



House of Commons
Environment, Food and Rural
Affairs Committee

Waste Strategy for England 2007

Third Report of Session 2009–10

Volume I



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**Waste Strategy for
England 2007**

Third Report of Session 2009–10

Volume I

Report, together with formal minutes

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Environment, Food and Rural Affairs Committee

The Environment, Food and Rural Affairs Committee is appointed by the House of Commons to examine the expenditure, administration, and policy of the Department for Environment, Food and Rural Affairs and its associated bodies.

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Summary

Every year some 330 million tonnes of waste are produced in the UK at huge economic and environmental cost. The direct costs of managing this waste—£2.5 billion annually for English household waste alone—are dwarfed by the costs of using new resources to replace discarded materials. The Government should, as a priority, set out a timetable with targets for reducing the total amount of waste produced.

Defra's Waste Strategy focuses disproportionately on domestic waste, which contributes less than 10% of all waste, while omitting firm targets for the commercial and industrial sectors which produce around a quarter of all waste. Defra must rectify this urgently, plugging the data gap by utilising information routinely collected to enable progress to be monitored. Funding cuts to services designed to help businesses manage their waste well are premature and should be re-evaluated and ways to extend such services to a wider range of organisations should be considered.

Waste is a valuable resource, but far too small a proportion is re-used, recycled, composted or used to produce energy. Nearly half of all waste is still sent to landfill sites where it contributes to climate change, producing 3% of the country's greenhouse gases and 40% of its methane emissions. This throw away tendency is exemplified by the so-called "Primark effect" which has led to large increases in the amount of clothing sent to landfill sites. Food waste is another significant component of waste sent to landfill sites and householders, food producers and retailers need to do more to reduce the amount of food discarded unnecessarily. We welcome the Government's proposed consultation on banning certain materials from landfill sites to encourage more waste to be recycled and re-used but its timescale is unambitious and it should implement such a ban by 2015.

Householders have already improved their recycling and composting levels to 37%. Defra should now raise its recycling targets to 50% by 2015 and 60% by 2020. Local authorities need to reinforce public support for recycling by explaining exactly how much it costs to collect and dispose of each bagful, or wheelie bin load, of waste, and give people more information on what happens to materials they put out for recycling. Defra needs to be more supportive of local authorities' work to help residents manage their waste, in particular it should explain how it will introduce a more rational regime for charging for domestic waste.

Waste should only be used for energy recovery if it is not possible to re-use, recycle or compost it. To achieve maximum energy efficiency levels, planning consent for energy from waste plants must require heat to be captured and used. The Government should publish guidance on the health and safety impacts of all energy from waste technologies.

The role of the Private Finance Initiative in funding infrastructure development must be reviewed since it can restrict local authorities' ability to respond to changes in technologies and waste collection systems. The Government should address delays in the planning system for new facilities and extend the escalator for landfill tax levels to 2020 to give certainty to those investing in long-term projects. Defra must ensure that enforcement of waste regulation is fully funded. The Government must ensure that local authorities are

using their powers fully to prevent fly-tipping and littering. Courts must recognise the seriousness of waste crime, including illegal exports of waste to other countries. Agencies must be enabled to fully share intelligence on criminal waste exports.

1 Background to the inquiry

1. England produces more than 330 million tonnes of waste a year,¹ nearly half of which is sent to landfill sites.² The proportion of total waste sent to landfill has decreased by nearly a quarter in recent years,³ but in some parts of England capacity is limited to less than five years at current disposal rates.⁴ Landfill sites produce 40% of the UK's output of methane and 3% of total UK greenhouse gas emissions.⁵ The direct costs of managing household waste alone are £2.5 billion annually.⁶

2. In the past, waste policy focussed on ensuring safe disposal. From 1999 EU legislation such as the Landfill Directive and the Waste Framework Directive (WFD),⁷ has extended regulation to cover the storage, treatment, recycling and transport of waste. The Landfill Directive sets out specific targets to reduce the amount of biodegradable municipal waste sent to landfill in order to reduce greenhouse gas emissions and decrease health risks.⁸

3. In May 2007, Defra published its Waste Strategy for England setting out policies and tools to meet both EU and UK targets, to make “faster progress on landfill diversion and recycling”, and putting “more emphasis on waste prevention and re-use”.⁹

4. The Committee announced its inquiry in July 2007. Full terms of reference are set out at the end of this report. The Committee received 75 written submissions and took oral evidence in October and November 2008. We also visited a Materials Recycling Facility in the London Borough of Sutton and Viridor's Beddington Farmlands site on 8 October 2008. In July 2009, following press reports of illegal waste exports to Brazil, the Committee re-opened its inquiry to take further evidence on the regulation and monitoring of waste exports and enforcement sanctions for waste crime. We took further oral evidence from the Environment Agency and the Secretary of State for Environment, Food and Rural Affairs in November 2009. We would like to thank those who gave us evidence in writing or in person.

1 Defra e digest, *Key facts and figures: Waste and Recycling*, 2004 figures.

2 Defra environmental protection web pages, *Key facts about waste and recycling; waste arisings and management 1998–99 and 2002–03*. www.defra.gov.uk. In 2002–03, the latest date for which comprehensive figures are available, the proportion of all UK waste sent to landfill sites was 43%, with 42% of all waste recycled or re-used.

3 “Waste to landfill continues to fall”, Environment Agency news release, December 2008. The amount of English and Welsh waste sent to landfill sites has fallen by 23% between 2001 and 2007.

4 “Waste to landfill continues to fall”, Environment Agency news release, December 2008.

5 Defra, *Waste Strategy for England 2007*, Cm 7086, July 2007, p 20.

6 Audit Commission, *Well Disposed; Responding to the Waste Challenge*, September 2008.

7 Council Directive 2006/12/EC on waste. This replaced the 1975 Waste Directive, 75/442/EEC, as amended.

8 Council Directive 1999/31/EC on the landfill of waste.

9 Defra, *Waste Strategy for England 2007*, Cm 7086, May 2007, p 7. EU Member States are required by the Waste Framework Directive, as revised in 2008, to take the necessary measures to achieve 50% household recycling levels and 70% re-use, recycling or recovery of non-hazardous construction and demolition waste by 2020 (Council Directive 2008/98/EC repealed Council Directive 2006/12/EC). Under the Landfill Directive biodegradable municipal waste must be decreased to 75% of that produced in 1995 by 2010, to 50% by 2013 and to 35% by 2020 (Council Directive 1999/31/EC).

2 Waste Strategy objectives

5. The Waste Strategy sets out a wide range of objectives (see figure 1) to:

- reduce net carbon dioxide emissions by 9.3 million tonnes per year;¹⁰
- decouple waste growth (in all sectors) from economic growth and put more emphasis on waste prevention and re-use;
- meet and exceed targets to reduce the amount of biodegradable municipal waste (BMW)¹¹ sent to landfill in 2010, 2013 and 2020 under the Landfill Directive 1999;¹²
- increase diversion from landfill of non-municipal waste, and secure better integration of treatment for municipal and non-municipal waste;
- secure the investment in infrastructure needed to divert waste from landfill, and for the management of hazardous waste, and
- get the most environmental benefit from that investment, through increased recycling of resources and recovery of energy from residual waste using a mix of technologies.

6. However, some statements of objectives are ill-defined, for example the policy listed in the bottom box of figure 1. This states that “if incentives are insufficient regulate both upstream (materials) and downstream (landfill)” but it does not specify the circumstances under which incentives would be considered to be insufficient.

7. To achieve its objectives the Waste Strategy includes an action plan which aims to:

- encourage efforts to reduce, re-use or recycle waste and to recover energy from waste;
- reform regulation to drive waste reduction and landfill diversion while reducing costs;
- target action on materials, products and sectors with the greatest scope for improving environmental and economic outcomes;
- stimulate investment in collection, recycling and recovery infrastructure, and markets for recovered materials, and

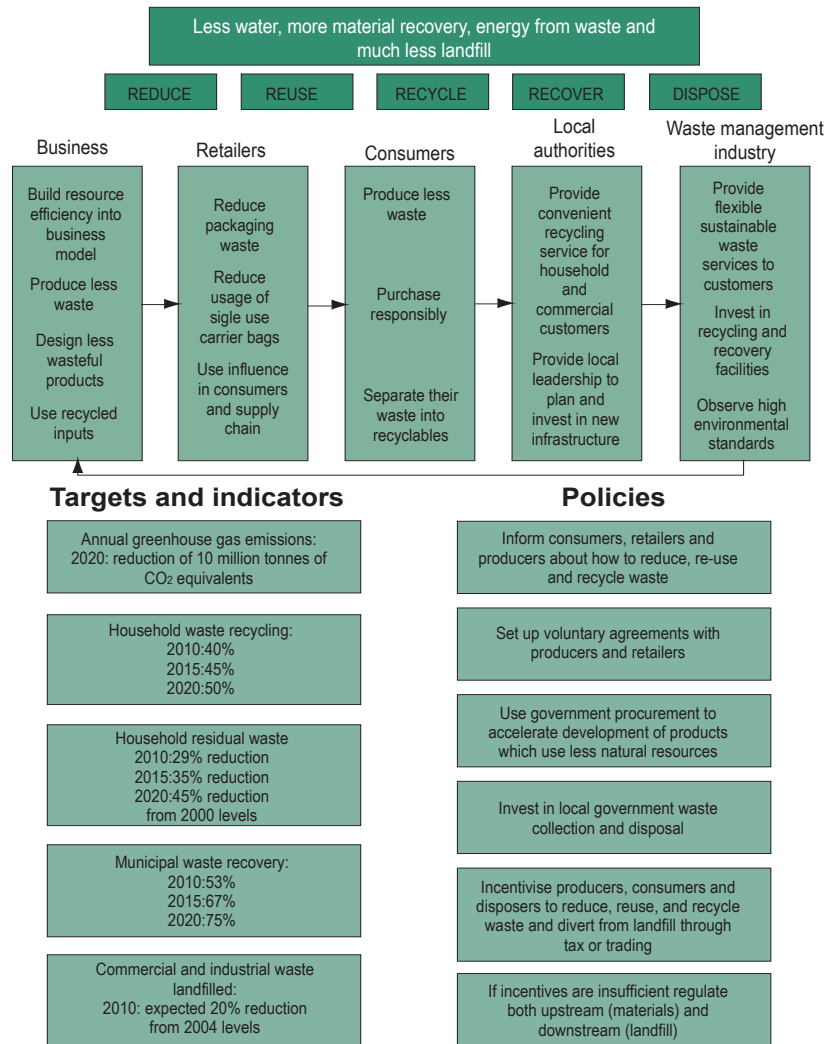
10 Reductions against a base year of 2006. This is equivalent to the annual usage of about 3 million cars.

11 Article 2 of the EU Landfill Directive defines municipal waste as comprising waste from households and other waste that, because of its nature or composition, is similar to waste from households. It defines biodegradable waste as “any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste and paper and cardboard”.

12 The EU Landfill Directive sets targets requiring reduction in landfilled biodegradable municipal waste to 75% of that produced in 1995 by 2010, to 50% by 2013 and 35% by 2020. The Waste and Emissions Trading Act 2003 provides the UK legislative framework to achieve these targets and requires limits to be set on the amount of biodegradable municipal waste sent to landfill. This led to the setting up of the Landfill Allowance Trading Scheme (LATS) enabling councils to trade allowances with the aim of meeting the Directive’s targets in the most cost effective way.

- improve national, regional and local governance to deliver co-ordinated action and services on the ground.

Figure 1: Waste Strategy 2007: objectives, policies, indicators and targets



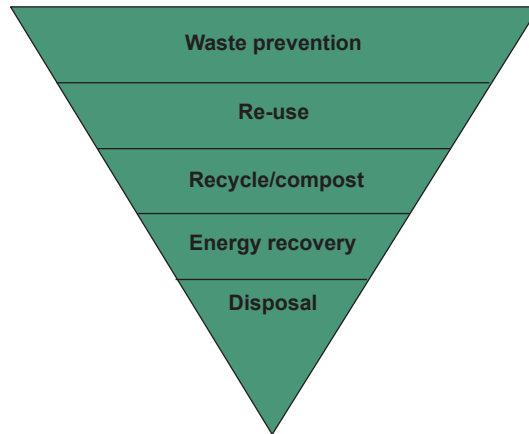
Source: Defra, *The Waste Strategy for England 2007*, Cm 7086, May 2007, p 18.

8. Underpinning the Waste Strategy is the waste hierarchy (see figure 2), which states that the “most effective environmental solution is often to reduce the generation of waste—prevention”. The next most desirable approach is re-use (where products and materials can be used again, for the same or different purposes), then recovery of resources through recycling or composting, followed by energy recovery and then “only if none of the above offer an appropriate solution should waste be disposed of”.¹³ The waste hierarchy is now enshrined in EU law.¹⁴ Our discussion below on the implementation of the Waste Strategy follows the structure of this hierarchy.

13 Defra, *Waste Strategy for England 2007*, Cm 7086, May 2007, p 28.

14 The EU Waste Framework Directive was revised in November 2008 to enshrine the “waste hierarchy” in EU law.

Figure 2: The waste hierarchy

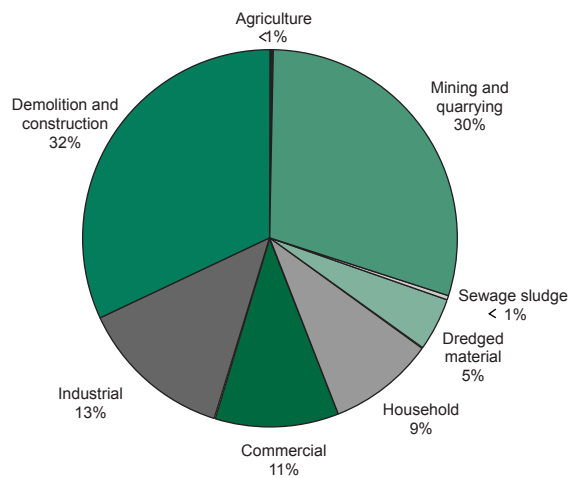


Source: Defra, The Waste Strategy for England 2007, Cm 7086, May 2007, p 9.

3 Omissions from the Waste Strategy

9. Defra's targets are confined in the large part to municipal waste,¹⁵ (ie principally household waste), which makes up just 9% of total waste arisings (see figure 3). The focus on this sector is in part a response to EU requirements to reduce the amount of biodegradable municipal waste (BMW) sent to landfill sites. However, non-municipal (ie principally non-household) waste accounts for 90% of total waste, but the Government sets few firm targets for this sector, except for one to halve the total amount of construction, demolition and excavation waste sent to landfill by 2012.¹⁶

Figure 3: Annual waste arisings in England, by sector.



Source: Defra, *Waste Strategy for England 2007, Cm 7086, May 2007, p 24.*

10. In particular, Defra's approach to the commercial and industrial sectors, which account for 25% of all waste, contrasts markedly with the clearly targeted approach for waste reduction in the household sector. The Waste Strategy expressed only an expectation that commercial and industrial waste levels will be reduced by 20% by 2010 compared to 2004 levels.¹⁷

11. Many businesses recognise that it makes good economic, as well as environmental, sense to minimise waste produced and maximise the use of waste products. In September 2008, a British Chambers of Commerce survey on the reasons companies reduced waste,¹⁸ showed that 47% of businesses cited financial benefits through lower taxes,¹⁹ whilst 60%

15 Municipal waste is waste under the control of local authorities or agents acting on their behalf. It includes all household waste, street litter, waste delivered to council recycling points, municipal parks and garden wastes, civic office waste, amenity site waste and some commercial waste where council waste collection arrangements are in place.

16 Department for Business, Innovation and Skills, *The Strategy for Sustainable Construction*, June 2008, p 48. Construction, Demolition and Excavation (CD&E) waste together produce three times as much waste as all UK households combined. The Strategy sets a target for halving the amount of CD&E waste sent to landfill by 2012 against a base year of 2008.

17 Defra, *Waste Strategy for England 2007, Cm 7086, May 2007, p 18.*

18 British Chambers of Commerce, *Business and the environment: challenges ahead*, September 2008. www.britishchambers.org.uk.

19 Those surveyed cited landfill tax (now £40 per tonne), the Climate Change Levy and fuel duty.

cited social responsibility and environmental concerns. Nevertheless, the Environment Agency told us there was a need for a greater policy focus on the industrial and commercial waste sectors as this was where “further or more innovative interventions may be needed if we are to see more sustainable resource use and responsible waste management”.²⁰

12. Defra recently published a statement on commercial and industrial waste,²¹ which ostensibly sets out its aims and objectives for this waste stream and “what we plan to do”.²² However the document is rich in rhetoric but extremely thin on detailed proposals (see box below for examples of actions). In particular it contains no action plan for assessing the potential level of waste reduction achievable in these sectors. Nor does it specify how and by when it will apply a targeted approach to improve recycling levels or reductions in the amount of material sent to landfill sites from these waste streams.

Examples of actions in Defra’s commercial and industrial waste statement:

Action 6: Defra and the department for Business Innovation and Skills are working together to identify new business opportunities for UK companies in managing commercial and industrial waste in innovative ways which can deliver both economic and environmental benefits. They will produce a strategy by early 2010 that will identify business opportunities that can transform the waste market and ultimately deliver both economic and environmental benefits.

Pre-amble to Action 10: There is already a lot of information available to business on resource efficiency but we want to understand what is “already out there”...

Action 10: Once Defra and BIS have completed initial research [on a waste minimisation standard] with the British Standards Institute in autumn 2009, we will consult stakeholders on the way forward.

Source: Defra, Commercial and Industrial Waste in England—Statement of Aims and Actions 2009, October 2009, p 22 and p 26.

13. Subsequently, in December 2009, Defra announced that it planned to classify “much more commercial waste” under the municipal waste category for which EU Landfill Directive targets are set. It stated that this reflected the increased focus it wanted to place on commercial waste. This would mean amending the UK’s targets for reduction of biodegradable municipal waste by 2010, 2013 and 2020 to allow for the inclusion of not only household, but also similar commercial, industrial and institutional wastes.²³

14. However, there is a significant gap in information on progress in tackling waste from the commercial and industrial sectors. Defra is unable to provide updated performance information as these sectors have not been comprehensively surveyed since 2002–03. The Secretary of State acknowledged that better information is needed.²⁴ Yet the underlying

20 Ev 1

21 Defra, *Commercial and Industrial Waste in England; Statement of Aims and Actions*, October 2009.

22 *Ibid*, p 4

23 “Changing the UK approach to the EU landfill diversion targets”, Defra news release, 2 December 2009.

24 Q 529

data is already available. Data from these sectors is already captured for various purposes, including by the National Industrial Symbiosis Programme (NISP).²⁵ This works with businesses to improve their use of waste. We were told during our visit to the Viridor Beddington Farmlands Site near Croydon that operational data is routinely collected at all waste management sites and passed to the Environment Agency but it is subsequently not collated.

15. Defra has recognised that policy on the commercial and industrial waste stream has been “less well developed”, due partly to not using the existing data but also to a lack of “hard targets”.²⁶ It announced that it would commission a new national survey of commercial and industrial waste in England to “collate the data necessary to inform the setting, and monitoring, of any future targets”.²⁷

16. Defra has belatedly focused its attention on commercial and industrial waste policy but its recent statement failed to set firm targets for these sectors. We remain unconvinced that current policies for tackling commercial and industrial waste are sufficiently robust to drive maximum improvement in these sectors. There are insufficient mechanisms specific to these sectors, rather a reliance on general incentives such as avoidance of landfill tax and economic benefits from lower wastage levels. For example, while Defra’s proposal to include commercial waste in targets set for the UK under the Landfill Directive is a welcome indication of its ambition for the sector, this will not in itself drive action. Nor does this entail the setting of specific targets for more sustainable management of commercial waste which is diverted from landfill. The department should urgently hold a round table with representatives from commerce and industry to develop waste reduction, re-use and recycling benchmarks to provide companies with a better idea of what they can be expected to achieve. The department should also develop an action plan setting out the steps the sector can take to achieve these levels.

17. Businesses must demonstrate to customers that they are improving their recycling rates. Retail outlets, restaurants and pubs should be required to publish information on what they are doing to improve their waste management and increase recycling.

18. Defra’s lack of up-to-date data on the commercial and industrial waste streams has hampered the development of waste reduction policies for this sector and made it very difficult to monitor progress in this area. Defra must now commit itself to developing a full and up-to-date data set for this sector. Whilst we welcome the department’s commitment for a new “survey of the sector”, one-off activity is no substitute for the establishment of regular information flows. We recommend that Defra set out an action plan on how it will collate the detailed data which is already being collected for operational purposes in order to provide performance information for the sector.

25 The National Industrial Symbiosis Programme is a Defra funded programme to support businesses in developing sustainable resource management practices by bringing together traditionally separate organisations.

26 Defra, *Waste Strategy Annual Progress Report 2008–09*, October 2009, p 10.

27 Defra, *Waste Strategy Annual Progress Report 2008–09*, October 2009, p 11.

4 Progress in delivering the Waste Strategy's objectives

19. Defra's second annual progress report on the Waste Strategy, published in October 2009, demonstrates overall good progress against most of its objectives.²⁸ However progress has not been made on hazardous waste volumes, which have increased.²⁹ Nearly half of all household waste,³⁰ was treated to recover some sort of value,³¹ with around 37% recycled or composted.³² Levels of household waste have remained fairly stable over the past five years, and reduced by 3% in 2008.³³ Levels of fly-tipping and other illegal waste activity have decreased by 9% over the past year.³⁴ Total waste sent to landfill has also reduced. Progress in meeting objectives for the key levels of the waste hierarchy is discussed in more detail below.

Landfill ban

20. Although the current regulatory framework is delivering steady progress against targets, some witnesses recommended a ban on landfill and the incineration of reusable, recyclable and compostable waste to encourage more sustainable waste management. Friends of the Earth considered that waste policies were weak and focussed on voluntary measures and believed that such a ban would encourage more sustainable waste management.³⁵

21. In October 2009 the Secretary of State for the Environment, Rt Hon Hilary Benn MP, announced that Defra would consult in 2010 on whether recyclable and compostable items should be banned from landfill so that the "most climate damaging substances" can be excluded from landfill "by 2020 at the latest".³⁶

22. Whilst we welcome the announcement that Defra will consult in 2010 on banning certain substances from landfill, we believe it is being too generous in allowing up to another decade to pass before these materials are not allowed to be landfilled. Defra should have the courage of its convictions and go for a more ambitious timescale to implement this change by 2015.

28 Defra, *Waste Strategy Annual Progress Report 2008–09*, October 2009.

29 Defra, *Waste Strategy Annual Progress Report 2008–09*, October 2009, p 4.

30 Household waste includes waste from household collection rounds (waste within Schedule 1 of the Controlled Waste Regulations 1992), waste from services such as street sweeping, bulky waste collection, hazardous household waste collection, litter collections, household clinical waste collection and separate garden waste collection (waste within Schedule 2 of the Controlled Waste Regulations 1992), waste from civic amenity sites and wastes separately collected for recycling or composting through bring/drop off schemes, kerbside schemes and at civic amenity sites.

31 48% of municipal waste was recovered through recycling, composting or energy recovery in 2008. Defra, *Waste Strategy Annual Progress Report 2008–09*, October 2009, p 23.

32 Defra, *Waste Strategy Annual Progress Report 2008–09*, October 2009, p 5.

33 Defra, *Municipal Waste Management Statistics: Provisional Quarter 3, 2008–09*, 6 August 2009.

34 Defra, *Waste Strategy Annual Progress Report 2008–09*, October 2009, p 4.

35 Ev 193

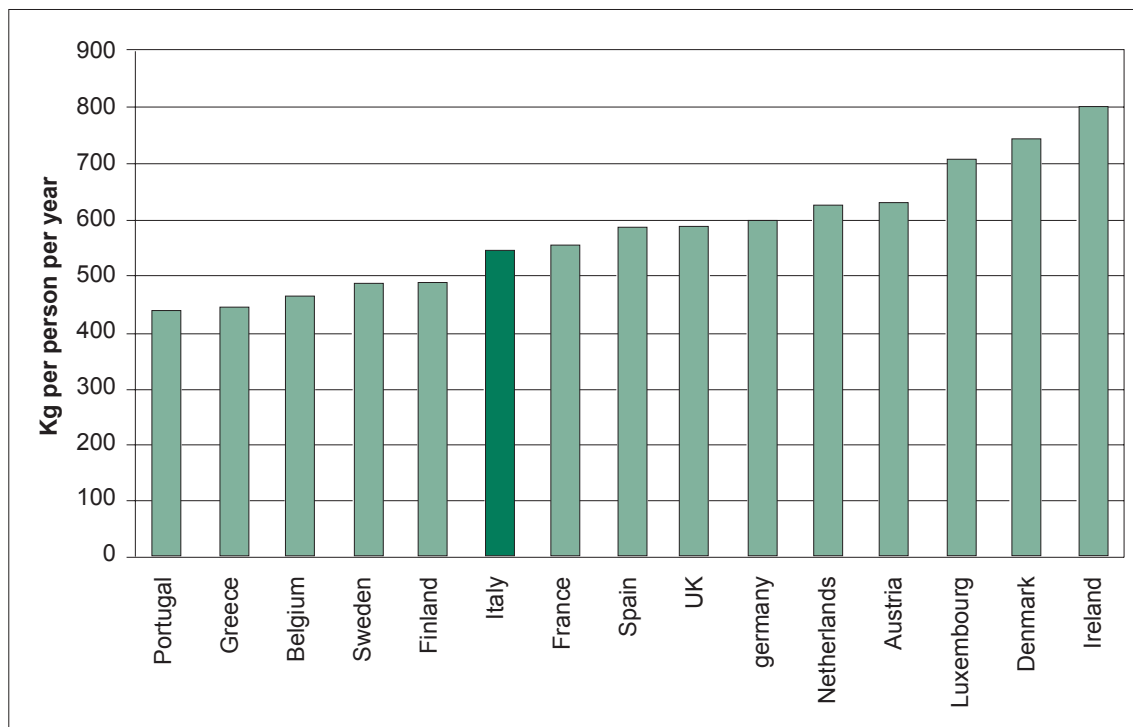
36 "Benn: We'll build a zero waste nation", Defra news release 235/09, 13 October 2009.

5 Waste prevention

23. The Waste Strategy 2007 restates the primacy of prevention in the waste hierarchy and sets out a range of prevention measures including “economic incentives, regulation and voluntary and awareness measures”.³⁷ The Strategy, however, has no targets to reduce overall waste levels, but simply aims to “decouple” growth of waste from that of the economy, and put more emphasis on waste prevention.

24. There have been only small decreases in total amounts of waste produced by the municipal sector—around 3% in 2008.³⁸ The UK produces higher tonnages of waste per head than that many other EU member states so it needs to achieve faster decreases to bring waste production down to the level of the best EU countries (see graph 1).

Graph 1: Municipal Waste Collected (kg per head) (2006)



Source: Ev 166

25. Many organisations were critical of the lack of waste reduction targets,³⁹ and the absence of a cohesive strategy for waste prevention. The Chartered Institution of Wastes Management (CIWM) said that not enough effort has been focused on “waste reduction, minimisation and re-use (the focus appears to be much more on recycling and recovery of waste, rather than preventing materials becoming waste in the first place)”, and that

37 Ev 167

38 Defra, *Municipal Waste Management Statistics, Provisional Quarter 3, 2008–09*, 6 August 2009.

39 Ev 212

recycling targets can be a barrier to reduction and minimisation.⁴⁰ Similarly the Environment Agency wanted “a greater focus on reducing the impacts of products and minimising waste production, rather than on simply increasing recycling rates”.⁴¹ The Environmental Services Association (ESA) supported waste minimisation, but considered it to be “no substitute for investment in [waste] infrastructure”,⁴² since reduction in waste arisings is likely to be fairly slow.⁴³ The then Minister for Farming and the Environment, the Rt Hon Jane Kennedy MP, said she would be “prepared to consider” the concept of a waste minimisation strategy.⁴⁴

26. In October 2009 the Secretary of State set out a vision for a “zero waste nation”, setting up a further six English pilot schemes for Zero Waste Places, to run until the end of March 2010.⁴⁵ Following a commitment in the Waste Strategy, in 2007 Defra set up a Waste Strategy Stakeholder Group to provide advice on delivering the Strategy and on future policy developments. Membership includes representatives of a wide range of bodies and a core task is to advise on priorities for implementation of the Waste Strategy.⁴⁶

27. Defra should publish, within six months of the completion of the Zero Waste Places pilots, a comprehensive strategy on waste prevention with a clear set of timetables and targets. The Waste Strategy Stakeholder Group should give priority in its work programme to the provision of waste prevention advice to ensure that Defra gives prevention sufficient attention in its waste policies.

Preventing retail waste

28. The retail and wholesale sector is the largest producer of commercial waste, producing 12.7 million tonnes in 2002–03, nearly half of which was sent to landfill. The retail sector alone produced 6.2 million tonnes, an increase of 16% from 1998–99.⁴⁷ Some companies have ambitious targets to reduce this figure although much of their focus is on recycling rather than minimisation.

Packaging

29. Nearly half of household waste sent to landfill originated as a purchase from retail supermarkets and convenience stores. There is a balance to be struck between protecting goods adequately and over-packaging. Reducing the amount of packaging can lead to product spoilage or use of less easily recycled materials.

40 Chartered Institution of Wastes Management, National Waste Strategy for England 2005 review: *Lessons Learned Report and Position Statement*, March 2005, para 3.1.

41 Ev 3

42 Ev 63

43 Ev 61

44 Q 368

45 “Benn—We’ll build a zero waste nation”, Defra news release, 13 October 2009.

46 “Waste Strategy for England 2007 programme board and stakeholder group”, Defra waste and recycling web pages, November 2009. www.defra.gov.uk.

47 Defra, *Waste Strategy for England 2007*, Cm 7086, May 2007, p 66.

30. Producer responsibility places the consequences on businesses for the environmental impact of their products. The Courtauld Commitment is a voluntary agreement by retailers to halt packaging growth. This target was met in 2008 with retailers now aiming to achieve a decrease in packaging by 2010 as well as addressing food waste. The Government's new packaging strategy was launched in June 2009. It included plans to set new voluntary targets building on the Courtauld Commitment.⁴⁸ However, a key issue remains, namely public confusion over the recyclability of certain types of plastics used in packaging and the varied approaches of different local authorities.

31. Retailers with a turnover greater than £50 million per annum should be required to publish details of their waste prevention strategies, including details of the targets they have set for waste reduction by type of material.

Single use carrier bags

32. In 2008–09, 10 billion single use carrier bags were handed out by retailers. This compares to 13 billion the previous year.⁴⁹ Some countries, including China and South Australia ban retailers from giving out single use plastic bags, with fines for those doing so. Ireland introduced a tax of 15 cents per plastic bag in 2002 which led to a reduction in their use initially of 90%.⁵⁰ The Welsh Assembly Government plans to introduce a tax for most single use bags from 2011.⁵¹

33. Under the Climate Change Act 2008 the Government could require English retailers to impose a minimum charge on single use carrier bags, if there is insufficient voluntary progress.⁵² However the retail industry's voluntary agreement with the Government to reduce single use carrier bag usage by 50% over the past three years, with a long-term aim of a 70% reduction, is delivering results. In July 2009 Defra announced a 48% reduction over the previous three years in the number of bags given out in England.⁵³ ASDA has achieved a 50% reduction,⁵⁴ principally by removing bags from check-outs and encouraging customers to use their re-usable "bags for life".⁵⁵

34. The UK Bag Manufacturers' Association say that paper bags should be exempt from any levy.⁵⁶ However the balance of evidence is that these bags have no less environmental impact than plastic ones.⁵⁷

48 Defra, *Making the most of packaging: A strategy for a low carbon economy*, June 2009, p 64.

49 "Local environmental quality, carrier bags", Defra environment web pages. www.defra.gov.uk

50 "Irish bag tax hailed success", BBC News website, 20 August 2002.

51 Welsh Assembly Government, *Consultation on Proposals to introduce a charge on single use carrier bags in Wales*, June 2009.

52 Climate Change Act 2008, section 77.

53 "Millions fewer carrier bags in England's high streets", Defra news release, 20 July 2009.

54 "Asda on target to hit 50% carrier bag reduction", ASDA web pages, May 2009.

55 Ev 379

56 Ev 349

57 The Scottish Parliament, *Proposed plastic bag levy, extended impact assessment*, August 2005, p 23. This impact assessment concluded that, with the exception of potential for litter, paper bags have a greater negative environmental impact than conventional plastic carrier bags.

35. We congratulate retailers on their progress to date to reduce the use of both plastic and paper single use carrier bags but, given the billions still being given out each year, greater effort to reduce their use is required. Defra should work with retailers to ensure that all adopt the practice of exemplar companies which have removed bags from check-outs and are promoting low-cost, re-usable bags. The British Retail Consortium should work with its members to help UK retailers achieve a minimum bag reduction target of 60% by 2012.

Minimising food waste

36. There is wastage at every stage of the process of bringing food from the plough to the plate. Particular efforts have been made to reduce the amount of food wasted by consumers since 6.7 million tonnes—one third of food bought—is currently thrown away each year, even though half of that discarded could have been eaten.⁵⁸ This food waste in landfill sites generates 18 million tonnes of carbon dioxide, equivalent to the emissions of 4 million cars. WRAP has run a “Love Food, Hate Waste” campaign since November 2007 to encourage consumers to change their behaviour. Defra has also announced plans to change packaging labelling to reduce confusion over how dates on food packaging relate to the safety of eating that food.⁵⁹

37. Retailers, food suppliers and manufacturers have a key role in reducing the significant volume of food wasted before it even reaches the consumer. The UK retail sector produces about 1.7 million tonnes of food waste a year.⁶⁰ The food, drink and tobacco manufacturing industry produces some 7.2 million tonnes of waste a year, the large part of which is returned to the supply chain for reprocessing but 1.9 million tonnes of this is sent to landfill.⁶¹ Commentator Tristram Stuart has criticised the lack of firm data on how much food waste individual retail companies produce, and recommended that such companies be required to publish this information.⁶² There is also criticism of the relationships between some retailers and suppliers which is considered to cause suppliers to waste food when retailers decide not to purchase it at short notice or which fail strict aesthetic criteria.⁶³

38. The Co-operative Group told us that in 2008 it had reduced total waste levels by nearly 79,000 tonnes, a reduction of 5% since 2007 despite increased sales. 31,500 tonnes of that waste had been sent to landfill, of which 13,000 tonnes was food waste.⁶⁴ It was investigating alternatives to landfill, including anaerobic digestion and composting.⁶⁵ The company sells a majority of fresh fruit and vegetable products either as class I or II.⁶⁶

58 WRAP, *The Food We Waste*, July 2008.

59 “A world without waste?”, Speech by Hilary Benn to Future Source conference, 9 June 2009.

60 The Environment Agency’s 2002–03 survey of commercial and industrial waste found that 1.6 million tonnes of food waste was produced by the English retail sector, with 1.7 million tonnes from the UK as a whole.

61 Defra, *Waste Strategy for England 2007*, Cm 7086, May 2007, p 68.

62 Tristram Stuart, *Waste: Uncovering the global food scandal* (London 2009), chapter 13.

63 Tristram Stuart, *Waste: Uncovering the global food scandal* (London 2009), chapter 7.

64 Ev 422

65 Ev 423

66 Under the European Community (EC) Marketing Standards for Fresh Fruit, Salads, Vegetables and Nuts, certain products are covered by Specific Marketing Standards and cannot be sold for fresh consumption unless they meet

However it does stock nine value brand lines which have a lower aesthetic appearance, which maximises sales of a particular product whilst helping to minimise waste production.⁶⁷ The company works with Fareshare to distribute food which is still safe and legal for consumption but which is not saleable in stores. It has informed its suppliers that they may use Fareshare as a disposal route for any Co-operative brand product not required by stores.⁶⁸ Tesco told us that it is particularly “efficient in minimising the amount of food waste from our stores” to the extent that it did not produce enough food waste on a regular basis to make it viable to form a partnership with Fareshare or other similar charities”.⁶⁹

39. We welcome moves by retailers to offer customers the choice of buying produce which, for aesthetic reasons, cannot be marketed as top category products. We urge all retailers to develop a wide range of such products for sale. We also urge all retailers to distribute to charities such as Fareshare any food which can legally and safely be used and to give explicit permission to their suppliers to do likewise with branded products.

40. We recommend that Defra requires food retailers and manufacturers to report the tonnages of food waste from their businesses at least on an annual basis. Defra should also work with the food industry to ensure that retailers give suppliers sufficient flexibility to be able to minimise wastage, including disseminating examples of industry best practice.

the standard required to be classed as either Extra Class (superior quality), Class I (good quality) or Class II (reasonable quality) produce. Rural Payments Agency, European Community (EC) Marketing Standards for Fresh Fruit, Salads, Vegetables and Nuts”, July 2009.

67 Ev 423

68 Ev 424

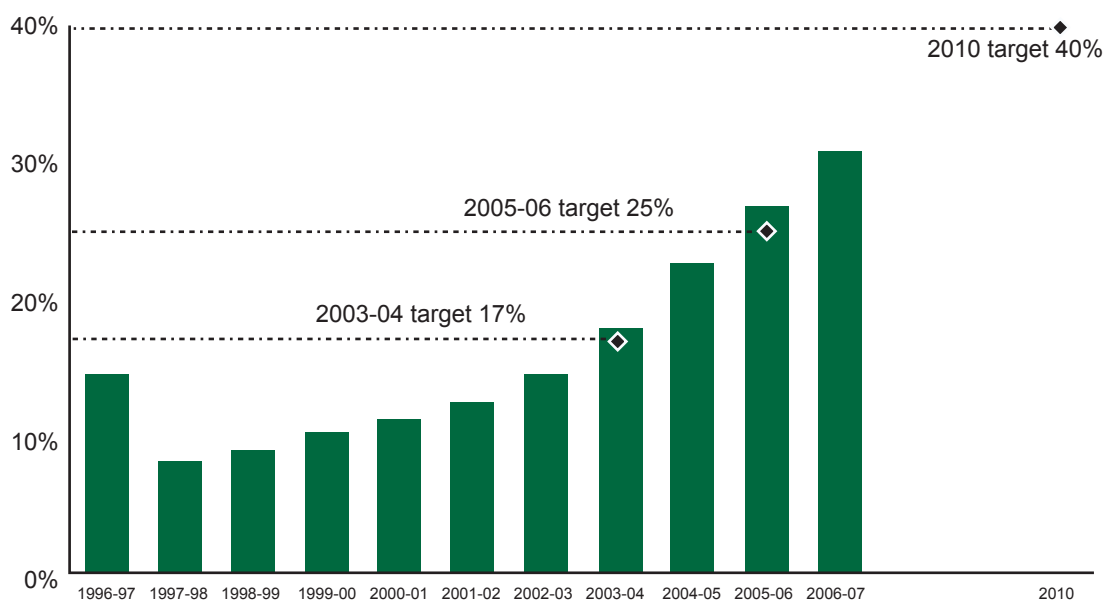
69 Ev 425

6 Re-use and recycling

Household waste re-use and recycling

41. Although household waste makes up only 9% of overall waste, progress in this sector is central to meeting UK and EU targets, particularly those for reducing biodegradable waste. This involves local councils, who are responsible for collection and disposal of household waste,⁷⁰ working with residents to reduce the amounts they produce and increasing recovery rates through re-use and recycling. Defra has reported steadily increasing household recycling rates in recent years, to over 37% for the financial year 2008–09.⁷¹ These increased rates mean that although overall levels of waste produced have only fallen slightly, enough waste is being recovered for England to have already achieved the 2010 target of a 25% reduction in biodegradable household waste going to landfill.⁷² However this progress comes against a low starting point compared to other EU member states.⁷³

Graph 2: English recycling rates 1996–97 to 2006–07



Source: "Waste and recycling statistics", House of Commons Standard note, SN/SG/2728.

70 Waste collection authorities (WCA)—376 unitary or district councils responsible for collecting waste from 22 million homes and some businesses. Section 45(1) of the Environmental Protection Act (1990) imposes a duty on WCAs to arrange for the collection of household waste in their areas, with section 46 giving them powers to determine the arrangements. Waste disposal authorities (WDA) councils manage the waste that is collected by the local council. In some cases the WDA is the same council as the WCA, if not it is often the county council for an area. WDAs are also responsible for developing and implementing plans to deal with municipal waste, working with WCAs to develop plans to help meet European targets to reduce the amount of waste sent to landfill. WDAs also arrange for places where householders can take their waste (civic amenity sites).

71 Defra statistical release, *Municipal Waste Management Statistics for England, 2008–09*, 5 November 2009.

72 Environment Agency, *Report on the Landfill Allowances and Trading Scheme*, November 2008, p 3. A total of 10,580,000 tonnes of biodegradable municipal waste was landfilled in 2007–08, against an EU set limit for 2010 of 11,200,000 tonnes.

73 Waste and recycling statistics, Standard Note SN/SG/2728, House of Commons Library, April 2008.

42. The national recycling statistics hide considerable variations between regions. Rates range from less than 30% in London to over 45% in the East and the East Midlands. Within regions there is also a wide range of performance levels.⁷⁴ For example, in the South West, Restormel District Council achieved levels of under 27% in 2007–08. By comparison South Hams achieved levels of nearly 58%.⁷⁵

43. Many of those giving evidence wanted greater consistency from councils in their approaches to recycling. The Local Authority Recycling Advisory Council (LARAC) believed that “one size does not fit all” but conceded that there was “some room for rationalisation and consolidation of techniques and equipment” to answer “some of the public concerns about the different systems in place across the country”.⁷⁶ ASDA called for “a consistent nationwide approach to recycling”.⁷⁷

44. WRAP research into the attitudes of householders found that many wanted to know more about what happened to their recycling and the environmental impact their actions had.⁷⁸ The public is more likely to recycle if there is clear information on the use of recyclates, for example to demonstrate that materials are re-used as far as possible in their original form—for example glass bottles being re-used as bottles rather than crushed for aggregates.

45. Recyclates must be of sufficient quality to ensure maximum use of materials for premium purposes and this requires care in collection. BAN waste told us “cleanliness is the key to the production of high quality [recyclable] materials”. They considered that separate collection (as opposed to mixed waste collection which is subsequently sorted) would enable more efficient collection of clean waste suitable for recycling.⁷⁹

46. Some organisations wanted recycling targets to be strengthened. The Green Alliance said that neither the recycling nor the residual waste targets were “stretching enough to stimulate the innovation needed”.⁸⁰ Friends of the Earth supported a 60% recycling and composting target.⁸¹

47. We welcome progress that has been made nationally on increasing levels of household recycling. We recommend that the Government set a more ambitious recycling target of 50% of household waste to be recycled by 2015 and 60% by 2020. It should also commission a report to explain the reasons for significant differences in the rates of recycling and prepare an action plan to assist poor performing local authorities to improve their domestic recycling levels. The Government should require local authorities to provide all householders with information on an annual basis explaining what actually happens to domestic waste sent for recycling and the environmental

74 Defra statistical release, *Municipal waste management statistics for England 2008–09*, 5 November 2009.

75 “Municipal Waste Management Statistics for England 2008–09; data for individual local authorities, November 2009”, Defra environment statistics web pages.

76 Ev 248

77 Ev 379

78 WRAP, *Barriers to recycling at home: technical report*, August 2008, para 5.5.

79 Ev 263

80 Ev 284

81 Ev 193

impact of their recycling activities. This information should also be collated nationally so that best practice can be disseminated.

48. Although it is important that maximum levels of re-use and recycling of waste are achieved, this must not be at the expense of efforts at national and local level to prevent waste arising in the first place.

Case study—engaging the public in textile re-use and recycling

49. More than a million tonnes of textiles are discarded each year.⁸² There has been an increase in recent years in the amount of textile waste sent to landfill. During our visit to the Viridor site at Beddington Farmlands near Croydon, waste operatives told us that textile waste had increased from around 7% five years ago to around 30% of total waste now—they labelled this the “Primark effect”. The company assumed the increase was due to a growing tendency for people to discard low cost clothes quickly. ASDA told us it was moving away from “fast fashion” in response to customer demands for more sustainable clothing ranges.⁸³

50. Defra has produced a Sustainable Clothing Action Plan with comprehensive proposals for reducing the environmental impact of clothing. This aims to increase the re-use of textiles and encourages the use of recycling facilities including civic amenity sites, kerbside drop bins, charity shops and collections.⁸⁴

51. We support the Government’s work to increase the levels of re-use and recycling of clothing. We recommend that Defra encourage retailers to do more to help customers recycle their clothes, for example by providing information in stores on facilities available at civic amenity sites, local drop bins, charitable collections and charity shops. Clothes labels should, where possible, remind purchasers not to bin items but to pass them on for re-use or recycling.

52. Defra should consult manufacturers to develop standards and criteria for whole-life assessments of the environmental impacts of different kinds of textiles and use this information to promote the use of more sustainable materials in clothing.

Household waste incentive schemes

53. To provide further tools to encourage householders to reduce the amount of waste they produce and to recycle more, the Government introduced provisions in the Climate Change Act 2008,⁸⁵ which enable local authorities to pilot household waste incentive schemes. Under such a pilot householders could receive a rebate if they recycled more or, in some pilots, be charged more if they do not.⁸⁶ Such schemes would aim to “recognise

82 Wasteonline, Textile recycling information sheet. www.wasteonline.org.uk

83 Q 258

84 “Sustainable Clothing Action Plan launched at London Fashion Week”, Defra news release, 39/09, 20 February 2009.

85 Climate Change Act 2008, section 72.

86 Defra Waste Strategy fact sheet, *Incentives for household waste minimisation and recycling*, May 2007.

more effectively the efforts of those householders who reduce, re-use and recycle their waste, and provide an incentive to those who do not change their behaviour”.⁸⁷

54. We received a range of evidence both supporting and opposing these provisions. Some witnesses wanted proposals to go further and include wider charging powers, such as variable charging, whereby a household’s waste charge depends on how much residual waste is collected from them. This has been used in Europe and North America where it is credited with reducing residual waste by between 15% and 45% in various locations, without any apparent problems of additional unauthorised dumping.⁸⁸ A number of EU member states, such as Austria, the Netherlands and Germany out-perform the UK in reducing the amount of municipal waste collected and household charging is the most widely used instrument to achieve this.⁸⁹

55. However, many witnesses considered financial incentives to be less effective than other methods, such as improved recycling services and education campaigns. The Greater Manchester Waste Disposal Authority (GMWDA) credited improved collection arrangements for quadrupling their recycling rates.⁹⁰ WRAP cited the success of campaigns, such as their Recycle Now campaign, which have led to 64% of people in England now describing themselves as committed recyclers, up from 45% in 2004.⁹¹

56. In January 2009 Defra announced that no local authority had expressed interest in piloting a financial incentive scheme for household waste and recycling.⁹² Consequently it has not announced how it intends to take the incentive scheme forward. Councils’ willingness to participate in the scheme has probably been reduced by negative press coverage which reinforced the public’s misunderstanding of the proposals. Public mistrust has been exacerbated by a lack of information from local authorities on their services and performance, including confusion over current costs of waste collection and disposal, and over which materials can be recycled in their locality, either by collection or personal disposal. Municipal waste costs local authorities £1.15 billion for its collection and £1.46 billion for its disposal.⁹³ Costs averaged £53.80 per household for collection and £54 per tonne for disposal. However, costs vary considerably between individual councils. For example, in 2007–08, South Shropshire’s collection costs were over £90 per household while Breckland’s costs were just over £25. For disposal, costs of just over £31 per tonne were incurred in Middlesbrough, but, at the other end of the scale, West Sussex’s costs were over £90 and Cornwall’s over £107 per tonne.⁹⁴ Whilst this information is available for each council, householders have no idea of how much it costs to collect and deal with

87 “Waste Strategy for England 2007: incentives for recycling by households”, Defra waste and recycling web pages.

88 Policy Studies Institute Discussion Paper, *Charging for Domestic Waste: combining equity and environment considerations*, 2004, p 18.

89 Cranfield University, *European household waste management schemes: their effectiveness and applicability in England*, July 2007.

90 Ev 77

91 Ev 42

92 “Financial incentive waste pilots: expressions of interest”, Defra information bulletin 11/09, 22 January 2009.

93 Audit Commission, *Well Disposed: Responding to the Waste Challenge*, September 2008.

94 Audit Commission site collection data web pages, www.audit-commission.gov.uk. Until 2008 the Audit Commission collated Best Value Performance Indicator data (BVPIs 86 and 87) on local councils’ waste collection and waste disposal costs.

their property's refuse. Such a situation makes it all the more difficult for councils to either incentivise householders to improve recycling or else "fine" them for over-producing waste. The Secretary of State said in June 2009 that he wished to support councils as they "explain and justify" waste collection systems to householders.⁹⁵

57. Defra must improve its support to local authorities in explaining more clearly the benefits which can arise from households reducing their domestic waste volumes. The department should now produce a report explaining how a more rational regime for charging for domestic waste collection and disposal can be proceeded with. If public commitment to recycling is to be developed, local authorities must firstly make it clear to people what the current costs of waste collection are and express such figures in terms of cost per bin, bag or wheelie bin.

Business waste re-use and recycling

58. Support programmes, such as those run by WRAP and the National Industrial Symbiosis Programme (NISP), are in place to assist businesses and encourage them to view waste as a "resource in the wrong place".⁹⁶ NISP works to "effect a long term cultural change in business to view all resources as an asset with a value which should not be wasted or discarded".⁹⁷ Whilst they do work on waste produced at the end of an industrial process, their main emphasis is higher up the waste hierarchy to prevent wastes occurring through innovative processes and collaborations between companies. Their regional approach aims to help companies to locate closely to maximise such collaboration.

59. Small and medium sized enterprises (SMEs) especially benefit from support programmes, as this group face particular challenges, including difficulties in gaining access to facilities. The Staffordshire and Stoke-on-Trent Waste Partnership considered that SMEs have "fallen through a policy gap".⁹⁸ Brecknell Willis, a small engineering firm, considered that unless there is a "huge incentive" small firms have difficulty finding the time and resources to recycle. They also said the company valued advice programmes.⁹⁹ However it considered there was some duplication in advice services and that it was important to have real focus to enable local sharing of experiences.¹⁰⁰

60. Defra has cut business resource efficiency budgets on the grounds that increased landfill tax and pre-treatment requirements for residual waste going to landfill would stimulate sufficient market activity. In 2008–09 it cut funding for WRAP by a third, for Envirowise (the resource efficiency advice agency) by 55% and for NISP by 42%.¹⁰¹ The CBI considered that many support programmes, including NISP, have been "cost effective in realising the potential resource-efficiency gains available to business". It believed that

95 "A world without waste?", speech by Hilary Benn to Future Source conference, 9 June 2009.

96 Ev 304

97 *Ibid*

98 Ev 290

99 Q 263

100 Qq 266 & 267

101 "Envirowise and NISP hit by Defra cuts", Lets recycle.com, 26 February 2008. 2008–09 funding was £5.025 million for NISP and £43.223 million for WRAP (HC Deb 2274W). For 2009–10 the figures are £4.88 million and £43.20 million respectively. (Defra web pages, Budgets for activities on business resource efficiency, 2009–10).

there was a good case for not cutting the programmes budget but for some expansion “where the cost-benefit data justify it”.¹⁰² Independent evaluation through Manchester Economics has calculated the benefit cost ratio provided by NISP to be around 30:1 and that, over a five year period, NISP was providing direct receipts to HMT in the region of £148 million to £247 million, in addition to environmental benefits and the creation of 770 jobs.¹⁰³ We also note that WRAP has been particularly good at co-operating with small communities—encouraging and enthusing them to seek out innovative waste reduction strategies.

61. Defra is now bringing together all business resource efficiency programmes (BREW), including NISP, under WRAP leadership to provide a “one stop shop”. 2009–10 budgets do not reverse previous years’ reductions in funding for resource efficiency programmes and we are concerned that the indicative amount shown in the tender document for industrial symbiosis represents a 17.5% cut in NISP’s funding from £4.875 million in 2009–10, despite NISP having delivered the majority of the outputs under BREW.¹⁰⁴

62. Support services to help businesses increase their re-use and recycling of materials have proven themselves to be extremely cost-effective, particularly in the case of the National Industrial Symbiosis Programme (NISP). We recommend that Defra re-evaluates the impact that cuts in funding for the Waste Resources Action Programme and NISP is having on business waste re-use and recycling levels and the missed opportunities for economic growth decoupled from environmental degradation. The department should confirm that rationalisation of services under WRAP has released efficiency savings and explain how WRAP will work with local government, businesses and regional agencies to enable them to serve a wider range of organisations.

Local authority support for businesses

63. Many witnesses highlighted the need to link municipal waste services with those for the non-municipal sector. The Chartered Institution of Wastes Management (CIWM) considered that more attention could be given to non-municipal waste by local authorities working with the private and third sectors.¹⁰⁵ The Waste Strategy points out that supporting local businesses with better management of their waste is part of local authorities’ local leadership and community development role. It notes that this can provide opportunities for cost-sharing through “more integrated management of different waste streams with economies of scale from joint facilities and services”.¹⁰⁶

64. Local authorities can, however, be reluctant to take on business waste as any increase in certain wastes would increase the probability of financial penalties under the Landfill

102 Ev 323

103 Manchester Economics and Scott Wilson Business Consultancy, *National Industrial Symbiosis Programme Economic Valuation Report*, September 2009.

104 Defra’s business resource efficiency web-pages set out Business Resource Efficiency and Waste (BREW) programme metrics for 2005–06 and 2006–07.

105 Ev 21

106 Defra, *Waste Strategy for England 2007*, Cm 7086, May 2007, p 88.

Allowance Trading Scheme (LATS).¹⁰⁷ GMWDA told us that local authorities were concerned that taking on trade waste disposal would push up the amount of waste they were accountable for under LATS.¹⁰⁸ While waste collection authorities have a duty to arrange for the collection of commercial waste, where requested to do so, they may, however, recover a reasonable charge for the collection and any disposal costs passed on by the waste disposal authority.¹⁰⁹

65. We recommend that Defra reviews whether the Landfill Allowance Trading Scheme is having a negative impact on council provision of waste services for businesses.

Construction industry waste re-use and recycling

66. Demolition and construction waste account for around 32% of all waste arisings and excavation waste accounts for a further 30%. The Waste Strategy identified the construction sector as a priority area for action. In June 2008 the Government's Strategy for Sustainable Construction set out an overarching target of a 50% reduction in construction, demolition and excavation waste sent to landfill by 2012, compared to 2008.¹¹⁰

67. Fiscal and legislative mechanisms which have most impact on this sector include the landfill tax, the aggregates levy, mandatory Site Waste Management Plans (SWMP) which apply to construction projects worth over £300,000,¹¹¹ and the Code for Sustainable Homes.¹¹² SWMPs are improving the culture and practices of construction companies but Constructing Excellence, representing construction companies, argued that an alternative to the project value, such as floor area or number of units, would avoid problems such as the original project value falling below the threshold but the final account being above it.¹¹³ Constructing Excellence also believed that smaller companies were not aware of good waste management practices and that there was insufficient enforcement of SWMPs.¹¹⁴

68. We recommend that the Government should identify more specific criteria than the current project value which could be used to determine which projects require a Site Waste Management Plan. We are concerned that some smaller construction companies find it difficult to comply with Site Waste Management Plan provisions to the same extent as larger companies. Defra should work with the Department for Business, Innovation and Skills to raise small and medium sized construction companies' awareness of their legal responsibilities on waste and to encourage them to view it as a resource. We further recommend that the Environment Agency puts greater effort into

107 Local authorities incur liability of £150 per tonne of waste sent to landfill beyond their Landfill Allowance Trading Scheme (LATS) quota. The quotas are set by Government to ensure that EU targets requiring a reduction in the amount of biodegradable municipal waste to landfill sites are met.

108 Q 212

109 Environmental Protection Act 1990, section 45(1).

110 HM Government, *Strategy for Sustainable Construction*, June 2008.

111 The Site Waste Management Plans Regulations (SI 2008/14).

112 Department for Communities and Local Government, *Code for Sustainable Homes: A step-change in sustainable home building practices*, December 2006.

113 Q 307

114 Q 325

enforcing construction waste requirements such as Site Waste Management Plans across the construction sector. It should publish a report by December 2010 showing what progress they have made in this respect.

69. Defra ought to work more closely with both the Department for Business, Innovation and Skills and the Department for Communities and Local Government to realise the opportunities that both reclamation and salvage present. More use should be made of the knowledge and expertise of the Building Research Establishment.

Waste classification

70. Defining when waste ceases to be waste is a complex issue. It has been a deterrent for those wishing to re-use waste. Materials classed as waste must be managed in compliance with waste regulations, which require that those handling it follow certain processes and potentially bear compliance costs. While definitions of waste under the European Waste Framework Directive have been clarified through a series of legal judgments in recent years, the EA believed that the lack of clarity has “fuelled debate and disagreement, often at the expense of identifying better options for managing waste and minimising its impacts”.¹¹⁵

71. The revisions to the Waste Framework Directive agreed in 2008 mean that criteria to determine when a product ceases to be a waste and becomes a new product can be developed for materials including aggregates, metals, paper, glass, tyres and textiles. WRAP and the Environment Agency were working together to produce protocols defining 15 waste streams.¹¹⁶ WRAP has said it would wish to continue this work, subject to resources being available.

72. The British Metals Recycling Association considered that the classification of recycled metal as ‘waste’ rather than as “an extremely valuable secondary raw material” was a deterrent to re-use and recycling of metals.¹¹⁷ The organisation considered that scrap metal should be “reclassified as non-waste as far as possible in the UK and under the EU’s Waste Framework Directive”.¹¹⁸

73. We recommend that funding is continued for the protocols work to develop standards to define when a wide range of waste material ceases to be waste, with arrangements also being made to provide widespread publicity of its conclusions. The Environment Agency should produce a report highlighting where the biggest gains could be made if certain materials were declassified as waste.

115 Ev 2

116 These protocols include those applicable to non-packaging plastics, tyres, pulverised fuel ash, anaerobic digestate. Anaerobic digestate is the solid residue produced after biodegradable waste is biologically processed in the absence of air.

117 Ev 84

118 Ev 84

Improving the re-use and recycling regulatory framework—Environmental Permitting Programme (EPP)

74. Waste management operations require a permit, although exemptions can apply to low risk waste recovery and disposal activities. The Environmental Permitting Programme (EPP), which came into force in April 2008, streamlined the permitting system by combining previous waste and pollution control systems into a single environmental permitting system.¹¹⁹ Defra estimates the new system will save around £90 million over 10 years.¹²⁰ The department recently consulted on reviewing the exemption regime and revisions to EPP are due to come into force in 2010 and be fully implemented by 2013.¹²¹

75. Some witnesses were concerned that EPP was not bringing benefits to their sector due to its “one size fits all” approach.¹²² The BMRA considered that the inflexibility of EPP imposed “excess regulatory costs and burdens which do not improve the environment but rather the reverse”.¹²³ Constructing Excellence was concerned that the thresholds under EPP were deterring the re-use and recycling of materials. They stated that the 500 cubic metres threshold, above which companies were required to obtain a permit to re-use materials, was set at too low a level. Its member companies considered that the “much lower limits on quantities of materials that can be used/stored” being proposed would encourage greater use of virgin resources since it would be more time and cost effective to do this than to apply for a permit to re-use waste.¹²⁴ The Environment Agency told us in November 2009 that it would “continue to work with industry to develop the right levels for thresholds to balance cost and risk”.¹²⁵ In a draft Statutory Instrument laid before Parliament in November 2009,¹²⁶ the threshold triggering the requirement for a permit to re-use inert aggregate waste was increased ten-fold to 5,000 cubic metres. However it is proposed that thresholds for requiring a permit for the storage and treatment of waste metal be reduced. The British Metals Recycling Association is reported to be concerned that this will add unnecessary regulatory burdens to the metals industry while doing “nothing to improve environmental protection”.¹²⁷

76. There is some evidence that Environmental Permitting thresholds are being set in ways that deter rather than encourage re-use of materials. Since recycled metal is a valuable secondary raw material, a specific review of waste regulation for the metals industry should be undertaken to ensure that regulatory burdens are proportionate to the health and environmental impacts of this sector. Any change in the rules that might result must ensure that metals, a valuable resource, are not discarded but re-used.

119 Environmental Permitting was introduced by the Environmental Permitting (England and Wales) Regulations 2007 (SI 2007/3538).

120 Defra, *Waste Strategy for England 2007*, Cm 7086, July 2007, p 41.

121 “A Consultation on revised waste exemptions from environmental permitting”, October 2009, Defra environment web pages.

122 Ev 97

123 Ev 84

124 Ev 125

125 Ev 407

126 The Environmental Permitting (England and Wales) (Amendment) (No.2) Regulations 2009, No [xxxx], was laid before Parliament in November 2009, to come into force, if approved, in April 2010.

127 “Waste exemption limits set to be increased”, ENDS report, November 2009, p 36.

77. Over half of the UK's discarded waste fuel oils are currently either sent to landfill sites or illegally fly-tipped, presenting considerable risks to the environment and to public health. However, recovery processes can turn these waste materials into environmentally safe recovered fuel oil (RFO) which can be used as an alternative to fossil fuels for providing heat and power.¹²⁸

78. The EU requires hydrocarbon oil duty to be applied to such fuel, but allows both a minimum rate of duty and differential rates of duty to be applied to reflect the product quality and environmental benefit of different waste fuel-derived products.¹²⁹ A number of companies operating recycled oil facilities were concerned that the level of duty applied in the UK was ten times higher than that applied in most other EU member states and that such a high duty level could end waste oil recycling in this country.¹³⁰ This duty is applied on a product which originally attracted duty. Lhoist UK, a lime manufacturing business, considered the duty regime to be "bizarre" since the duty levied made RFO more expensive to use than virgin fossil fuels such as gas, despite RFO representing a "greener" alternative. Since some other EU member states have exempted RFO from duty, the company considers that the current situation favours competitors operating in those countries.¹³¹

79. The duty regime for waste fuel oils is acting as a deterrent to the re-use of such oils, increasing the likelihood of illegal dumping and providing a perverse incentive for industry to use virgin fossil fuels. The Government should impose lower levels of duty on waste fuel oils which meet quality specifications determined by the Environment Agency.

128 "What is stopping the lime-manufacturing industry implementing green technologies?", Lhoist UK fact sheet, November 2009.

129 Council Directive 2003/96/EC, on restructuring the Community framework for the taxation of energy products and electricity.

130 Ev 380

131 Ev 426

7 Composting

80. Biodegradable waste is a priority for reduction since it is a major contributor to greenhouse gas emissions when it is landfilled. Composting and Anaerobic Digestion (AD) are the main options for managing this waste and witnesses considered that both have an important role in preventing biodegradable waste from being sent to landfill sites. However, the EA believed that “we need to ensure these activities are located, operated and regulated in a way that minimises the impact on the environment and local amenity”.¹³² We discuss AD further below in relation to energy from waste.

81. Although composting rates are increasing, barriers remain to making faster progress, including uncertainty over the suitability of some compost outputs for uses such as land spreading since they might contain contaminants.¹³³ CIWM noted that composting is a relatively “low capital and revenue cost treatment for a broad range of organic waste from all sectors” but considered that the Government “must ensure that standards developed to protect soil quality and animal health are maintained and adequate to satisfy market requirements”.¹³⁴ **We welcome the work by Defra and the Environment Agency to develop quality protocols on compost products.**

82. Household composting rates have risen significantly, from under 2% in 1997–98 to nearly 15% in 2008–09 but composting remains a minority activity.¹³⁵ Such rises that have occurred have been assisted by education and support programmes. The reduction of funding for home composting schemes could jeopardise this progress and we consider that continued programmes are needed to make information and low cost equipment available, including systems for composting food waste at home or locally. The ESA said that whilst initial uptake of schemes can be high, “without consistent promotion and support, participation levels fall”.¹³⁶ Regulation requiring community level schemes to meet environmental permitting conditions and the application of business rates to non-residential premises, including those used for composting, are further barriers to increased local composting. Many councils are now collecting household food waste separately from residual waste, for use in facilities such as anaerobic digestion plant. **We recommend that Defra undertake an analysis of the trade-offs between the use of food waste in anaerobic digestion and composting to determine the optimal method of food waste disposal.**

83. **Although there is a significant proportion of homes that are unable to compost, home composting (including of all food waste using systems such as bokashi, green cone and jora) has considerable potential for reducing residual waste sent to landfill and for making refuse collection more hygienic and thus reducing problems of hygiene and odour associated with alternate weekly waste collections.**

132 Ev 3

133 “EA calls for tougher biowaste regulations”, Let’s recycle.com, 10 April 2008.

134 Ev 23

135 Defra, *The environment in your pocket 2009*.

136 Ev 63

84. Local composting of food waste from institutions such as schools and hospitals and groups of restaurants (including those in Parliament) should also be encouraged using similar systems. Not only would this reduce collection costs and the negative environmental effects of transportation but the resulting compost is also a valuable resource for household and community use (for example in local food production). However, we also support separate collection of household and other food waste, particularly where home composting is not feasible. We recommend that the Government sets a target for mandatory collection of food waste, learning lessons from those authorities already operating such schemes in which food waste is put to beneficial use such as in an anaerobic digestion plant. To maximise the beneficial use of food and garden waste advice, education and practical support should be made available by local authorities. Such support should include securing discounts or providing subsidies for composting equipment, taking into account the outcome of Defra's analysis of the optimal method of food waste disposal.

8 Energy recovery

Energy from waste technologies

85. The EU places energy efficient incineration within the energy recovery stage of the waste hierarchy rather than in the disposal tier at the bottom of the waste hierarchy.¹³⁷ In 2008–09, 12.2% of England’s municipal waste was incinerated with energy recovery.¹³⁸ The Government has set no definitive targets for increasing the amount of energy recovered from waste. It has only “aspirations” to increase the level to 25% of all waste being used for energy recovery by 2020,¹³⁹ commensurate with reaching the current recycling and composting targets.¹⁴⁰

86. Many organisations supported greater use of energy from waste technology. The EA supported the recovery of energy from waste as part of the waste management and disposal hierarchy where this “does not undermine opportunities to re-use and recover resources”.¹⁴¹

87. There are a range of energy from waste technologies currently being exploited or developed (see annex). It is Government policy not to favour any specific technology—with the exception of anaerobic digestion (AD) as the preferred technology for treating food waste.¹⁴² Many witnesses support this approach, including CIWM who considered that councils are best placed to identify the scale and type of technology that best suits their need. Nevertheless the Government’s financial support framework for renewable energy, using differentially banded Renewables Obligation Certificates (ROCs),¹⁴³ provides particular incentives for certain technologies such as advanced gasification, advanced pyrolysis and AD.¹⁴⁴

88. The preference for using AD to treat food waste is not universally supported by witnesses. London Councils was concerned over its use for urban municipal waste since the practicalities of separate food collection in cities could mean that “proven technologies such as incineration, particularly with the use of Combined Heat and Power” could be a more viable solution.¹⁴⁵

137 Council Directive 2008/12/EC, Annex II B lists activities defined as “recovery” as opposed to “disposal”. The “recovery” category includes use of waste as a fuel or other means to generate energy. To qualify under Annex II B, plant must meet energy efficiency criteria as set out in a formula. Plant permitted from December 2008 must operate at an efficiency of 0.65 or higher, with existing plant required to reach 0.6 under the formula.

138 Defra, *Municipal Waste Management Statistics for England, 2008–09*, 5 November 2009.

139 Daniel Instone, Defra, *Waste Strategy 1.5 years on*, Waste Management Finance Forum, 22 January 2009.

140 Energy from waste factsheet, Defra web pages.

141 Ev 4

142 Energy from waste factsheet, Defra web pages.

143 The Renewables Obligation (RO) requires electricity suppliers to source a stated and annually increasing proportion of their electricity from renewable energy generation or to pay a buy-out price for not doing so. Renewable Obligation Certificates (ROCs) are issued by the gas and electricity market regulator, Ofgem, to generators for each MWh of renewable energy generated.

144 From April 2009 advanced gasification, advanced pyrolysis and anaerobic digestion qualify for two ROCs per MWh, energy from waste, standard pyrolysis and gasification remain on one ROC and landfill gas qualifies for a quarter ROC per MWh.

145 Ev 216

89. Regardless of technology used, to achieve maximum efficiencies waste heat must be captured and utilised, for example for district heating. There are concerns that new plant, such as that at Lakeside near Heathrow, are being constructed without provision for use of waste heat, despite two thirds of the energy produced by such plant being converted to heat.¹⁴⁶ We heard from Viridor representatives during our visit to the Beddington Farmlands site in October 2008 that the company was keen to maximise use of waste heat but this had not always happened in practice and there would be problems in fitting infrastructure retrospectively. The Environment Agency said it had a policy that required heat to be recovered by all municipal waste incinerators,¹⁴⁷ and would not issue a permit for a plant “without any energy recovery”.¹⁴⁸

90. To ensure that only energy efficient methods of generating energy from waste are adopted, the Government should require planning applications for such plant to demonstrate how heat produced will be captured and used.

146 Q 55

147 Q 57

148 Ev 17

9 Meeting the targets—infrastructure development

91. Witnesses considered that a step change is needed in investment in new waste infrastructure in order to meet EU and UK recycling and landfill targets.¹⁴⁹ CIWM believed that, to overcome the legacy of the country’s strong historic reliance on landfill, one new waste treatment facility would be required each week for the next decade.¹⁵⁰ The Audit Commission considered that 2010 and 2013 EU Landfill Directive landfill diversion targets were likely to be met—as long as there were no delays to planned waste infrastructure.¹⁵¹ Failure to meet these targets would incur penalties costing councils £7 million each (equivalent to £30 per household).¹⁵²

Planning barriers

92. Many witnesses, including the Environmental Services Association (ESA), considered that planning was the biggest issue holding up development of new infrastructure.¹⁵³ It suggested that extending permitted development rights to minor extensions of existing waste operations on current sites should be allowed, as for other sectors, since this would release resources to focus on “more substantial applications”.¹⁵⁴ Witnesses also recommended adoption of twin tracking of planning and permit applications, or enabling developers to submit an application for a permit prior to application for planning consent.¹⁵⁵ The ESA noted that other industrial processes within the pollution control regime did not have a requirement for prior planning permission.¹⁵⁶

93. During our visit to the Viridor site near Croydon we heard concerns that the lack of local authority experience of waste infrastructure projects could lead to delays in processing planning applications. The need for improved skills was echoed by CIWM which said that all parts of the industry need “new skills and information” to move away from landfill towards alternative treatments.¹⁵⁷ The Communities and Local Government Committee noted in a report published in July 2008 that there was a growing problem of both a shortage of planners and a widening skills gap among planners.¹⁵⁸

149 Ev 4

150 Ev 24

151 Audit Commission, *Summary of Well Disposed: Responding to the Waste Challenge*, September 2008, p 6. The Environment Agency subsequently reported in 2008 that enough waste was already being recovered to meet the 2010 target for reduction in the amount of biodegradable municipal waste sent to landfill sites.

152 Audit Commission, *Well Disposed: Responding to the Waste Challenge*, September 2008.

153 Ev 64

154 Ev 74

155 *Ibid*

156 *Ibid*

157 Ev 24

158 Communities and Local Government Committee, Eleventh report of Session 2007–08, *Planning Matters—labour shortages and skills gaps*, HC 517, July 2008, p 3.

94. We recommend that planning processes be streamlined by allowing an application for an Environment Agency permit to be made either in parallel with, or prior to, application for planning permission for waste infrastructure, as local circumstances dictate. Planning should also be speeded up for minor extensions to existing waste operations on current sites by applying permitted development rights in these circumstances.

95. We urge the Department for Communities and Local Government to set out an action plan to improve the skills within, and support available to, local authority planning departments for handling one-off or occasional waste facility applications.

96. In November 2009 the Government published for consultation a draft National Policy Statement (NPS),¹⁵⁹ which in its final form will provide the basis for decisions on large biomass and energy from waste plant, to be made in future by a new Infrastructure Planning Commission rather than through existing planning processes.¹⁶⁰ Many witnesses supported the use of this planning approach for larger plant, although some, such as the ESA, suggested that it should apply not only to large facilities (over 50 MW) because “smaller, strategically located facilities could equally help the UK to comply with EU law and improve sustainability”.¹⁶¹ The CIWM acknowledged concerns over “dilution of local accountability” through streamlining processes, but considered the changes necessary.¹⁶²

97. Although energy from waste plants are subject to regulatory controls that are tighter than those applied to any other industrial sector, using waste to generate energy is controversial. Many witnesses had concerns about the environmental impacts of incineration. Friends of the Earth referred to pollutants, including dioxins, heavy metals and dust particles, being present in air emissions and in residual ash from incinerators.¹⁶³ The Capel Action Group believed that there was an absence of scientific evidence on the safety of modern incinerators and, since there was a delay in health effects becoming evident, the precautionary principle should apply to incinerating waste.¹⁶⁴ Local opposition on such grounds to new energy from waste plant has led in some circumstances to planning delays, despite the fact that a licence to operate such plant can only be granted when strict emissions criteria are met.

98. We do not support extending the scope of the National Policy Statement relating to biomass and energy from waste plant to smaller facilities as this would reduce local involvement in planning decisions. The Government should produce up-to-date, clear guidance on the environmental impacts of energy from waste operations as people need to know whether incineration is “safe”. This guidance should inform planning

159 Biomass is biological material derived from living, or recently living organisms. In the context of biomass for energy this usually means plant-based material but can apply equally to animal and vegetable matter and can refer to waste material or material produced specifically for energy production. www.biomassenergycentre.org.uk.

160 The Planning Act 2008 requires the production of National Policy Statements which would form the primary consideration for an Infrastructure Planning Commission in determining applications for development consent for nationally significant infrastructure projects. Such projects would include, for example, hazardous waste facilities and electricity generating plant larger than 50MW.

161 Ev 75

162 Ev 25

163 Friends of the Earth, *Up in smoke: why Friends of the Earth opposes incineration*, September 2006, p 7.

164 Ev 202

decisions on energy from waste technologies and enable debate to be focussed on site specific issues.

Finance barriers

99. The Private Finance Initiative (PFI) has been a key part of the funding for public sector infrastructure development. As at February 2009 a total of 643 PFI projects had been signed with a total capital value of £63.8 billion.¹⁶⁵ Two-thirds of these projects, worth £22.3 billion, are local authority projects.¹⁶⁶ A total of 37 waste PFI projects have been agreed by local authorities, totalling £2.48 billion in PFI credits. Further projects are currently being prepared for which it is expected a further £0.8 billion of PFI credits will be awarded.¹⁶⁷ Defra's Comprehensive Spending Review settlement included £2 billion for local authority waste PFI schemes, including £700 million for each of the years 2009–10 and 2010–11. The department believes that PFI waste schemes will help to meet EU Landfill Directive diversion and recycling targets. They also believe that they “encourage greater partnership working between authorities resulting in efficiency gains, more integrated waste management solutions and the benefits of economies of scale”.¹⁶⁸

100. Witnesses had concerns, however, that PFI can potentially lead to a lack of flexibility to meet changing local circumstances. The Environment Agency said that it had concerns over locking in technologies over 25 years since technologies developed rapidly.¹⁶⁹ London Councils noted that some local authorities expressed concerns about long contracts given uncertainties about the future size, duration and composition of the waste stream and the “future acceptability of disposal technologies”.¹⁷⁰ The Gloucestershire Friends of the Earth Network argued that PFI's focus on residual waste, was not helpful in encouraging higher recycling rates.¹⁷¹ The Institution of Civil Engineers (ICE) suggested that new models for long term private investment could be considered, drawing on experiences from other infrastructure sectors such as flood defences, highways and waste water.

101. There has been a long-running debate about whether PFI brings innovation and flexibility, or suppresses it. On the one hand, PFI is designed to tap the expertise of the private sector, contractually motivated to manage the costs associated with the risks of designing and providing assets that will deliver the required service for the life of the contract. On the other hand, projects tie the public sector to the service as defined in the contract for many years. Whether individual PFI projects are sufficiently innovative and flexible is likely to depend on how well the contract is written. However this is difficult to judge given the lack of transparency created by the constraints of commercial

165 HM Treasury web pages, PFI statistics. <http://www.hm-treasury.gov.uk>

166 Central government departments provide 'PFI credits' for the capital investment involved to local authorities when a PFI contract is agreed. The credit represents a commitment to make annual 'PFI grants' to the authority once the PFI service comes on stream and payments to the contractor begin.

167 Defra, *Waste Strategy Annual Report 2008–09*, October 2009, p 6.

168 Defra local authority finance web pages. <http://www.defra.gov.uk/environment/waste/>

169 Q 58

170 Ev 223

171 Ev 358

confidentiality. This should be taken into account when assessing the use of PFI to finance future infrastructure projects.

102. There are concerns that the economic crisis has caused problems for some waste PFI projects in securing finance. In November 2008, the Bank of Ireland said that projects had been “delayed or scrapped” due to problems in raising finance.¹⁷² In March 2009 HM Treasury established an Infrastructure Finance Unit to provide government loans to PFI projects which cannot raise sufficient debt finance on acceptable terms from commercial sources.¹⁷³ The Unit completed its first loan in April 2009, providing £120 million for the GMWDA contract, Europe’s largest waste contract.¹⁷⁴ This project is also funded by a £100 million loan from the European Investment Bank and £124.5 million in PFI credits.¹⁷⁵ However the contract was only concluded after a two year delay, with the cost increasing by 18% to £4.7 billion due, according to GMWDA, to “increased cost of finance and greater transfer of risk to the contractor”. The waste scheme will add more than £50 a year to council tax bills for every Greater Manchester household.¹⁷⁶

103. Development of significant new waste management infrastructure is heavily reliant on the Private Finance Initiative, which has been able to secure long-term funding for large scale projects. However since the PFI approach has draw-backs, including potential inflexibility, Defra should review its future role in funding the provision of waste infrastructure to ensure that, where it is appropriate, projects include contractual arrangements which provide for flexibility to meet changing circumstances.

Landfill tax

104. Introduced in 1996, the landfill tax is currently set at £40 per tonne of waste sent to landfill.¹⁷⁷ This generated revenue of £954 million in 2008–09. Since 2007 the tax has been subject to an escalator of £8 per tonne each year, with the 2009 Budget confirming that this rate of increase would continue up to 2013. Many organisations recommended setting landfill tax levels over a longer timeframe to provide certainty for investment in long term waste infrastructure. The ESA believed that the landfill tax is a driver for investment and that it would be helpful for levels to be set up to 2020.¹⁷⁸

105. We recommend that the Government extends the escalator for landfill tax up to at least 2020 in order to enable the waste industry to plan on a longer term basis.

172 “Bank of Ireland set to lead on Manchester PFI funding”, *Let’s Recycle*, 5 November 2008.

173 HM Treasury web pages, <http://www.hm-treasury.gov.uk/ppp>

174 HM Treasury web pages, <http://www.hm-treasury.gov.uk/ppp>

175 “Greater Manchester Waste PFI deal completed with Treasury cash”, *New Civil Engineer*, 9 April 2009.

176 “Bill for Manchester waste PFI scheme hits £4.7bn”, *Public Finance*, 17 April 2009.

177 Landfill site operators pay the landfill tax to HM Revenue and Customs and pass on the additional cost to waste producers by way of increased gate fees. There are two rates of tax—a standard rate covering active waste and a lower rate covering a list of wastes that are commonly regarded as inactive. Inert wastes used in the restoration of landfill sites and quarries have been exempt since 1 October 1999. Landfill tax revenues have contributed over £800m to environmental bodies, such as the Suffolk Environment Trust, through the Landfill Communities Fund (formerly the Landfill Tax Credit Scheme).

178 “ESA responds to landfill tax changes”, *Resource Management and Recovery*, May 2009.

10 Tackling waste crime

Illegal waste exports

106. Exports of recyclable materials are currently necessary for the UK to meet EU recycling targets and they provide significant economic benefits. For example, paper, glass and plastics exports had a combined market value of around £450 million in 2006. Similar to the pattern in other parts of Europe, the UK's exports of waste for recovery and reprocessing have doubled between 2002 and 2008 and now stand at around 14 million tonnes a year. There are strict constraints on exports of waste under both international and UK regulations. It is illegal to export waste from England and Wales beyond the EU for disposal. Exports for recovery are only permissible under detailed conditions specifying the type of waste and country of destination.¹⁷⁹

107. According to EA data, since 2002 Thailand, Belgium, the Netherlands and Poland have received illegal waste exports from England and Wales.¹⁸⁰ The Agency is currently investigating alleged illegal waste exported to Brazil from England in early 2009. Since 2004 there have been 18 successful prosecutions for illegal waste shipments, with fines imposed totalling some £224,650.¹⁸¹

108. There is some evidence however that illegal waste export cases detected and prosecuted represent only a small fraction of the total percentage of this trade. A 2009 report published by the European Environment Agency found that illegal waste shipments from the EU were rising and that reported cases, which made up around 0.2% of notified waste exports, represent only a fraction of actual numbers.¹⁸²

109. It is difficult to get a complete picture of the potential scale of illegal waste exports due to the nature of the regulatory system. Under the EU Waste Shipment Regulations there are two systems for regulating waste exports—one is for notifiable waste (generally having some hazardous waste content) while the other for “green list” waste is self-policing. The Environment Agency is the competent authority for England and Wales responsible for ensuring compliance with notifiable waste regulations. It estimated that only a small minority of waste exports were of such waste (some 180,000 tonnes annually),¹⁸³ and that the vast majority of exports take place under the green list system. Since no prior permission or applications need be made to regulatory authorities before green list wastes are moved, the EA does not collate data on these movements.

110. However, the EA noted that while notified waste shipments were “largely legitimate and well regulated” there was evidence that the green list system was “being abused”—although a majority of exports under the green list system were “entirely legitimate” and

179 Transfrontier Shipment of Waste Regulations 1994 (SI 1994/1137) as amended. The UK Management Plan for Exports and Imports of Waste came into operation in 1996 setting out the Government's policies on exports and imports of waste for disposal and recovery.

180 HC Deb, 12 October 2009, col 306W

181 HC Deb, 12 October 2009, col 305W

182 European Environment Agency, *Waste without borders in the EU*, 2009.

183 Ev 405

played a crucial role in bring about the recycling of waste materials.¹⁸⁴ The EA told us that its efforts to work with the legitimate waste industry to reduce illegal exports, particularly through work at recycling facilities to improve the quality of recyclates, had been a “broad success” but that criminal activity was harder to counteract.¹⁸⁵ It conceded that illegal exports can only be tackled if they are detected and that detection is “more challenging” under the green list system since the Agency did not have accurate information on where the exports take place from.¹⁸⁶

111. Improving the intelligence on illegal waste exports is therefore central to tackling the problem. The EA considered that some companies “operate on the fringe of legality and others operate at a high level of criminality”, and argued there is a need for better co-ordination with agencies including HM Revenue and Customs, the UK Border Agency and Ports Authorities to help its “intelligence led approach”.¹⁸⁷ The EA also noted that the Dutch model—whereby electronic tags on waste exports databases flag up to ports authority inspectors which loads might require inspection—was effective but that there were currently “legal impediments” preventing this approach in the UK.¹⁸⁸ Defra told us of work underway through its Compliance and Enforcement Project to improve liaison between the range of agencies working on waste crime.¹⁸⁹ The EA has received additional funding of £4 million over three years to put in place a “more comprehensive programme of work around securing compliant waste exports” with an increase to 132 port inspection days in the first half of 2009.¹⁹⁰ Around 15–16% of total EA waste expenditure is now spent on enforcement activities.¹⁹¹

112. The small number of prosecutions for illegal waste exports does not give a true picture of the potentially much larger scale of illegal waste exports from this country. It concerns us that the competent authority for regulating waste exports does not currently have full access to intelligence on potential illegal waste exports. It is vital that liaison between all the relevant agencies tackling waste crime is improved and the Government should seek the first available opportunity to remove legal impediments to full information sharing between the Environment Agency and other agencies monitoring exports, including the police, HM Revenue and Customs and the UK Border Agency. In addition the Government should liaise with the Home Office and the Crown Prosecution Service to ensure that the Proceeds of Crime Act can fully bear down on the illegal profits which can be gained from this lucrative trade.

Illegal exports of Waste Electronic and Electrical Equipment (WEEE)

113. There is a specific problem with exports of electronic and electrical equipment which can only be exported for recycling or re-use, not disposal, and then only to OECD

184 Ev 404

185 Q 429

186 Ev 405

187 Ev 406

188 Q 432

189 Ev 413

190 Ev 406

191 Q 456

countries. However the EA is concerned that this material is being exported under the guise of non-waste for re-use, but in reality it is being dismantled, and in many instances burnt, to recover metal content thus causing serious harm to human health and the environment.¹⁹² The Environmental Services Association (ESA) shares these concerns and recommends tightening of the regime to ensure that waste electronic and electrical equipment is properly directed into the legitimate WEEE treatment system and that only fully functioning equipment is exported.¹⁹³ The Secretary of State told us that the Government supported revision of EU regulations to require electronic and electrical equipment to be tested, labelled and packaged to ensure that it was functioning and not waste equipment.¹⁹⁴

114. There is evidence that regulations prohibiting the export of waste electronic and electrical equipment have been circumvented on a wide scale by those passing off waste equipment as functioning equipment for legitimate export. We support changes to the regulatory regime to ensure that only fully functioning electronic and electrical equipment is exported from the UK.

Litter and fly-tipping

115. Levels of litter and fly-tipping have, until recently, been increasing. In 2006 the overall level of litter dropped for the first time in five years. However Encams (the Keep Britain Tidy group) considers this improvement to be minor and not indicative of a general trend.¹⁹⁵ Fly-tipping decreased in 2007–08 but this followed an increase of 5% in 2005–06 when 2.6 million incidents were recorded.¹⁹⁶

116. The Clean Neighbourhoods and Environment Act 2000 gives councils clear and enhanced powers to act on fly-tipping and littering.¹⁹⁷ The Campaign to Protect Rural England (CPRE) was, however, critical of local authorities' enforcement levels. CPRE noted that 25 of England's 354 councils were responsible for almost two-thirds of fines for littering and that 72 councils issued no fines at all.¹⁹⁸ This clearly indicates variations which cannot be explained by local differences in littering levels. Enforcement action and successful prosecutions for fly-tipping increased in 2007–08, with a 26% increase in enforcement actions issued by local authorities and a 95% success rate for the 1,871 prosecutions for fly-tipping.¹⁹⁹ However CPRE noted that this means there is "only a one in 1,450 chance of being brought to book". It considered that there is considerable progress to be made "with regard to existing regulatory powers being used consistently and with

192 Ev 405

193 Ev 409

194 Q 514

195 Ev 129

196 Defra, *Waste Strategy Annual Progress Report 2007–08*, July 2008, p 5. 2.6 million incidents of fly-tipping were recorded for 2005–06. Excluding Liverpool this figure was 1.3 million. Defra, Fly-tipping incidents reported by Local Authorities on the Flycapture database in 2005–06.

197 Clean Neighbourhoods and Environment Act 2008.

198 Ev 127

199 "Fly-tipping decreased across England", Defra news release, 16 October 2008.

vigilance”.²⁰⁰ Greater consistency in the waste collection policies of neighbouring local authorities may reduce the incidence of fly-tipping.

117. Organisations such as CPRE and Encams have mounted large scale public information campaigns, such as “Stop the Drop”, to reduce the levels of litter and fly-tipping, including work with a range of public sector bodies to share best practice and “develop comprehensive, effective and geographically consistent systems”.²⁰¹ Councils such as Bath and North East Somerset have demonstrated success in tackling litter through a blitz on badly littered areas, working with partners locally and supporting education campaigns.²⁰²

118. We recommend that the Government review how councils are using statutory provisions to tackle fly-tipping and littering. It should develop incentives (both carrots and sticks) for councils to utilise fully their powers on these issues. The outcome of this work should be made available within 12 months.

119. Some witnesses expressed concern over the low level of funding available for enforcement of waste legislation. The Environment Agency believed that increased costs of sending waste to landfill, and proposals to allow councils to pilot variable charging for household waste, could lead to an increase in illegal activity. It argued that their work would be limited without proper funding and both the Agency itself and councils needed powers and resources to tackle it.²⁰³ Private landowners also incur costs from repeated incidences of fly-tipping since dealing with fly-tipping on private land is the responsibility of the landowner. The ESA noted that £2 million had been provided by Defra over the last three years to help the EA fight fly-tipping but said that it had “repeatedly” told Defra this sum was inadequate.²⁰⁴ The Environment Agency also wanted appropriate sanctions to be in place and for the courts to “recognise the seriousness of waste crime”.²⁰⁵ It noted that although custodial sentences were now beginning to be imposed for some fly-tipping offences, courts were not imposing such sanctions for illegal waste exports.²⁰⁶

120. Regulatory income is insufficient to fund enforcement of regulations and Defra must ensure that additional resources are made available. Private landowners who are victims of fly-tipping should also be given assistance in cleaning up their property, using revenue from the penalties imposed for waste crime. We recommend that Defra identifies and brings forward proposals to address barriers to enforcement, including lack of awareness of powers and sanctions, across Government departments.

121. Litter arising from containers used to retail drinks is a significant problem.²⁰⁷ Keep Britain Tidy’s 2008 survey found that such litter was present at over half of the sites visited,

200 Ev 127

201 *Ibid*

202 “Litter drops across Bath and North East Somerset”, Bath and North East Somerset Council news release, 9 May 2007.

203 Ev 2

204 Ev 66

205 Ev 2

206 Q 449

207 Q 351

the third most prevalent type of litter after smoking materials and confectionary packaging.²⁰⁸ CPRE considered that a bottle return scheme would help to reduce this significantly. Only 25% of the million plastic bottles used in the UK each day are recycled, compared to recycling rates of 75% or more for the US states and European countries with deposit schemes.²⁰⁹ Defra claims to have an open mind on deposit and return schemes but CPRE considered that it needed to be more objective and come up with a “new, more positive” approach to such schemes.²¹⁰ However, Defra concluded in a report published in December 2008 that alternative schemes, such as collection from households, could achieve the same or better recycling levels at lower cost and that deposit schemes could divert materials from existing arrangements such as bottle banks or kerbside collections.²¹¹ The department’s packaging strategy, launched in June 2009, proposed that by 2010 trials for increasing the use of re-usable and refillable packaging would be completed.

122. We welcome Defra’s announcement that it is establishing trials of re-usable and refillable packaging. The Government should make public the findings of the outcomes of these trials, in particular how cost-effective different methods of re-using packaging prove to be.

123. The Government should also evaluate the practicalities of applying a small “clean up” levy to products, including smoking materials, drinks and confectionary including chewing gum, which, together with their packaging, contribute the largest volumes of litter. Revenues could be distributed to local authorities to help clean up their neighbourhoods.

208 Encams, *Local Environmental Quality Survey of England, seventh report, 2007–08*, p 35.

209 “Litter increases despite £600 million cleaning bill”, *Daily Telegraph*, 6 April 2008.

210 Q 351

211 HC Deb, 13 May 2009, col 760W

11 Conclusion

124. Changing the way England manages its waste is a significant challenge. However it must be tackled effectively if the country is to reduce greenhouse gas emissions and meet targets to reduce the amount of waste sent to landfill sites. The Waste Strategy for England 2007 provides a partial route map for how this can be achieved. It includes firm, timetabled targets and programmes for tackling municipal waste against which, for the most part, good progress has been made. However, we consider that the dearth of firm targets for the non-municipal sector is a key omission from the Strategy and subsequent Defra waste policy statements. In particular it is remiss of Defra to fail to define concrete targets for waste prevention and improved re-use and recycling levels from the commercial and industrial sectors which account for over a quarter of total waste. Vague ambitions and rhetoric must be replaced urgently with firm action plans. Moreover, as data on commercial and industrial waste is not routinely collated to monitor progress, there is a gap in the performance information that Defra is able to provide. We consider that plugging this data gap and setting firm targets for the non-municipal sector must be a priority for Defra in 2010.

125. In this report we have suggested a number of improvements which we consider would further improve waste management and more effectively fulfil the aims of the Waste Strategy for England. We hope that our successor committee in the new Parliament will return in due course to assess progress on this important issue.

Conclusions and recommendations

Omissions from the Waste Strategy

1. Defra has belatedly focused its attention on commercial and industrial waste policy but its recent statement failed to set firm targets for these sectors. We remain unconvinced that current policies for tackling commercial and industrial waste are sufficiently robust to drive maximum improvement in these sectors. There are insufficient mechanisms specific to these sectors, rather a reliance on general incentives such as avoidance of landfill tax and economic benefits from lower wastage levels. For example, while Defra's proposal to include commercial waste in targets set for the UK under the Landfill Directive is a welcome indication of its ambition for the sector, this will not in itself drive action. Nor does this entail the setting of specific targets for more sustainable management of commercial waste which is diverted from landfill. The department should urgently hold a round table with representatives from commerce and industry to develop waste reduction, re-use and recycling benchmarks to provide companies with a better idea of what they can be expected to achieve. The department should also develop an action plan setting out the steps the sector can take to achieve these levels. (Paragraph 16)
2. Businesses must demonstrate to customers that they are improving their recycling rates. Retail outlets, restaurants and pubs should be required to publish information on what they are doing to improve their waste management and increase recycling. (Paragraph 17)
3. Defra's lack of up-to-date data on the commercial and industrial waste streams has hampered the development of waste reduction policies for this sector and made it very difficult to monitor progress in this area. Defra must now commit itself to developing a full and up-to-date data set for this sector. Whilst we welcome the department's commitment for a new "survey of the sector", one-off activity is no substitute for the establishment of regular information flows. We recommend that Defra set out an action plan on how it will collate the detailed data which is already being collected for operational purposes in order to provide performance information for the sector. (Paragraph 18)

Landfill ban

4. Whilst we welcome the announcement that Defra will consult in 2010 on banning certain substances from landfill, we believe it is being too generous in allowing up to another decade to pass before these materials are not allowed to be landfilled. Defra should have the courage of its convictions and go for a more ambitious timescale to implement this change by 2015. (Paragraph 22)

Waste prevention

5. Defra should publish, within six months of the completion of the Zero Waste Places pilots, a comprehensive strategy on waste prevention with a clear set of timetables and targets. The Waste Strategy Stakeholder Group should give priority in its work

programme to the provision of waste prevention advice to ensure that Defra gives prevention sufficient attention in its waste policies. (Paragraph 27)

Preventing retail waste

6. Retailers with a turnover greater than £50 million per annum should be required to publish details of their waste prevention strategies, including details of the targets they have set for waste reduction by type of material. (Paragraph 31)

Single use carrier bags

7. We congratulate retailers on their progress to date to reduce the use of both plastic and paper single use carrier bags but, given the billions still being given out each year, greater effort to reduce their use is required. Defra should work with retailers to ensure that all adopt the practice of exemplar companies which have removed bags from check-outs and are promoting low-cost, re-usable bags. The British Retail Consortium should work with its members to help UK retailers achieve a minimum bag reduction target of 60% by 2012. (Paragraph 35)

Minimising food waste

8. We welcome moves by retailers to offer customers the choice of buying produce which, for aesthetic reasons, cannot be marketed as top category products. We urge all retailers to develop a wide range of such products for sale. We also urge all retailers to distribute to charities such as Fareshare any food which can legally and safely be used and to give explicit permission to their suppliers to do likewise with branded products. (Paragraph 39)
9. We recommend that Defra requires food retailers and manufacturers to report the tonnages of food waste from their businesses at least on an annual basis. Defra should also work with the food industry to ensure that retailers give suppliers sufficient flexibility to be able to minimise wastage, including disseminating examples of industry best practice. (Paragraph 40)

Household waste re-use and recycling

10. We welcome progress that has been made nationally on increasing levels of household recycling. We recommend that the Government set a more ambitious recycling target of 50% of household waste to be recycled by 2015 and 60% by 2020. It should also commission a report to explain the reasons for significant differences in the rates of recycling and prepare an action plan to assist poor performing local authorities to improve their domestic recycling levels. The Government should require local authorities to provide all householders with information on an annual basis explaining what actually happens to domestic waste sent for recycling and the environmental impact of their recycling activities. This information should also be collated nationally so that best practice can be disseminated. (Paragraph 47)

11. Although it is important that maximum levels of re-use and recycling of waste are achieved, this must not be at the expense of efforts at national and local level to prevent waste arising in the first place. (Paragraph 48)

Case study—engaging the public in textile re-use and recycling

12. We support the Government's work to increase the levels of re-use and recycling of clothing. We recommend that Defra encourage retailers to do more to help customers recycle their clothes, for example by providing information in stores on facilities available at civic amenity sites, local drop bins, charitable collections and charity shops. Clothes labels should, where possible, remind purchasers not to bin items but to pass them on for re-use or recycling. (Paragraph 51)
13. Defra should consult manufacturers to develop standards and criteria for whole-life assessments of the environmental impacts of different kinds of textiles and use this information to promote the use of more sustainable materials in clothing. (Paragraph 52)

Household waste incentive schemes

14. Defra must improve its support to local authorities in explaining more clearly the benefits which can arise from households reducing their domestic waste volumes. The department should now produce a report explaining how a more rational regime for charging for domestic waste collection and disposal can be proceeded with. If public commitment to recycling is to be developed, local authorities must firstly make it clear to people what the current costs of waste collection are and express such figures in terms of cost per bin, bag or wheelie bin. (Paragraph 57)

Business waste re-use and recycling

15. Support services to help businesses increase their re-use and recycling of materials have proven themselves to be extremely cost-effective, particularly in the case of the National Industrial Symbiosis Programme (NISP). We recommend that Defra re-evaluates the impact that cuts in funding for the Waste Resources Action Programme and NISP is having on business waste re-use and recycling levels and the missed opportunities for economic growth decoupled from environmental degradation. The department should confirm that rationalisation of services under WRAP has released efficiency savings and explain how WRAP will work with local government, businesses and regional agencies to enable them to serve a wider range of organisations. (Paragraph 62)

Local authority support for businesses

16. We recommend that Defra reviews whether the Landfill Allowance Trading Scheme is having a negative impact on council provision of waste services for businesses. (Paragraph 65)

Construction industry waste re-use and recycling

17. We recommend that the Government should identify more specific criteria than the current project value which could be used to determine which projects require a Site Waste Management Plan. We are concerned that some smaller construction companies find it difficult to comply with Site Waste Management Plan provisions to the same extent as larger companies. Defra should work with the Department for Business, Innovation and Skills to raise small and medium sized construction companies' awareness of their legal responsibilities on waste and to encourage them to view it as a resource. We further recommend that the Environment Agency puts greater effort into enforcing construction waste requirements such as Site Waste Management Plans across the construction sector. It should publish a report by December 2010 showing what progress they have made in this respect. (Paragraph 68)
18. Defra ought to work more closely with both the Department for Business, Innovation and Skills and the Department for Communities and Local Government to realise the opportunities that both reclamation and salvage present. More use should be made of the knowledge and expertise of the Building Research Establishment. (Paragraph 69)

Waste classification

19. We recommend that funding is continued for the protocols work to develop standards to define when a wide range of waste material ceases to be waste, with arrangements also being made to provide widespread publicity of its conclusions. The Environment Agency should produce a report highlighting where the biggest gains could be made if certain materials were declassified as waste. (Paragraph 73)

Improving the re-use and recycling regulatory framework—Environmental Permitting Programme (EPP)

20. There is some evidence that Environmental Permitting thresholds are being set in ways that deter rather than encourage re-use of materials. Since recycled metal is a valuable secondary raw material, a specific review of waste regulation for the metals industry should be undertaken to ensure that regulatory burdens are proportionate to the health and environmental impacts of this sector. Any change in the rules that might result must ensure that metals, a valuable resource, are not discarded but re-used. (Paragraph 76)
21. The duty regime for waste fuel oils is acting as a deterrent to the re-use of such oils, increasing the likelihood of illegal dumping and providing a perverse incentive for industry to use virgin fossil fuels. The Government should impose lower levels of duty on waste fuel oils which meet quality specifications determined by the Environment Agency. (Paragraph 79)

Composting

22. We welcome the work by Defra and the Environment Agency to develop quality protocols on compost products. (Paragraph 81)
23. We recommend that Defra undertake an analysis of the trade-offs between the use of food waste in anaerobic digestion and composting to determine the optimal method of food waste disposal. (Paragraph 82)
24. Although there is a significant proportion of homes that are unable to compost, home composting (including of all food waste using systems such as bokashi, green cone and jora) has considerable potential for reducing residual waste sent to landfill and for making refuse collection more hygienic and thus reducing problems of hygiene and odour associated with alternate weekly waste collections. (Paragraph 83)
25. Local composting of food waste from institutions such as schools and hospitals and groups of restaurants (including those in Parliament) should also be encouraged using similar systems. Not only would this reduce collection costs and the negative environmental effects of transportation but the resulting compost is also a valuable resource for household and community use (for example in local food production). However, we also support separate collection of household and other food waste, particularly where home composting is not feasible. We recommend that the Government sets a target for mandatory collection of food waste, learning lessons from those authorities already operating such schemes in which food waste is put to beneficial use such as in an anaerobic digestion plant. To maximise the beneficial use of food and garden waste advice, education and practical support should be made available by local authorities. Such support should include securing discounts or providing subsidies for composting equipment, taking into account the outcome of Defra's analysis of the optimal method of food waste disposal. (Paragraph 84)

Energy from waste technology

26. To ensure that only energy efficient methods of generating energy from waste are adopted, the Government should require planning applications for such plant to demonstrate how heat produced will be captured and used. (Paragraph 90)

Planning barriers

27. We recommend that planning processes be streamlined by allowing an application for an Environment Agency permit to be made either in parallel with, or prior to, application for planning permission for waste infrastructure, as local circumstances dictate. Planning should also be speeded up for minor extensions to existing waste operations on current sites by applying permitted development rights in these circumstances. (Paragraph 94)
28. We urge the Department for Communities and Local Government to set out an action plan to improve the skills within, and support available to, local authority planning departments for handling one-off or occasional waste facility applications. (Paragraph 95)

29. We do not support extending the scope of the National Policy Statement relating to biomass and energy from waste plant to smaller facilities as this would reduce local involvement in planning decisions. The Government should produce up-to-date, clear guidance on the environmental impacts of energy from waste operations as people need to know whether incineration is “safe”. This guidance should inform planning decisions on energy from waste technologies and enable debate to be focussed on site specific issues. (Paragraph 98)

Finance barriers

30. Development of significant new waste management infrastructure is heavily reliant on the Private Finance Initiative, which has been able to secure long-term funding for large scale projects. However since the PFI approach has draw-backs, including potential inflexibility, Defra should review its future role in funding the provision of waste infrastructure to ensure that, where it is appropriate, projects include contractual arrangements which provide for flexibility to meet changing circumstances. (Paragraph 103)

Landfill tax

31. We recommend that the Government extends the escalator for landfill tax up to at least 2020 in order to enable the waste industry to plan on a longer term basis. (Paragraph 105)

Illegal waste exports

32. The small number of prosecutions for illegal waste exports does not give a true picture of the potentially much larger scale of illegal waste exports from this country. It concerns us that the competent authority for regulating waste exports does not currently have full access to intelligence on potential illegal waste exports. It is vital that liaison between all the relevant agencies tackling waste crime is improved and the Government should seek the first available opportunity to remove legal impediments to full information sharing between the Environment Agency and other agencies monitoring exports, including the police, HM Revenue and Customs and the UK Border Agency. In addition the Government should liaise with the Home Office and the Crown Prosecution Service to ensure that the Proceeds of Crime Act can fully bear down on the illegal profits which can be gained from this lucrative trade. (Paragraph 112)

Illegal exports of Waste Electronic and Electrical Equipment (WEEE)

33. There is evidence that regulations prohibiting the export of waste electronic and electrical equipment have been circumvented on a wide scale by those passing off waste equipment as functioning equipment for legitimate export. We support changes to the regulatory regime to ensure that only fully functioning electronic and electrical equipment is exported from the UK. (Paragraph 114)

Litter and fly-tipping

34. We recommend that the Government review how councils are using statutory provisions to tackle fly-tipping and littering. It should develop incentives (both carrots and sticks) for councils to utilise fully their powers on these issues. The outcome of this work should be made available within 12 months. (Paragraph 118)
35. Regulatory income is insufficient to fund enforcement of regulations and Defra must ensure that additional resources are made available. Private landowners who are victims of fly-tipping should also be given assistance in cleaning up their property, using revenue from the penalties imposed for waste crime. We recommend that Defra identifies and brings forward proposals to address barriers to enforcement, including lack of awareness of powers and sanctions, across Government departments. (Paragraph 120)
36. We welcome Defra's announcement that it is establishing trials of re-usable and refillable packaging. The Government should make public the findings of the outcomes of these trials, in particular how cost-effective different methods of re-using packaging prove to be. (Paragraph 122)
37. The Government should also evaluate the practicalities of applying a small "clean up" levy to products, including smoking materials, drinks and confectionary including chewing gum, which, together with their packaging, contribute the largest volumes of litter. Revenues could be distributed to local authorities to help clean up their neighbourhoods. (Paragraph 123)

Glossary of acronyms and terms used in this report

AD	Anaerobic digestion (see annex).
BREW	Business resource efficiency and waste programme. Established by Defra in 2005 to fund services to help cut business waste and manage resources more efficiently.
BMW	Biodegradable municipal waste. Biodegradable waste is able to decompose through the action of bacteria or other microbes and includes materials such as paper, food waste and garden waste (see below for definition of municipal).
Bokashi	Composting system using anaerobic processes to produce soil conditioner, typically from kitchen waste.
CD&E	Construction, demolition and excavation. Waste from these activities mainly consists of brick, concrete, subsoil and topsoil but can contain quantities of timber, metal and occasionally hazardous waste.
Commercial Waste	Commercial waste arises from premises used for trade, business, sport, recreation or entertainment, but excluding municipal and industrial waste.
Composting	The degradation of organic wastes in the presence of oxygen, to produce fertiliser or soil conditioner. This can either be an enclosed process (in-vessel) or an open windrow process.
DBIS	Department for Business, Innovation and Skills.
DCLG	Department for Communities and Local Government.
Defra	Department for Environment, Food and Rural Affairs.
EA	Environment Agency. Responsible for licensing, monitoring and inspection of waste management facilities; enforcement of regulations against illegal waste management activities; data provision on waste quantities and management regimes.
Fly-tipping	The illegal deposit of waste on land.

EPP	Environmental Permitting Programme. Administered by the Environment Agency.
Green cone	Composting system using aerobic processes, aided by solar heat effect, to produce water, carbon dioxide and small amounts of residue from kitchen and similar wastes.
HMT	Her Majesty's Treasury.
Household Waste	Household waste includes waste from household collection wastes (within Schedule 1 of the Controlled Waste Regulations 1992), waste from services such as street sweeping, bulky waste collection, hazardous household waste collection, litter collections, household clinical waste collection and separate garden waste collection (waste within Schedule 2 of the Controlled Waste Regulations 1992), waste from civic amenity sites and wastes separately collected for recycling or composting through bring/drop off schemes, kerbside schemes and at civic amenity sites.
Jora	Composting system for kitchen waste.
LATS	Landfill Allowance Trading Scheme, established under the Waste and Emissions Trading Act 2003.
Landfill Tax	Tax payable on waste disposed of at landfill sites. Rates for 2009–10 are £40 per tonne (plus VAT) for active waste and £2.50 per tonne (plus VAT) for inactive waste. Active waste rates will increase by £8 per tonne on 1 April each year to 2013.
MRF	Materials Recovery Facility (also known as Materials Reclamation Facility or Materials Recycling Facility). A transfer station for the storage and segregation of recyclable materials.
Municipal Waste	Waste under the control of local authorities or agents acting on their behalf. Includes all household waste, street litter, waste delivered to council recycling points, municipal parks and garden wastes, civic office waste, civic amenity site waste and some commercial waste (e.g. from shops and smaller trading estates) where council waste collection agreements are in place.
NISP	National Industrial Symbiosis Programme.
NPS	National Policy Statement, permitted under the Planning Act 2008.
PFI	Private Finance Initiative.

Producer Responsibility	Producer responsibility refers to producers and others involved in the distribution and sale of goods taking greater responsibility for recovery of those goods at the end of a product's life.
RO	Renewables Obligation. Requires electricity suppliers to source a stated and annually increasing proportion of their electricity from renewable energy generation or pay a buy-out price for not doing so.
ROC	Renewables Obligation Certificate. Issued by Ofgem for each megawatt hour (MWh) of renewable electricity generated.
SWMP	Site Waste Management Plan.
WCA	Waste Collection Authority. Local authority responsible for collecting municipal waste (normally a district or unitary council).
WDA	Waste Disposal Authority. Local authority responsible for disposing of municipal waste (normally a county or unitary council).
Waste-derived fuel oil	Fuel oil produced from waste fuel oil.
WFD	Waste Framework Directive, EU Council Directive 2006/12/EC. Codifies amendments to the 1975 Council Directive on Waste 75/442/EEC.
WRAP	Waste and Resources Action Programme. Defra funded body supporting waste re-use and recycling activity.

Annex: Energy from waste technologies

Mechanical Biological Treatment (MBT)

Mechanical Biological Treatment (MBT) is the term for the integration of mechanical and biological processing within a single facility to deal with a mixed solid municipal waste stream, such as autoclaving and anaerobic digestion (see below). The waste stream is sorted—by water or by mechanical systems, such as magnets or screening by size, in conjunction with manual sorting. Fine material is separated from larger material such as metal and plastic, and then the fine fraction is further separated into lighter biodegradable material and heavier material such as glass and grit. Usually the waste is sorted into recyclable, biodegradable and fuel materials, as well as a reject stream to be landfilled. The fuel stream can be used in an incinerator to generate energy from waste, to fuel energy intensive industrial processes such as cement kilns or co-firing with coal in power stations. Possible biological treatments of the biodegradable waste stream include composting or anaerobic digestion (see below).

Mechanical Heat Treatment/ Autoclaving

Thermal treatments were originally used to treat clinical and laboratory waste on a small scale. They can be used as an initial stage in MBT, following the removal of unsuitable materials, such as metal objects and rubble. In the most common system, the mixed solid municipal waste is shredded and then treated with steam at 140–160°C in a thermal autoclave. After the steam has been injected the pressure is maintained for 30 to 40 minutes, sterilising the waste and breaking down biodegradable materials. Other types of mechanical heat treatment systems include non-pressurised heating in a rotating kiln. Autoclaving is most suited to facilities that generate heat and power through incineration or anaerobic digestion.

Incineration

An incinerator is a furnace for burning waste at high temperatures. Incineration not only reduces the volume of the original waste by over 90%, but also has the potential to convert the waste to energy. Heat can be recovered from the flue gases. This recovered heat can then be used as process heat for industry, for a district heating system or to generate steam for electricity generation via a turbine (or both heat and power in a Combined Heat and Power system). According to Danish estimates,²¹² incinerating 1 tonne of waste produces around 2MWh of heat and around 0.67 MWh of electricity (enough electricity to power approximately 670 homes for an hour). About one fifth of the waste is estimated to be non-combustible in the form of metals and glass which can be collected from the ash and recycled. There are different types of incineration technology, including:

Moving Grate Incineration—sometimes called Municipal Solid Waste Incineration. The movement of the grate through the furnace allows the waste to be combusted more efficiently. Air is supplied from below through holes in the grate (which also cools the

212 *Waste-to-Energy in Denmark*, RenoSam and Rambøll 2006.

grate) and at high speed through nozzles above the grate, which facilitates complete combustion. The EU Directive on Waste Incineration (2000/76/EC) states that the flue gas must reach temperatures of 850°C for two seconds to ensure the appropriate breakdown of organic toxins in the waste. Auxiliary backup oil burners are often installed to ensure this. The flue gases are then cooled and cleaned.

Fluidised Bed Incineration—in this type of furnace, pre-treated waste is put under such conditions that it behaves as a fluid, allowing it to flow freely and fully circulate throughout the combustion chamber. This process is achieved by forcing pressurised air through a sandbed until a turbulent mixture forms and a ‘fluidised bed’ is created. In the waste pre-treatment process, non-combustible components are removed and the waste shredded to produce coarse Refuse Derived Fuel (cRDF) which has a higher calorific (energy) value than untreated waste. The cRDF is then fed into the fluidised bed, coming into much greater contact with the air than would be the case if the waste were untreated. A wide variety of wastes can be incinerated, from sludge of high water content to plastic refuse. By controlling the amount of air and waste or fuel introduced to the fluidised bed, materials of different densities can be made to float or sink in the mixture.²¹³ The material to be combusted is then introduced, with the flue gases following the same route as described above.

Rotary-Kiln—these incinerators have a primary ignition chamber and a secondary afterburner chamber. The primary chamber is a rotating, inclined cylindrical vessel. Waste material including contaminated sludge and soils are fed into the primary ignition chamber, where the rotation facilitates movement and mixing of the waste. The high temperature causes the contaminants and other waste to vaporise into a gas, which is then burnt at a higher temperature (760–980°C) in the secondary afterburner chamber.²¹⁴

Anaerobic Digestion

Anaerobic Digestion is the biological processing of biodegradable waste (such as kitchen and garden waste, farm waste or sewage sludge) in the absence of air. Bacteria degrade the material in an enclosed reaction tank, with attached heating and mixing systems, to produce biogas, a mixture of methane and carbon dioxide, and small amounts of some other gases. Anaerobic digestion is normally carried out at about 35°C. Three groups of bacteria are involved in the anaerobic digestion: the hydrolytic and fermentative bacteria; the acetogenic bacteria; and the methanogenic bacteria. The hydrolytic and fermentative bacteria break down longer chain molecules to produce long and short chain organic acids. The acetogenic bacteria feed on these organic acids to produce short chain organic molecules and carbon dioxide. In turn, the methanogenic bacteria use these molecules as a substrate for the production of methane. A balance between the populations of the types of bacteria is essential for the stability of the process.

Advanced waste treatment technologies can produce biogas with 55–75% methane, depending on the system design and feedstocks used. This can be concentrated and purified to the same standards as fossil natural gas and distributed in the normal gas grid,

²¹³ Fluidized Bed Type Incinerator, Global Environment Centre, Japan.

²¹⁴ Rotary Kiln Solid Waste Disposal System, HiTemp Technology Corporation, USA.

although this has yet to happen in the UK. Alternatively, the methane can be used as fuel to generate electricity and heat (combined heat and power generation, CHP) on site, and distributed via available local networks.

The solid residue from the process (digestate) can also be further processed into compost and liquid residues used as a fertiliser. Anaerobic digestion can be carried out in small scale systems, for example located on the farm and operated by farmers, or to serve businesses (or clusters of businesses) with large food waste arisings. Alternatively it can be carried out in large centralised systems, for example to treat municipal food waste being diverted from landfill by local authorities. Anaerobic digestion is widely used for sewage sludge treatment and there is spare capacity to process municipal biodegradable waste at Waste Water Treatment Plants. However, to comply with EU regulations, such as the EU Animal By-products Regulation (EC 1774/2002), this may involve fitting additional treatment units, such as pasteurisation, to these facilities. A number of purpose built Anaerobic Digestion facilities have begun operations in recent years.

Gasification

Gasification is a process that can extract energy from many types of organic material, including biomass. This is subjected to high temperatures (above 700°C) in low-oxygen environment within a closed tank to produce synthetic gas, known as 'syngas'. This is primarily a mixture of carbon monoxide and hydrogen. The 'syngas' itself can also be used as a fuel to generate heat or electricity (which can be more efficient than directly burning the original fuel, as well as less polluting) or undergo further reactions to produce methane.²¹⁵ It can also be processed further to make liquid fuels. The wastes used in gasification and pyrolysis (see below), do not need to be sorted but do need to be crushed, incurring increased costs and energy use. Advanced gasification is a more efficient version of this process.

Pyrolysis

The pyrolysis process is similar to gasification, except that the fuel is subjected to high temperatures (400–800°C) in a closed, virtually oxygen free (as opposed to low oxygen) environment. Around 75% of the pyrolysis product is in the form of a biofuel oil, with the remainder being gaseous and waste products similar to gasification. The resultant gases can then be burned in the presence of oxygen to generate heat or ultimately electricity. The pyrolysis process is more widespread in industry than gasification, which is not yet a commercially established technology. Advanced pyrolysis is a more efficient version of this technique.

Plasma Waste Disposal

This technology uses electricity to break down waste and convert it into fuel. High voltage, high current electricity is passed between two electrodes, creating an arc. An inert gas (such as helium, neon or argon) is pumped between the electrodes—where it breaks down and

²¹⁵ *An Overview of Incineration and EFW Technology as Applied to the Management of Municipal Solid Waste (MSW)*, A. Knox, University of Western Ontario, February 2005.

forms a plasma (a very hot, ionised gas), with temperatures between the electrodes reaching 13,900°C—and through to a sealed waste vessel where temperatures a few feet from the arc can reach 2,800 to 4,400°C. These high temperatures break most types of waste down into a gaseous form that can be used for fuel. Small facilities are in operation in Canada,²¹⁶ and Taiwan,²¹⁷ and there are test facilities in Swindon,²¹⁸ and the USA.²¹⁹

Composting—Windrow and In-vessel

Composting is a natural biological process in which organic matter is decomposed by fungi and bacteria in the presence of oxygen to produce compost. Five key aspects need to be controlled in the composting process: temperature, moisture content, oxygen concentration, air circulation and the ratio of carbon to nitrogen rich materials. These can be controlled by adding bulking materials to the compost material or by mechanical means.

The composting process is designed according to the types of waste accepted by the facility. Windrow composting consists of piling biodegradable waste, such as garden waste, in long rows (windrows) in open facilities. The rows are generally turned to improve porosity and oxygen content, mix in or remove moisture, and redistribute cooler and hotter portions of the pile. However, facilities which accept mixed biodegradable waste including food wastes are subject to more stringent regulation. To avoid the transfer of diseases from meat wastes, the composting process and the compost outputs are controlled in line with the requirements of the EU Animal By-products Regulation (EC 1774/2002). The composting is carried out in enclosed reactors (in-vessel composting), such as metal tanks or concrete bunkers, in which air flow and temperature can be controlled. Generally the air circulation is metered via buried tubes that allow fresh air to be injected under pressure, with temperature and moisture conditions monitored using probes to allow maintenance of optimum conditions. Once the pathogens have been eliminated, a further stage of composting takes place in open facilities. Only compost originating from biowastes segregated at source can be used for commercial applications, as composting residual waste arising from mixed municipal solid waste produces poorer quality compost.

216 Zero Waste Ottawa, Plasco Energy Group.

217 PEAT International, National Cheng Kung University, Taiwan.

218 Swindon Plant, Advanced Power Plasma.

219 WPC Pilot Plant Pennsylvania, Westinghouse Plasma Corporation.

Formal Minutes

Wednesday 6 January 2010

Members present:

Mr Michael Jack, in the Chair

Mr Geoffrey Cox	Miss Anne McIntosh
Mr David Drew	Dr Gavin Strang
Mr James Gray	Paddy Tipping
Lynne Jones	Mr Roger Williams
David Lepper	

Draft Report (Waste Strategy for England 2007), proposed by the Chairman, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 125 read and agreed to.

Summary agreed to.

Resolved, That the Report be the Third Report of the Committee to the House.

Ordered, That the Chairman do make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No.134.

Written evidence was ordered to be reported to the House for printing with the Report.

Several papers were ordered to be reported to the House for placing in the Library and Parliamentary Archives.

[Adjourned till Wednesday 13 January at 2.30 pm

Witnesses

Wednesday 15 October 2008

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Dr Paul Leinster, Chief Executive and **Ms Liz Parkes**, Head of Waste, Environment Agency Ev 5

Mr Steve Lee, Chief Executive Officer and **Mr Robert Lisney OBE**, Chair of CIWM Strategy Special Interest Group, Chartered Institution of Wastes Management (CIWM) Ev 33

Mr Phillip Ward, Director for Local Government Resources, WRAP Ev 51

Wednesday 12 November 2008

Mr Dirk Hazell, Chief Executive, **Mr Richard Skehens**, Managing Director, Grundon Waste Management and **Ms Gill Weeks**, Regulatory Affairs Director, Veolia Environmental Services (UK) Plc, Environmental Services Association Ev 66

Mr John Bland, Deputy Clerk and Treasurer, Greater Manchester Waste Disposal Authority Ev 78

Ms Lindsay Millington, Director General, British Metals Recycling Association and **Mr Graeme Carus**, Director of Business Development, European Metal Recycling Ltd Ev 90

Wednesday 19 November 2008

Mr Julian Walker-Palin, Head of Corporate Policy for Sustainability and Ethics, ASDA, **Ms Gemma Lacey**, Project Manager, Corporate Social Responsibility and **Mr Arthur Sayer**, Manager, Recycling and Waste, John Lewis Partnership and **Mr Richard Whitefield**, Production Manager, Brecknell Willis Ev 104

Mr Andrew Kinsey, Senior Sustainability Manager, Bovis Lend Lease and **Mr Jon de Souza**, Director of Member Services, Constructing Excellence Ev 115

Monday 24 November 2008

Ms Samantha Harding, "Stop the Drop" Campaign Manager and **Mr Neil Sinden**, Policy Director, Campaign to Protect Rural England, **Mr Phil Barton**, Chief Executive and **Mr Mike Phillips**, Chairman, ENCAMS Ev 131

Ms Jill Ardagh, Director General and **Mr Paul Smith**, Chairman, BSDA Environment Committee, British Soft Drinks Association, **Ms Jane Milne**, Director of Business Environment, British Retail Consortium Ev 141

Rt Hon Jane Kennedy MP, Minister for Farming and the Environment, **Mr Daniel Instone**, Senior Responsible Owner, Waste Programme and **Mr Roy Hathaway**, Head of Waste Regulation and Business Waste, Department for Environment, Food and Rural Affairs Ev 153

Wednesday 4 November 2009

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Dr Paul Leinster, Chief Executive, **Ms Liz Parkes**, Head of Waste and **Mr David Jordan**, Director of Operations, Environment Agency

Ev 383

Rt Hon Hilary Benn MP, Secretary of State, **Mr Roy Hathaway**, Head of Waste Regulation and Business Waste and **Mr Andy Howarth**, Head of Hazardous and International Waste, Defra

Ev 392

List of written evidence

Alpheco Composting Ltd	Ev 345
ASDA	Ev 379
Association of Charity Shops	Ev 182
Association of Manufacturers of Domestic Appliances	Ev 228
Audit Commission	Ev 221
BAN Waste	Ev 254
Biffa Waste Services Limited	Ev 191
Biomass Worldwide Ltd	Ev 197
Gillian Bostic	Ev 357
British Glass	Ev 234
British Metals Recycling Authority (BMRA)	Evs 84, 88, 95
British Retail Consortium	Ev 136
British Soft Drinks Association	Evs 140, 144
Campaign to Protect Rural England	Ev 127
Capel Action Group	Ev 198
CBI	Ev 321
CEMEX	Ev 270
Chartered Institution of Wastes Management	Evs 20, 40
City of London Corporation	Ev 340
Professor Chris Coggins	Ev 185
Compost Works	Ev 207
Composting Association	Ev 307
Confederation of Paper Industries	Ev 208
Constructing Excellence	Ev 122
Co-operative Group	Ev 422
Professor J C Dearden	Ev 365
Department for Environment, Food and Rural Affairs	Evs 147, 161, 410, 415
ECT Recycling	Ev 298
EEF, the Manufacturers' Organisation	Ev 313
Mrs Angela Ellithorpe	Ev 169
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Environmental Industries Commission	Ev 336
Environmental Recycling Systems	Ev 354
Environmental Services Association	Evs 61, 65, 73, 408
Friends of the Earth	Ev 193
Gemini Waste Consultants Ltd	Ev 316
Gloucestershire Friends of the Earth Network	Ev 358
Greater Manchester Waste Disposal Authority	Evs 75, 82
Green Alliance	Ev 284
History and Policy	Ev 203
Industry Council for Packaging & the Environment (INCPEN)	Ev 169

Institution of Civil Engineers	Ev 237
Institution of Mechanical Engineers	Ev 229
John Lewis Partnership	Ev 99
Peter T Jones	Ev 420
Land Network International Ltd	Ev 282
Jon Letcher	Ev 287
Lhoist UK	Ev 426
Local Authority Recycling Advisory Committee (LARAC)	Ev 248
London Councils	Ev 211
Mayor of London	Ev 272
Barry Moles and Hilary Tandy	Ev 378
Nappy Alliance	Ev 295
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National Industrial Symbiosis Programme	Ev 303
Packaging Federation	Ev 241
PaperChain Recycling Ltd	Ev 417
REaD Group plc	Ev 331
Michael Ryan	Ev 252
Salvation Army Trading Co Ltd (SATCoL)	Ev 177
Sea & Water	Ev 181
Simple Fraser LLP for and on behalf of Fuel Producing Group of Waste Oils Recovery/Recycling Companies	Ev 380
Staffordshire and Stoke-on-Trent Waste Partnership	Ev 290
Dr Dick van Steenis	Ev 339
Sustainable Organic Resources Partnership Expert Advisory Group	Ev 333
Symphony Environmental	Ev 341
Dr Alan Taylor	Ev 277
Packaging Federation	Ev 241
Tesco	Ev 425
UK Bag Manufacturers' Association	Ev 348
United Kingdom Without Incineration Network	Ev 357
Waste Recycling Group Ltd/FCC	Ev 175
Alison Waterhouse	Ev 311
Paul Whittlesea	Ev 176
WRAP (the Waste & Resources Action Programme)	Evs 42, 47, 58
Zero Waste Alliance UK	Ev 350

List of unprinted evidence

The following memoranda have been reported to the House, but to save printing costs they have not been printed and copies have been placed in the House of Commons Library, where they may be inspected by Members. Other copies are in the Parliamentary Archives, and are available to the public for inspection. Requests for inspection should be addressed to The Parliamentary Archives, Houses of Parliament, London SW1A 0PW (tel. 020 7219 3074). Opening hours are from 9.30 am to 5.00 pm on Mondays to Fridays.

Capel Action Group (Waste 13) – Appendix
Mayor of London (Waste 32) – Appendix
Land Network International (Waste 34) – Annexes
Environmental Services Association (Waste 39b) – Background paper
Dr Dick van Steenis (Waste 55) – Annexes
Campaign to Protect Rural England (Waste 61) – Annex
Constructing Excellence (Waste 66) – Annex
Gloucestershire Friends of the Earth Network (Waste 68) – Annex
Symphony Environmental Ltd – Letter to the Chairman
Scottish Retail Consortium – Background paper
Green Cone Ltd – Background paper
Tony Hancock – Letter to the Chairman

List of Reports from the Committee during the current Parliament

The reference number of the Government's response to each Report is printed in brackets after the HC printing number.

Session 2009–10

Second Report	The work of the Committee in 2008–09	HC 148
First Report	Appointment of the Chair of Natural England	HC 68

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Sixth Report	The Draft Flood and Water Management Bill	HC 555-I (CM 7741)
Fifth Report	Ofwat Price Review 2009	HC 544-I (HC 1023)
Fourth Report	Securing food supplies up to 2050: the challenges faced by the UK	HC 213-I (HC 1022)
Third Report	Energy efficiency and fuel poverty	HC 37 (CM 7719)
Second Report	Work of the Committee in 2007–08	HC 95
First Report	The English pig industry	HC 96 (HC 391)

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Fifth Special Report	Energy efficiency and fuel poverty: written evidence	HC 1099
Eleventh Report	The potential of England's rural economy	HC 544-I (HC 155, 08–09)
Tenth Report	Badgers and cattle TB: the final report of the Independent Scientific Group on Cattle TB: Government response to the Committee's Fourth Report of Session 2007–08	HC 1010 (HC 1178)
Ninth Report	Draft Marine Bill: Coastal Access Provisions	HC 656-I (CM 7422)
Eighth Report	British Waterways: follow-up	HC 438 (HC 1081)
Seventh Report	Implementation of the Nitrates Directive in England	HC 412 (HC 1080)
Sixth Report	The Veterinary Surgeons Act 1966	HC 348 (HC 1011)
Fifth Report	Flooding	HC 49-I (HC 901)
Fourth Report	Badgers and cattle TB: the final report of the Independent Scientific Group on Cattle TB	HC 130-I (HC 1010)
Third Report	The work of the Committee in 2007	HC 250
Second Report	Climate change: the "citizen's agenda": Government response to the Committee's Eighth Report, Session 2006–07	HC 189
First Report	The UK Government's "Vision for the Common Agricultural Policy: Government response to the Committee's Fourth Report, Session 2006–07	HC 48

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Eighth Report	Climate change: the "citizen's agenda"	HC 88-I (HC 189 07–08)
Seventh Report	British Waterways	HC 345-I (HC 1059)
Sixth Report	The Implementation of the Environmental Liability Directive	HC 694 (HC 1058)
Fifth Report	Draft Climate Change Bill	HC 534-I (CM 7225)

Fourth Report	The UK Government's "Vision for the Common Agricultural Policy"	HC 546-I (HC 48 07–08)
Third Report	The Rural Payments Agency and the implementation of the Single Payment Scheme	HC 107-I (HC 956)
Second Report	Defra's Annual Report 2006 and Defra's budget	HC 132 (HC 522)
First Report	The work of the Committee in 2005–06	HC 213
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Eighth Report	Climate change: the role of bioenergy	HC 965-I (HC 131 06–07)
Seventh Report	The Environment Agency	HC 780-I (HC 1519)
Sixth Report	Bovine TB: badger culling	HC 905-I
Fifth Report	Rural Payments Agency: interim report	HC 840
Fourth Report	The Departmental Annual Report 2005	HC 693-I (HC 966)
Third Report	The Animal Welfare Bill	HC 683
Second Report	Reform of the EU Sugar Regime	HC 585-I (HC 927)
First Report	The future for UK fishing: Government Response	HC 532