including burning, burial, stockpiling and inclusion in the household dustbin. In future these forms of disposal will not be possible without a waste management licence or a registered licence exemption (only available for certain types of waste).

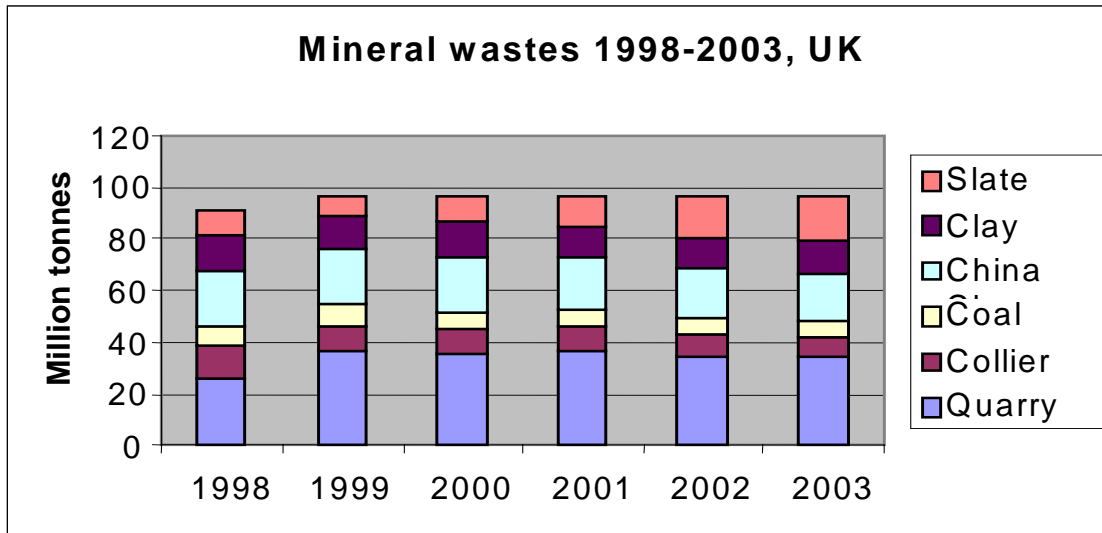
29. The largest component of the agricultural waste stream was animal health products (predominately sheep dip), followed by plastics and agrochemicals (such as pesticide washings). These types of waste made up two thirds of the total in 2003.

### Mineral wastes

30. For historical reasons, mineral wastes from mines and quarries are controlled in the UK under the Town and Country Planning Acts and related national legislation. There is also the prospect of new EU measures on mineral wastes, laying down minimum requirements for the management of waste resulting from the extraction, treatment and storage of mineral resources. The aim is to ensure that this type of waste is managed without endangering human health or causing harm to the environment.

31. Since 1990 there has been an overall reduction in mineral waste arisings, although this has stabilised in the last 4 or 5 years (Chart 14).

**Chart 14**



Source: DEFRA

32. Further data on waste can be found at <http://www.defra.gov.uk/environment/statistics/waste/index.htm> and <http://www.environment-agency.gov.uk/subjects/waste/1031954/315439/?version=1&lang=e>

## ANNEX E – Evidence for Future Policies

Defra draws on evidence from internal and external sources in order to make progress towards achieving its strategic outcomes. A robust and comprehensive evidence base is crucial to the formulation of objectives and associated delivery of our policies. Our evidence base spans a wide range of social, technological, economic, statistical and scientific areas. We make use of evidence throughout the full spectrum of policy implementation, more specifically in:

- ***the design stage*** - to enhance our understanding of the policy context and to formulate policy goals and set targets;
- ***implementation*** - to develop practical solutions to meeting targets and achieving goals; and
- ***monitoring and evaluation*** – to assess the effectiveness of our policies and interventions, and to feed lessons learned back into the policy cycle.

Defra manages a number of research and data programmes which help to generate the specific knowledge we need to make informed choices about policy options and develop practical solutions in the area of sustainable waste management. The **Waste and Resources R&D Strategy** and the **Waste Data Strategy** detail our approach to generating waste-specific research and data and to facilitating access of policy-makers and stakeholders to this information. Both strategies identify a number of data, information and knowledge gaps which have been translated into evidence needs. However, Defra recognises that these initiatives are very much in their infancy. We describe in outline below how these programmes are developing alongside other evidence-based investigations of relevance to Waste Strategy. Consultees are invited to respond to the general development of the evidence-base for future policy (See question 13 in the main consultation document).

### Waste and Resources R&D Strategy

In Autumn 2003, in response to the 2002 Strategy Unit report, **Waste Not, Want Not**, and as part of its reform of the Landfill Tax Credit Scheme, Defra established a dedicated waste-related research programme. A stakeholder advisory group, the Waste and Resources Research Advisory Group (WRRAG), was appointed to assist Defra in developing a strategy for the new programme, adopting a 10-year forward look at the research needed to provide the sound evidence base required to underpin future policy-making at the national and local levels.

The **Waste and Resources R&D Strategy** (2004/5 – 2006/7) was launched in September 2004 and can be found at:

[www.defra.gov.uk/environment/waste/wip/research/pdf/rdstrategy.pdf](http://www.defra.gov.uk/environment/waste/wip/research/pdf/rdstrategy.pdf). The strategy provides an overview of waste and resources issues and associated

R&D, categorising them into eight themes, many of which are inter-connected (see Table 1). It forms the basis for defining the first three years of a £5m per annum R&D programme, with the first projects in the programme's portfolio commencing in the summer of 2005.

**Table 1: The R&D Programme Themes and Associated Areas**

Theme	Programme Areas
1. Sustainable resource consumption and management	1.1 Understanding resource flows 1.1 Design for the environment (IPD) <sup>21</sup> 1.2 Exploring techniques and methodologies for effective: <ol style="list-style-type: none"> <li>i. industrial/commercial waste minimisation</li> <li>ii. household waste prevention</li> </ol> 1.3 Understanding waste composition and trends
2. Systems for resource recovery	2.1 Waste collection and handling 2.2 Producer responsibility and priority waste streams 2.3 Sorting systems, including processing and reprocessing technologies 2.4 Biowaste
3. Residual wastes management	3.1 Processing technologies for: <ol style="list-style-type: none"> <li>i. biodegradable municipal solid waste (MSW)<sup>22</sup></li> <li>ii. intermediate technologies focussed on treatment and/or energy recovery<sup>23</sup></li> </ol> 3.2 Managing residual waste in landfill
4. Market development and intervention	4.1 WRAP short-term, material specific, research areas <sup>24</sup> 4.2 Uncovering market opportunities outside WRAP's remit 4.3 Technological advancements in product design and implications for market development 4.4 Use of different tools to stimulate market development
5. Social dimension	5.1 Understanding pro-environmental behaviour and how to enhance it 5.2 Understanding socio-economic benefits of recycling: local and regional level 5.3 Development of tools and instruments to facilitate behaviour change 5.4 Local acceptability of waste and resource management facilities
6. Environment and health (risk management and impact assessment)	6.1 Risk assessment and management 6.2 Impact assessment 6.3 Indicators and benchmarking
7. Economics	7.1 Understanding true costs of waste management 7.2 Better understanding of factors affecting decoupling waste growth from consumption 7.3 Role/use of economic incentives and penalties to promote and support change in resource use and waste generation 7.4 Economic performance indicators 7.5 Understanding the economic and political causal factors and connections, from local to global scale
8. Decision support tools	8.1 Decision support tools for strategic development at all levels 8.2 Innovative methodologies and forecasting tools for data collection and management <sup>25</sup> 8.3 Performance measurement and benchmarking

**Notes**

<sup>21</sup> Integrated Product Design (see also programme area 4.3)

<sup>22</sup> Biodegradable Municipal Solid Waste – mostly addressed under WIP's New Technologies work stream programme

<sup>23</sup> To include improvements to current technologies excluded under 1(i), technologies involving non-biodegradable components of MSW and technologies for all other waste types

<sup>24</sup> Mostly addressed by WRAP, but there may be exceptions

Since publication of the R&D Strategy and benefiting from further analysis conducted as part of the development of the Evidence and Innovation Strategy (see below), two annual action plans covering work conducted in 2004/5 and 2005/6 have guided early implementation of the Programme.

An initial call for proposals conducted in 2004/5 yielded 26 projects commissioned by Defra. Over half focused on household waste prevention, waste composition and trend analysis studies. A further five projects examine waste sorting and reprocessing technologies and the remaining projects in the portfolio span impact assessment, socio-economic benefits of recycling, and decision support tools.

A second call was launched in November 2005 with a particular emphasis on biowaste, residual wastes management, behavioural change, community-based activities, and risk management and assessment. For more details on live and planned projects, see the action plan summary available at [www.defra.gov.uk/environment/waste/wip/research/index.htm](http://www.defra.gov.uk/environment/waste/wip/research/index.htm).

Projects in the Waste and Resources R&D Programme may cover more than one theme and this is encouraged given the cross-cutting nature of waste and the contribution of sustainable waste management to wider goals of sustainable development and a cleaner environment. The Programme also forms an integral part of Defra's work on sustainable consumption and production (see below).

### **Waste Data Strategy**

A lack of information on specific waste streams, their growth rates, composition, life cycles and impact is hampering the development of an effective waste strategy for household and other waste streams and the ability to measure and monitor progress effectively. The joint Defra-Welsh Assembly Government Waste Data Strategy charts out the way forward for a three-year workstream aimed at filling this gap and contributing to the development of a sound evidence base for waste policy making, land use and business planning, and performance monitoring. A Regulatory Impact Assessment to consult on the final proposals and their impact on industry closed in early January 2006. We are currently collating the returns which will be available on the Defra website in February.

The workstream will help to ensure effective coordination, provision and dissemination of reliable and timely data to government, local authorities, businesses, the community sector, and industry on different waste streams (e.g. household, commercial and industrial). This is complementary to the knowledge harnessed through the waste research programme above and forms part of the overall waste evidence base.

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<sup>25</sup> Note link here with the Waste Data Strategy being developed elsewhere in WIP

One strand of the Strategy already in progress is the WasteDataFlow system, a web-based intranet for the provision of quarterly data on municipal waste both to and from local authorities. As well as underpinning central government policy making, this further serves the needs of both local authorities, who will be better equipped to develop long-term plans for waste management, and of industry, who will have access to a robust evidence base to inform investment decisions.

Other strands include a data integrity project and a central data hub which combines existing datasets for analytical use. We have been collaborating with the Environment Agency and industry in the collection of data. We have close ties with the EA on a day-to-day basis through our Data Strategy Team and through a number of projects including the Generic Operator Returns Programme Board.

Like the Waste and Resources R&D Strategy, Defra is funding the delivery of this work through its Waste Implementation Programme. For progress to date and the current position, see <http://defraweb/environment/waste/wip/data/index.htm>.

### **Sustainable Consumption and Production (SCP) Evidence Base**

SCP is about achieving economic growth while respecting environmental limits, finding ways to minimise damage to the natural world and making sustainable use of the earth's resources. The development of the evidence base for SCP including waste is in its early stages. Defra is developing a long-term strategy for development and management of a joined-up, collaborative SCP evidence base which is valued and used not only by Defra and DTI, but also by others inside and outside government.

We are currently establishing our longer term evidence needs and priorities, including commissioning work to review existing literature, undertaking qualitative and quantitative analysis, identifying gaps and determining new and emerging research priorities (see <http://www.defra.gov.uk/environment/waste/wip/research/index.htm>). A number of priority areas have been identified to date including:

- the magnitude of the challenge;
- consumption by individuals and businesses;
- links between competitiveness and environmental performance;
- impacts of food production and consumption;
- economic analyses to support SCP; and
- sustainable procurement in the public and private sectors.

During 2005/6, review studies have taken place which analyse currently available information in terms of scope and robustness in order to provide a base for informing work in future years. In addition to generating and evaluating evidence, emphasis has been placed on engaging with stakeholders to generate and

maintain buy-in of the SCP evidence agenda. This in turn helps to build capacity and connectivity with the research community. Active discussions are taking place between those working on the SCP evidence base, including on the Market Transformation Programme, and the Waste and Resources R&D Programme to coordinate the development of project initiatives and consolidate the evidence base.

### **The Central Analytical Directorate (CAD)'s Research Programme on Understanding Sustainable Behaviour**

Defra recognises that achieving its wide ranging agenda requires enhanced understanding of how to encourage positive behavioural change among producers and consumers at the individual and collective levels. Choices matter across the whole spectrum of Defra's policy areas and having knowledge of consumer and producer behaviour can help to determine which policy options are more likely to result in the desired changes on the ground.

CAD was established in September 2004 in order to bring coherence to the various economic, statistics and social research activities within Defra, as well as to coordinate input into cross-governmental endeavours, such as joint working with the Treasury's economic analysis team.

CAD also manages a cross-cutting programme of social research covering three main areas of relevance to waste and the wider SCP agenda, highlights of which involve:

- secondary analysis of research in relation to pro-environmental change to strengthen policy making and related development of guides for practitioners and policy makers;
- think pieces on applying behavioural theory in environmental policy context; and
- action research and qualitative modelling of behaviour for pro-environmental change.

The Programme has identified waste as one of seven 'behaviour' domains and engages with others in the Department in the design and delivery of its evidence for policy.

### **Evidence and Innovation Strategy**

Given the wide-reaching nature of waste and resources issues, we also benefit from and contribute to research undertaken elsewhere in Defra. The Evidence and Innovation Strategy (E&I) 2005 to 2008 spells out the evidence and innovation needs of the Department and the programmes aimed to deliver these in order to make progress towards achieving our strategic objectives and associated outcomes up to 2010 and beyond. For more on the E&I see [www.defra.gov.uk/science/how/strategy.htm](http://www.defra.gov.uk/science/how/strategy.htm).

The EI&S builds on the waste and data strategies, incorporating other evidence-based issues and innovation and resources R&D needs (i.e. the successful exploitation of new ideas). Waste is seen as a fundamental part of the SCP agenda and a strategic outcome in its own right. The Strategy demonstrates how the use of evidence has been evolving from a reactive approach to meeting existing policy demands to a more proactive and innovative stance that takes as a starting point some of the key challenges facing advancements in the longer term in order to inform sustainable waste and resources policy.

The cross-cutting nature of waste and the need to mainstream waste into the broader sustainability agenda, mean that it is essential for policy development that evidence is drawn from and across a range of disciplines, sectors and evidence sources.

### **Concluding Comment**

While the above areas describe what Defra has been doing to support the development of the waste and resources specific and broader evidence base, we also have an important role to play in engaging our partners in dialogue and exchange of knowledge and information currently available to meet the sustainable waste management challenge. Defra views this engagement as central to evidence along with other forms of research. Consultees are invited to make suggestions that highlight R&D gaps in the evidence base and innovation needs.