



Cynulliad National
Cenedlaethol Assembly for
Cymru Wales

Environment, Planning and Countryside Committee



Inquiry into Meeting Landfill and Recycling Targets

August 2005

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Chair's Foreword



Dealing with the waste for which we are all responsible is a growing and extremely serious problem in Wales. We landfill the vast majority of our waste, while the space to do so is rapidly decreasing, and even though most of us are now more aware of the need to recycle and compost, the tendency is to assume that dealing with waste is someone else's problem.

For our inquiry, the Committee decided to focus on municipal waste and meeting landfill and recycling targets set by Europe and the Welsh Assembly Government. We received and heard evidence from a wide range of public bodies and from the community and voluntary sector, and we visited a number of sites and facilities to see for ourselves the different methods and technologies for recycling and composting at work.

Having considered all the evidence, the Committee believes that Wales, its Government, its local authorities and its people, faces a very substantial challenge if it is to increase the amount of waste recycled and composted. We therefore recommend the introduction of a number of measures to improve the performance of those authorities that are struggling to meet the targets, but we are also of the opinion that every local authority in Wales should plan more efficiently to meet targets in the longer term. The Committee makes a number of recommendations with regard to the planning process and urges the Welsh Assembly Government to provide vision and guidance on those kinds of facilities and technologies that should be employed to meet targets. While acknowledging the substantial funding that the Government has provided to date to ensure higher recycling and composting rates, we are calling for a considerable increase in funding in order to ensure that the targets for 2009-2010 are met. We also make recommendations for educating the people of Wales and changing their attitudes towards dealing with waste and we feel strongly that the Welsh Assembly Government should urge and support businesses to create and make innovative use of recycled products.



I look forward to receiving the Government's response to our recommendations. We would like to thank everyone who gave evidence to this inquiry. My thanks also, as ever, to the Members' Research and Committee Services for their support and guidance.



ALUN FFRED JONES AM

Chair, Environment, Planning and Countryside Committee

August 2005



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¹ In addition to the current membership of the Committee, several other Assembly Members contributed to the inquiry – Tamsin Dunwoody-Kneafsey AM (Preseli Pembrokeshire), Jeff Cuthbert AM (Caerphilly), Elin Jones AM (Ceredigion) and Janet Davies AM (South West Wales)



Summary of recommendations

Targets – recycling / landfill / composting / waste minimisation

Recommendation 1: *That the Welsh Assembly Government identifies local authorities that may struggle to meet the 40 per cent recycling / composting target for 2009–10 and works with them to ensure appropriate measures are put in place to achieve the target.*


Recommendation 2: *That the Welsh Assembly Government ensures that municipal waste management strategies are used as the main tool for individual local authorities to plan for their waste management needs and the delivery of Welsh Assembly Government and European targets.*

Recommendation 3: *That local authorities fully utilise source segregation of recyclable materials and make this as user-friendly as possible. (In making this recommendation, the Committee agrees with the Welsh Assembly Government's view that while householders should segregate recyclable material at source, local authorities should be allowed the flexibility to choose how segregated materials are collected, e.g., kerbside sorting, clean MRF or bring sites).*

Recommendation 4: *That the Welsh Assembly Government removes the perverse incentive for local authorities not to encourage home composting, and develops a mechanism that allows home composting to count towards local authority landfill diversion targets. Local authorities should encourage householders to compost at home.*

Recommendation 5: *That the Welsh Assembly Government introduces material-specific targets for recycling of bulky but low weight materials such as plastics.*

Recommendation 6: *That local authorities continue to work in partnership with the community, voluntary and private sectors in developing minimisation, re-use and recycling schemes in their areas, recognising the particular skills and expertise that these organisations can contribute to the delivery of targets.*



Recommendation 7: *That the Welsh Assembly Government makes representations to the UK Government to introduce measures to promote waste minimisation / penalise unnecessary waste creation. The Committee believes that the UK Government should consider producer-responsibility levies and tax reductions on more environmentally-friendly products. The UK Government's response should be made available to the Committee.*

Planning / regional working

Recommendation 8: *That Regional Waste Plans should be made statutory.*

Recommendation 9: *That, in the meantime, Regional Waste Plans should be revised to ensure they identify suitable geographical locations for regional facilities and that the Welsh Assembly Government provides local authorities with clearer guidance to deliver this objective.*

Recommendation 10: *That private sector engagement with local authorities should be promoted more vigorously via the Wales Waste Forum, Welsh Local Government Association and regional waste groups.*

Recommendation 11: *That the Welsh Assembly Government provides clear advice and guidance on the sustainability of different waste management options.*

Recommendation 12: *That the Welsh Assembly Government provides clearer guidelines to local authorities on:*

- i. which technologies it would like to see operating in Wales and which it wishes to discourage;*
- ii. which technologies should be used to deal with residual waste, until it is possible to eliminate it.*

Recommendation 13: *That the Welsh Assembly Government provides assistance and guidance to local authorities on how best practice from elsewhere in the UK, Europe and worldwide can be applied in Wales.*



Funding

Recommendation 14: *That the Welsh Assembly Government provides an indication to local authorities of the level of capital and operational funding that will be available to them until at least 2013, in order to enable long-term planning and business security.*

Recommendation 15: *That the Welsh Assembly Government provides regional hypothecation of some waste management funding to encourage local authorities to work together on developing regional facilities, especially for more specialised facilities such as composting of kitchen waste.*


Recommendation 16: *That the Welsh Assembly Government provides sufficient funding to ensure that local authorities are able to roll out kerbside collection systems to a level consistent with securing the delivery of recycling, composting and landfill diversion targets.*

Recommendation 17: *That the Welsh Assembly Government provides a central source of advice to local authorities on legal, contractual and funding issues to enable them to access expertise, reduce expenditure and improve success in securing external sources of funding, including European funds.*

Public Awareness

Recommendation 18: *That sustained, local, targeted education should be introduced to reduce, re-use and recycle. Liaison officers should be appointed in each local authority to visit residents and schools, to run road shows, etc., to increase householders' knowledge of what they can do, what can be done with recycled materials and how individuals' actions impact on the local environment and community. Initiatives should include the use of incentive schemes and positive feedback on how well schemes are doing and how they benefit the local community.*

Recommendation 19: *That the Welsh Assembly Government encourages more schools to be part of the 'eco-schools' programme run by Keep Wales Tidy. The benefits of the programme should be more widely promoted in terms of education, compatibility with curricula and the potential for cost savings for the school.*



Recommendation 20: *That the Welsh Assembly Government works with Environment Agency Wales and local authorities to build public confidence in the monitoring and pollution prevention processes in place for waste treatment facilities. This could include education initiatives in schools and communities near such facilities, tours of facilities, community liaison officers and working with schools / eco-schools.*

Recommendation 21: *That the Welsh Assembly Government maintains funding of organisations that contribute to promoting recycling and composting.*

Markets / business support

Recommendation 22: *That the Welsh Assembly Government encourages and supports business to create recycled products and markets by:*

- i. providing greater financial and business support, including research and development funding, for new and existing businesses in Wales to use recycle from the municipal waste stream, create recycled products and develop markets for recycled goods and services;*
- ii. encouraging business to apply for European funding to help develop their businesses;*
- iii. supporting the development of a recycling facility for farm plastics and a market for the products. (While not directly within the remit of the inquiry, the Committee recognises that agricultural waste and farm plastics are important issues).*

Recommendation 23: *That the Welsh Assembly Government provides help and advice to public sector organisations, including local authorities, to procure more recycled products and that this should be built into the normal procurement process. The Welsh Assembly Government should be an exemplar in procuring recycled products.*

Recommendation 24: *That the Welsh Assembly Government encourages and supports businesses to reduce, re-use and recycle waste by:*

- i. working with Wales-based businesses, particularly large retailers, to encourage waste minimisation, consumer education and provision of recycling facilities;*
- ii. providing advice and support for Wales-based companies to reduce waste and make the best use of waste, in particular by providing a central source of advice for businesses / organisations on how to audit waste streams, reduce and recycle waste and make cost savings.*



Research and development

Recommendation 25: *That the Welsh Assembly Government*

- i. encourages the setting up of exemplar / demonstration projects to illustrate to local authorities and the general public how different technologies operate;*
- ii. funds research and development and commercial-scale field trials / demonstration projects for potential treatment options for residual waste, until it is possible to eliminate it, in order to inform local authority choices;*
- iii. funds research and development into the innovative use of recycled materials to make new products.*

1. Introduction

1.1 *Wise about Waste*², the Welsh Assembly Government's waste strategy published in June 2002, contains policies, actions and targets aimed at improving sustainable waste management in Wales for a range of waste streams.

1.2 The Committee inquiry and this report focus on municipal waste, the waste stream over which the Welsh Assembly Government and key stakeholders, such as local authorities, have most influence.

1.3 In particular, the Committee inquiry is primarily concerned with **recycling and composting targets** for municipal waste contained in *Wise about Waste* and Wales' ability to meet its share of the UK's **Landfill Directive**³ **targets** under Article 5.

1.4 The primary targets for reducing the amount of biodegradable municipal waste (BMW) sent to landfill under the Landfill Directive are⁴:

- by 2010 no more than 75 per cent by weight of the BMW produced in 1995 can be landfilled;
- by 2013 no more than 50 per cent by weight of the BMW produced in 1995 can be landfilled;
- by 2020 no more than 35 per cent by weight of the BMW produced in 1995 can be landfilled.

1.5 The Welsh Assembly Government has set the following targets for local authorities in *Wise about Waste*:

- by 2003-04 achieve at least 15 per cent recycling / composting of municipal waste – minimum 5 per cent composting and 5 per cent recycling. Only composting from source segregated materials counts towards composting target;
- by 2006-07 achieve at least 25 per cent recycling / composting of municipal waste – minimum 10 per cent composting and 10 per cent recycling. Only composting from source segregated materials counts towards composting target;

²*Wise about Waste: The National Waste Strategy for Wales*, Parts One and Two, Welsh Assembly Government, (June 2002), <http://www.countryside.wales.gov.uk/fe/master.asp?n1=366&n2=213&n3=368>

³*Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste*, <http://europa.eu.int/comm/environment/waste/legislation/b.htm>

⁴The dates given include a four-year derogation granted to Member States, including the UK, which were heavily reliant on landfill as a disposal route for BMW i.e. landfilled more than 80 per cent of collected BMW

- by 2009-10 and beyond achieve at least 40 per cent recycling / composting of municipal waste – minimum 15 per cent composting and 15 per cent recycling. Only composting from source segregated materials counts towards composting target.

1.6 The Welsh Assembly Government believes that attaining these targets will meet the requirements of the *Landfill Directive*. Paragraph 5.57 of *Wise about Waste* states that:

Recycling and composting at the target rate (ie. 40 per cent rate from 2010 onwards) would achieve the Landfill Directive BMW diversion target in 2010 (even with 3 per cent growth [in waste arisings]).

Definitions of biodegradable waste and municipal waste

1.7 Biodegradable waste and municipal waste are defined in section 21 of the *Waste and Emissions Trading Act 2003*⁵

21 "Biodegradable waste" and "municipal waste"

(1) In this Chapter "biodegradable waste" means any waste that is capable of undergoing anaerobic or aerobic decomposition, such as-

food and garden waste, and
paper and paperboard.

(2) In this Chapter "biodegradable municipal waste" means waste that is both biodegradable waste and municipal waste.

(3) In subsection (2) "municipal waste" means-

- (a) waste from households, and
- (b) other waste that, because of its nature or composition, is similar to waste from households

Wise about Waste defines municipal waste as:

...all wastes under the control of local authorities or agents acting on their behalf. It includes: all waste collected from households; litter collected in bins, by street sweeping and by beach cleansing; waste delivered to council recycling points; municipal parks and garden wastes; council office waste; civic amenity site waste; flytipped waste and abandoned vehicles on public ground; and some commercial waste

⁵The definitions replicate those contained in Article 2 of the *Landfill Directive*. Part 1 of the 2003 Act is intended to give legal effect to the obligations imposed by Article 5(1) and (2) of the *Landfill Directive*.

collected where local authority waste collection agreements are in place. Municipal waste, as defined in the Welsh Assembly Government Best Value Performance Indicators⁶ also includes wastes collected by local authorities, where they are acting as sub contractors.

and biodegradable waste as waste which is:

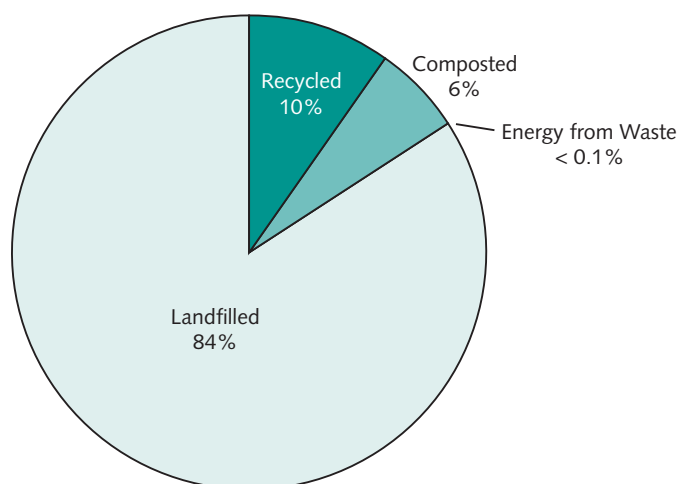
...capable of being broken down by plants (including fungi) and animals (including worms and micro-organisms). In municipal solid waste, the [biodegradable] property is generally attributed to the following fractions: paper and card, kitchen (food) and garden waste and a proportion of textiles, fines and miscellaneous combustible waste, including disposable nappies.

1.8 The National Assembly for Wales Performance Indicators (NAWPIs) are used by the Welsh Assembly Government to measure local authority performance against the municipal waste targets contained in *Wise about Waste*.

Municipal waste in Wales

1.9 The majority of municipal waste in Wales is sent to landfill. Figure 1 shows the proportion of municipal waste in Wales that is recycled, composted, sent to landfill or used to generate energy from waste.

Figure 1 The fate of municipal waste in Wales, 2003-04



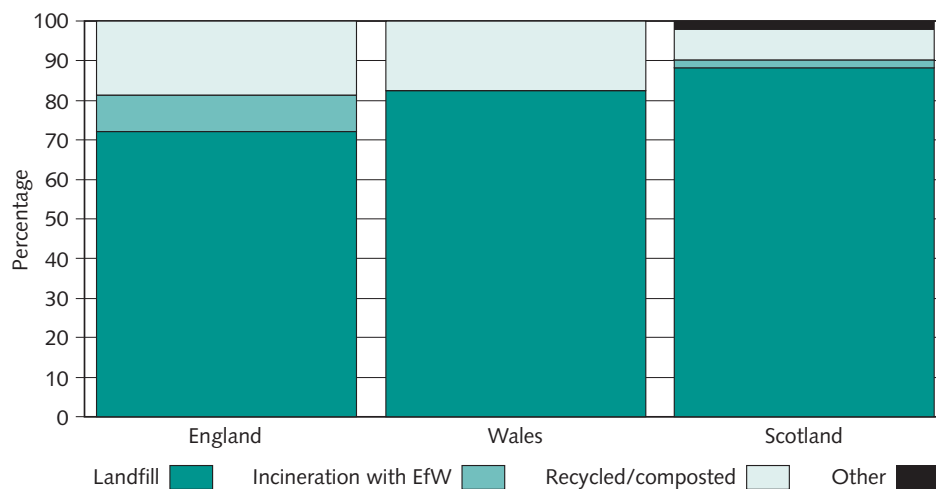
Source: National Assembly for Wales Performance Indicator data 2003-04

⁶Now called the National Assembly for Wales Performance Indicators (NAWPIs)



Figure 2 compares the proportion of municipal waste sent to landfill, recycled / composted or used to generate energy from waste in England, Wales and Scotland. Data presented relates to 2003-04 for England and Wales, but 2002-03 for Scotland. The figures for Wales differ slightly to those presented in figure 1 above because they are based on the Municipal Waste Management Survey, rather than NAWPI data.

Figure 2 Fate of municipal waste in England, Wales and Scotland




Source: Municipal Waste Management Survey, Defra 2003-04
Municipal Waste Management Survey, Welsh Assembly Government, 2003-04
Waste Data Digest 4, Scottish Environment Protection Agency, 2002-03

Terms of reference

1.10 The terms of reference for the inquiry were:

- to consider progress in meeting the recycling and composting targets set out in *Wise about Waste* by considering policy instruments used for delivery including the planning system, sources and uses of funding, and the role of stakeholders;
- to consider the need for any additional measures required to ensure that Wales meets its statutory obligations under the *Landfill Directive*;
- make recommendations.



1.11 In addition, the inquiry also takes into account the findings of two recent reports on waste management in Wales by the Audit Committee of the National Assembly for Wales and the Wales Audit Office. The recommendations of the reports can be found at Annex 1:

- *National Assembly for Wales Audit Committee: Environment Agency Wales: Regulation of waste management*⁷;
- *Waste Management, A Challenging Agenda for the Welsh Public Sector*⁸.

1.12 This report summarises the evidence presented to the Committee as part of the inquiry and outlines the conclusions and recommendations of the Committee.

1.13 Section 2 sets out background to the inquiry, including the 10-year strategy for waste in Wales – *Wise about Waste*, what actions are being taken in Wales to meet targets and the funding available to local authorities to help them reach the targets. It also provides some background on the possible options available for the treatment of municipal waste, the planning system in relation to waste management facilities and public opinion of waste management and recycling issues.

1.14 Section 3 outlines the stages of the inquiry, including meetings held, evidence taken and site visits made by Committee members.

1.15 Section 4 summarises the main issues raised during the course of the inquiry and sets out the recommendations of the Committee.

⁷*National Assembly for Wales Audit Committee: Environment Agency Wales: Regulation of waste management: Committee Report (2) 01-05, (2005), Audit Committee,*
<http://www.wales.gov.uk/assemblydata/N0000000000000000000000000028698.pdf>

⁸*Waste Management A Challenging Agenda for the Welsh Public Sector (2005), Themed Paper 9, Audit Commission in Wales,*
http://www.wao.gov.uk/assets/englishdocuments/Waste_Management_Themed_Paper_9.pdf





2 Background

2.1 *Wise about Waste* sets out the Welsh Assembly Government's 10-year sustainable waste management strategy. It sets out 24 targets including:

- UK targets – set for the UK as a whole by EU Directives;
- primary Wales-specific targets – the Welsh Assembly Government and key partners such as local authorities have influence over the outcome of these targets;
- secondary Wales-specific targets – where the Welsh Assembly Government's influence is less.

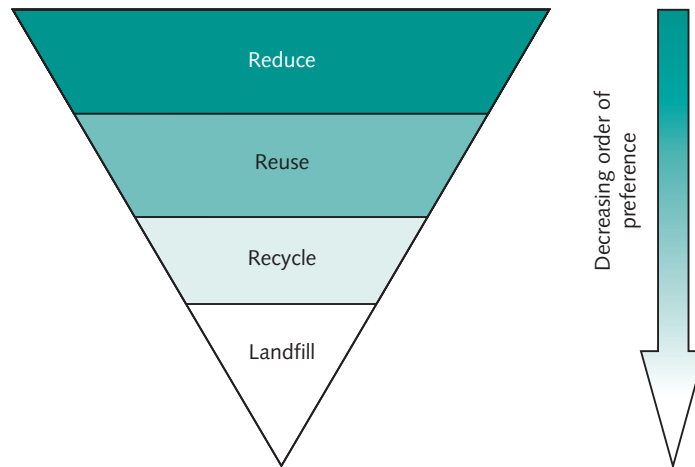
2.2 In addition to setting targets, *Wise about Waste* also sets out the order of preference for treatment types that the Welsh Assembly Government would like used to meet targets:

- reduce the amount of BMW produced;
- increased use of home composting;
- re-use;
- recycling – through the kerbside collection of segregated waste, use of bring sites and the mechanical extraction of recyclables from municipal waste, but only for residual waste after a source segregated collection;
- central / community composting, vermiculture⁹ and/or anaerobic digestion;
- energy recovery – Energy from Waste (EfW);
- mechanical biological treatment (MBT) of mixed waste to form a stabilised non-biodegradable waste.

2.3 Similarly, *Wise about Waste* also sets the Welsh Assembly Government's preferences for dealing with residual waste and actions it expects or encourages local authorities to undertake. These preferences coincide with the basic principles of the waste hierarchy, as illustrated in figure 3 and consider landfill to be the least favourable option.

⁹Vermiculture is the rearing of worms, which are capable of digesting uncontaminated biodegradable waste to produce high quality compost and a liquid that can be used as a fertiliser.

Figure 3 Basic waste hierarchy



Progress to date

2.4 In order to monitor progress in achieving targets, *Wise about Waste* sets out a number of indicators. The Wales Waste Forum¹⁰ is tasked with monitoring and advising the Welsh Assembly Government on the implementation of the strategy.

2.5 The most recent National Assembly for Wales Performance Indicator (NAWPI) data, for 2003/04, shows that nine local authorities failed to meet their individual 15 per cent recycling and composting target, although the 15 per cent target was reached on an all-Wales basis.

2.6 In addition, the NAWPI data showed great variability in the proportion of the population served by a kerbside collection of recyclables. Overall, 67 per cent of the population had a kerbside collection of recyclables. In nine local authorities, over 90 per cent of the population had a kerbside collection, while in five, less than 20 per cent of the population had a kerbside collection. Figure 4 illustrates the proportion of households with a kerbside collection of waste.

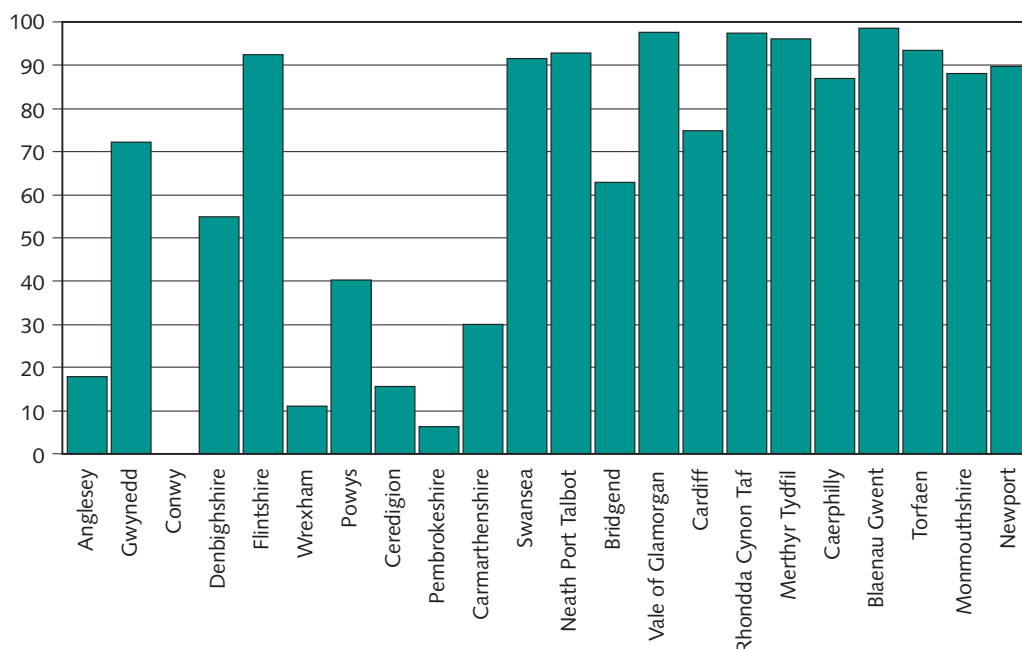
2.7 Five partnership projects between local authorities and the community sector have also been chosen as 'exemplar projects' to achieve recycling and composting rates of over 50 per cent of municipal waste within three years of starting operation.¹¹

¹⁰Established in December 2000 to bring together organisations from industry, local government, the voluntary and public sectors and specialists to co-operate in the identification and discussion of the main sustainable waste management issues in Wales.

¹¹The five exemplar projects are in Ceredigion, Isle of Anglesey, Newport, Powys and Torfaen



Figure 4 Percentage of households with a kerbside collection of waste, 2003-04



Source: National Assembly for Wales Performance Indicator data 2003-04

2.8 Regional Waste Plans (north, south east and south west) have identified the most sustainable waste management options within regions and the capacities of the facilities needed, but have not identified potentially suitable sites for such facilities.

2.9 To support the creation of markets for recycled products, the Waste Resources Action Programme (WRAP) and the Wales Environment Trust's (WET) Creating Welsh Markets for Recyclate (CWMRe) initiative have been set up. WRAP is a UK-wide programme supported financially by the UK Government and the devolved administrations, while funding for WET is mainly from EU structural funds and the Welsh Assembly Government.

Waste treatment options

2.10 Composting and recycling are the most favoured options for the treatment of municipal waste, as set out in *Wise about Waste*. This is followed by anaerobic digestion, other energy from waste (EfW), mechanical biological treatment (MBT) of mixed waste and finally landfill. Table 1 summarises the advantages and disadvantages of the various treatment options (see page 13).



Composting¹²

2.11 Composting is the natural break down of organic materials by micro-organisms in the presence of air and can be split into two categories:

- i. windrow composting – used for garden and green wastes, piled into long rows and aerated by turning the material mechanically or forcing air through them. It can take place outside or in buildings (covered windrows);
- ii. in-vessel composting – takes place in an enclosed vessel or tunnel and can be used for composting kitchen and catering wastes, as it can be controlled to ensure temperatures that destroy bacteria are reached, to comply with Animal By-Products legislation.¹³

2.12 In addition, **vermicomposting**, which utilises worms to break down organic matter, can also be included.

Materials Recovery Facilities¹⁴

2.13 Materials Recovery Facilities (MRFs – pronounced “murfs”) are used to separate different components of the waste stream to recover recyclables and then compress, bulk and store the wastes before sending to be reprocessed. MRFs can be subdivided into two categories:


- i. clean MRFs - process source segregated waste, remove any contaminants and bulk up the different waste streams to ensure they are of a suitable quality to go for reprocessing. Clean MRFs recover around 90 per cent or more of the materials entering the facility;
- ii. dirty MRFs - process mixed wastes to separate recyclables from non-recyclables and then bulk and send for processing the recyclable fraction of the waste stream. They typically recover 10 – 15 per cent of the material as recyclables, the remainder requiring further treatment or landfilling. The quality of the recyclate produced is lower than that from clean MRFs, due to higher levels of contamination and less efficient separation of recyclables.

¹²Mechanical Biological Treatment website, <http://www.waste-technologies.co.uk/index.html>

¹³*Animal By-Products Regulations 2003 (SI 2003/1482)*, *Animal By-Products Regulations (Wales) 2003 (SI 2003/2756)*, *Animal By-Products Regulations (Scotland) 2003 (SSI 2003/411)*

¹⁴*Materials Recovery Facilities Information Sheet*, Warmer Bulletin Information Sheet, [http://www.env.leeds.ac.uk/envi2063/WB58-IS_\(MRFs\).pdf](http://www.env.leeds.ac.uk/envi2063/WB58-IS_(MRFs).pdf)

Mechanical Biological Treatment website, <http://www.waste-technologies.co.uk/index.html>



2.14 *Wise about Waste* advocates the use of clean MRFs in conjunction with kerbside collections or source segregated recyclables as the most favoured option for increasing recycling and composting rates. The use of dirty MRFs should only be used to boost recycling rates, rather than replace source segregated collections.

*Anaerobic digestion*¹⁵

2.15 Anaerobic digestion (AD) is the biological breakdown of organic waste by micro-organisms in the absence of oxygen in an enclosed container. It requires warm conditions, so some heating of the container is necessary.

2.16 AD produces a relatively stable solid residue, a liquid element and a flammable biogas composed of methane (CH₄) and carbon dioxide (CO₂). The solid residue can be used as a soil conditioner, or fertiliser, the liquid element can also be used as a fertiliser, while the biogas can be used as a fuel, some of which can be used to provide heat for the digestion process.

2.17 Anaerobic breakdown of organic waste also takes place in landfill sites, leading to the production of landfill gas. Production and collection of biogas is, however, much more efficient from an anaerobic digester than from a landfill.

*Energy from waste*¹⁶

2.18 The term 'energy from waste' (EfW) encompasses all waste treatment processes that use waste to generate power and heat, while reducing the volume and weight of the waste. It includes anaerobic digestion, utilising the gas from landfill sites, incineration, gasification and pyrolysis. The different treatments produce different emissions and residues.

¹⁵*Anaerobic digestion, The Wasteguide: The Stakeholders Guide to Sustainable Waste Management*, the wasteguide website,

http://www.wasteonline.org.uk/resources/Wasteguide/mn_wmo_biotreatment_anaerobic.html

Anaerobic digestion – Overview, ATLAS website,

http://europa.eu.int/comm/energy_transport/atlas/htmlu/adover.html

Mechanical Biological Treatment website, <http://www.waste-technologies.co.uk/index.html>

¹⁶*Waste Today – an overview of waste management in the UK, (1998)*, Waste online website,


<http://www.wasteonline.org.uk/resources/WasteWatch/WasteToday.htm>

Incineration, The Wasteguide: The Stakeholders Guide to Sustainable Waste Management, the wasteguide website,

http://www.wasteonline.org.uk/resources/Wasteguide/mn_wmo_thermtreatment_incin.html

Energy from Waste, Chartered Institution of Wastes Management website,

<http://www.iwm.co.uk/pma/1488>

- 
- i. incineration involves direct combustion of waste, converting it to energy and waste ash. The majority of incinerators in the UK are mass burn incinerators, which burn mixed waste. Incinerators can be used to generate electricity only, or combined heat and power (CHP);
 - ii. pyrolysis is the thermal breakdown of waste in the absence of air to produce a char, oil and syngas e.g. the conversion of wood into charcoal;
 - iii. gasification operates at higher temperatures than pyrolysis and breaks down hydrocarbons into a syngas in the presence of a controlled amount of oxygen. The output from pyrolysis can be fed into a gasification process.

Mechanical Biological Treatment¹²

2.19 Mechanical Biological Treatment (MBT) was originally developed as a way of treating residual municipal wastes, after source segregated recycling had taken place. Some MBT systems can operate without initial source segregation. MBT is not a single process, but is a description that applies to the combination of waste preparation and separation, recovery of recyclable material and the stabilisation of a biodegradable fraction by composting or anaerobic digestion.

2.20 MBT can be used to boost the recycling rate of local authorities with high kerbside recycling participation by removing more recyclables, or improve the performance of authorities with low kerbside participation rates without having to implement kerbside schemes and associated infrastructure.



Table 1 Advantages and disadvantages of waste treatment options

Advantages	Disadvantages
<i>Composting</i>	
<ul style="list-style-type: none"> • Produces a saleable/useable product • Reduces volume of organic waste by 25 to 50 per cent • Makes landfills easier to manage by removing organic wastes 	<ul style="list-style-type: none"> • Product must be of a suitable quality • Sensitive to contamination by non-compostable material • Concerns about pathogens may affect the market for composted material • Potential odour and leachate problems • Health concerns about bioaerosols
<i>Materials Recovery Facilities (MRFs)</i>	
<ul style="list-style-type: none"> • Clean MRFs have high recycling efficiencies and produce high quality recycle • Dirty MRFs can be used to boost recycling after source segregation • Can be combined into an integrated waste management system 	<ul style="list-style-type: none"> • Clean MRFs require co-operation from householders to segregate waste • Dirty MRFs do not encourage householder participation in waste management • Dirty MRFs have low recycling efficiencies if not used in tandem with source segregation • Potential health risks for workers, particularly at dirty MRFs • Potential dust and odour problems
<i>Anaerobic digestion (AD)</i>	
<ul style="list-style-type: none"> • Makes landfills easier to manage by removing organic wastes • Enables all of the gas produced by biodegradation to be collected for use • Produces fertiliser and soil conditioners • Relatively low capital costs • Complies with Animal By-Products legislation for treatment of kitchen waste 	<ul style="list-style-type: none"> • Has yet to establish a track record in the UK • Requires pre-processing as contaminants can cause operational difficulties • Requires market development for products • Can have odour impacts/problems • Liquid produced can contain relatively high concentrations of metals, nitrogen, organics



Advantages	Disadvantages
<i>Energy from Waste (EfW)</i>	
<ul style="list-style-type: none"> • Can handle mixed wastes or source segregated wastes. • Reduces the weight (by up to 75 per cent) and volume (by up to 90 per cent) of waste • Gasification / pyrolysis can be operated on a range of scales or on a modular basis • Destroys / detoxifies wastes that may cause problems in landfill. • Energy recovery can replace fossil fuel use 	<ul style="list-style-type: none"> • Requires waste to be pre-treated (unless mass burn incineration is used) • Mass burn may reduce the flexibility of waste management plans due to the need for long-term waste disposal contracts. • Capital intensive - most economic when operated on a large scale • Low public acceptance due to perceived health risks • Removing recyclables may reduce the calorific value, affecting performance • Seen as a waste of resources • Residues require further treatment / disposal
<i>Mechanical Biological Treatment</i>	
<ul style="list-style-type: none"> • Increases recovery of recyclables without having to increase kerbside collections • Reduces volume of waste • Sorting and separation phases can remove hazardous household waste items. • Reduces biodegradable content of waste and stabilises the residue • Plants tend to be modular, so can be small-scale or larger by adding / subtracting units 	<ul style="list-style-type: none"> • Recyclables are not of the same quality or value as those from kerbside / bring sites • Need to develop markets for the products • Part of the residue is biodegradable and may be classed as BMW by the <i>Landfill Directive</i>. • Residue is likely to be subject to Animal By-Products legislation

Waste management planning

2.21 The planning framework for making municipal waste management decisions in Wales is based on a series of inter-linked legislative requirements, policy documents, guidance and plans including:

- *Waste Framework Directive*¹⁷ – requires Member States to establish an integrated and adequate network of waste facilities;
- *Wise about Waste* – Welsh Assembly Government's waste strategy;
- *People, Places, Futures: The Wales Spatial Plan*¹⁸ - sets out a strategic framework to guide future development and policies for land use planning;
- *Planning Policy Wales*¹⁹ - sets out the Welsh Assembly Government's land use planning policies;
- *Technical Advice Note 21: Waste*²⁰ (TAN 21) - provides more detailed guidance for local authorities on the development of Regional Waste Plans and specific requirements to be undertaken when preparing local authority development plans;
- Regional Waste Plans (RWPs) – voluntary joint arrangements between local authorities in three regions: north, south east and south west Wales covering all waste types. The Welsh Assembly Government considers RWPs to be essential to implement *Wise about Waste* and to meet EU waste management obligations;
- Municipal Waste Management Strategies – voluntary strategies, prepared by individual local authorities²¹, to identify their plans to meet municipal waste management targets;
- Unitary Development Plans (UDP) / Local Development Plans (LDP) prepared by individual local authorities for all development types.²² In respect of waste, UDPs should indicate suitable locations / sites or

¹⁷*Council Directive of 15 July 1975 on waste (75/442/EEC)* (as amended), <http://europa.eu.int/comm/environment/waste/legislation/a.htm>


¹⁸*People, Places, Futures: The Wales Spatial Plan, (2004)*, Welsh Assembly Government, <http://www.wales.gov.uk/themesspatialplan/index.htm>

¹⁹*Planning Policy Wales, (2002)*, Welsh Assembly Government, <http://www.wales.gov.uk/subiplanning/content/planningpolicy/final/contents-e.htm>

²⁰*Technical Advice Note 21: Waste, (2001)*, Welsh Assembly Government, <http://www.wales.gov.uk/subiplanning/content/tans/tan21/contents-e.htm>

²¹in accordance with *Guidance on Municipal Waste Management Strategies in Wales (2002)*, Welsh Assembly Government, <http://www.wales.gov.uk/subienviroment/11>

²²Under Part 6 of the *Planning and Compulsory Purchase Act 2004*, UDPs are to be replaced by LDPs, which will be simpler and more concise and will focus on the local planning authority's objectives for the use and development of land in their area and general policies for implementing these objectives. Specific allocations will be necessary to ensure that development needs are met. There will be scope for more detailed policies (including site specific proposals).



types of location / areas that may be acceptable for waste facilities. UDPs should be in line with RWPs and municipal waste management strategies.²³

2.22 Local planning authorities have the main role in facilitating the development of waste management infrastructure. The development of the waste management infrastructure itself will largely be delivered by the private sector, the community / voluntary sector and, potentially, local authorities themselves. Guidance recognises that good data on waste production and the capacities of existing and future waste facilities is essential, for both the development of regional and local plans and also to secure investment in the new facilities that are required to deliver those plans.

2.23 One of the key issues to be addressed by the planning system is the location of new waste management facilities, particularly given their often controversial nature. TAN 21 states:

2.15 A key element in the RWP will be agreement of the apportionment of facilities to local authorities. It would be for the individual local authorities to determine actual locations of facilities and make provisions in their UDP, and the RWP to specify the type, capacity and approximate location or type of location.


2.16 The identification of areas or types of location for future facilities will be of particular importance. The RWP would not allocate sites for facilities, but it will indicate areas of need and search for potential sites for future facilities, and where possible, a choice of locations that once agreed in the due local political process and in recognition of existing contractual arrangements, would serve the region. In some cases (for instance if the waste to be treated is of an infrequently arising type) a facility might serve other regions also.

2.24 Further clarification from the Welsh Assembly Government on the development of UDPs states:

It is considered that the most suitable locations for new waste facilities are on general industrial areas until further agreement is reached about the location of regional or national scale waste management facilities...²⁴

²³As at the end of March 2005, only two local authorities had adopted UDPs – Wrexham and Denbighshire.

²⁴*Policy Clarification Note: Unitary Development Plans–Waste Policies and Hazardous Waste Planning Applications*, Welsh Assembly Government, 28 May 2004, <http://www.wales.gov.uk/subiplanning/content/circulars/waste-sub-let-e.htm>



2.25 All three RWPs have been prepared and agreed by the Welsh Assembly Government.²⁵ All plans have been subject to Sustainable Waste Management Option appraisal, Health Impact Assessments and public consultation. All preferred options involve maximising recycling and composting. The north and south-west Wales RWPs propose the treatment of residual waste with a combination of energy from waste, MBT and landfill, while the south east RWP opts for MBT, with the residual waste from this process being sent to landfill or used as Refuse Derived Fuel.

2.26 The RWPs have identified the most sustainable waste management options within regions and the capacities of the facilities needed, but have not identified potentially suitable sites for such facilities. All RWPs contain guidance on the type of location that would be suitable for the types of waste facilities identified under the preferred treatment options and all plans report positive outcomes in terms of active co-operation between authorities in the preparation of the plans.

2.27 All local authorities' municipal waste management strategies have recently been subject to a review by consultants on behalf of the Welsh Assembly Government, although the results of this review are not available at the time of writing.

Waste management funding

2.28 Funding for waste management in Wales is available from the Welsh Assembly Government and a range of other sources, and is outlined below.

Local authority funding

2.29 Local authorities have a number of statutory waste collection and disposal functions, as set out in the *Environmental Protection Act 1990*. These include collecting waste (including recyclables) and providing civic amenity sites, where householders can take household waste for recycling, composting and disposal. These functions are funded mainly by the Welsh Assembly Government's Revenue Support Grant (RSG), but also by a portion of local authority Council Tax. The RSG is not hypothecated to any particular service, so local authorities can spend it according to their own priorities.

²⁵All RWPs can be found on the Wales Regional Waste Plans website at: <http://www.walesregionalwastepans.gov.uk>

2.30 Since 2001-02, the Welsh Assembly Government has provided additional funding to local authorities via a Specific Sustainable Waste Management Grant, which may only be spent on certain activities relating to waste management and recycling and that are additional to activities funded by the RSG. It may not be used to fund energy from waste projects.²⁶ Between 2001-02 and 2004-05 the Welsh Assembly Government provided specific grant and supplementary credit approvals²⁷ of £63.5 million to local authorities. A further £93 million is being made available for 2005-08.²⁸

2.31 In 2004, the Welsh Assembly Government introduced a grant brokering system to allow local authorities to spend more than their Specific Sustainable Waste Management Grant allocation by borrowing from underspending authorities. This ensures that underspent monies are not lost.

2.32 Local authorities may also use Performance Incentive Grant money to fund waste management activities. Performance Incentive Grant is paid to local authorities on the basis of voluntary policy agreements between an individual local authority and the Welsh Assembly Government.

2.33 Those local authorities charged as lead authorities for Regional Waste Groups receive additional funding to support this role.

2.34 Table 2 below shows the amount spent by local authorities on the collection and disposal of municipal waste between 2001-02 and 2003-04, including funding from Revenue Support Grant, Council Tax and all other grants.

Table 2 Local authority expenditure for refuse collection and disposal, 2001-02 to 2003-04 (includes all sources of revenue)

£000's

Year	Refuse collection	Refuse disposal	Year total
2001-02	53,062	48,090	101,152
2002-03	59,286	54,175	113,461
2003-04	69,852	61,601	131,453
Total	182,200	163,866	346,066

Source: Welsh Assembly Government

²⁶However, from 2004-05, the grant may be used for anaerobic digestion projects where the materials digested are separately collected food and green wastes and where the digestate is subsequently composted.

²⁷£3 million of supplementary credit approvals were provided in 2002-03 and £5 million in 2003-04.

²⁸£93 million to make recycling easier for all, (2005), Welsh Assembly Government press release, 12 April 2005, http://www.wales.gov.uk/servlet/PressReleaseBySubject?area_code=37D4D81E0007C793000006320000000&document_code=N0000000000000000000000000030125&_arch=null&module=dynamicpages&month_year=4|2005



Other sources of funding

2.35 Funding that can be accessed by local authorities, the private sector and community / voluntary sector (often working in partnership together) to help meet the municipal waste recycling and composting targets includes:

- Strategic Recycling Scheme – launched in 2004, it provides funding for re-use, recycling and composting projects across Wales. £6.8 million of match funding is being provided by the Welsh Assembly Government for £13 million of EU funds. Grants of up to £1.5 million are available for projects. All applications must involve the local authority and the preferred approach is for partnership working between the public, private and community sectors;
- Cleanstream - part of the Transforming Your Waste programme, funded from the UK-wide Big Lottery Fund. The scheme aims to get communities throughout Wales involved in waste re-use, recycling and composting. A total of £2.65 million is available as grants of between £25,000 and £300,000 between 2003-04 and 2006-07. All current Cleanstream grant resources have been fully allocated;
- Enfys – a £7.5 million grant scheme funded from the Big Lottery Fund. Recycling schemes may be eligible for grants of between £5,000 and £100,000. The scheme ends in 2005;
- EU funding - recycling projects may be eligible for Objective 1 funding, subject to relevant eligibility criteria being met;
- the Welsh Assembly Government's Community Facilities and Activities Programme / Physical Regeneration Fund – schemes to support the regeneration of communities, either to community / voluntary organisations or local authorities.
- other Welsh Assembly Government funding – used, for example, to fund organisations that can directly or indirectly contribute to the delivery of recycling and landfill diversion targets e.g. Cylch (the Wales Community Recycling Network), Waste Awareness Wales and the Waste and Resources Action Programme (WRAP);
- businesses can access a range of grants that could be used for waste management projects, such as Regional Selective Assistance, Assembly Investment Grant and the Welsh Development Agency's Environmental Goods and Services grants.

Public opinion of waste and waste management²⁹

2.36 Awareness of waste, household waste and disposal method is low in the UK. People are generally concerned about the environment, but waste ranks low on their list of concerns, compared with global issues such as climate change, unless specifically prompted about waste issues. Householders are more concerned with 'mess' than with waste, so items are unconsciously discarded as part of an overall effort to keep things 'tidy'.

2.37 Public awareness of the costs of waste disposal is also poor, with most people believing that the cost of waste collection and disposal is much higher than it actually is. It is also a commonly held belief that recycling saves councils money.

2.38 Public acceptance of recycling, composting and re-use is high, with up to 98 per cent considering recycling to be a worthwhile activity, but people have little 'ownership' of waste management. They identify certain factors with increased waste generation, e.g. consumerism, population growth, packaging, but few link their own behaviour to these issues.

2.39 Waste is often seen as somebody else's problem, generally the council's, while producing less waste is often not seen as their responsibility or as something over which they have little control. People feel they can do more with the right help and few believe the government does enough to promote recycling.

2.40 Charging for waste disposal based on the amount of waste produced, often termed 'pay as you throw' (PAYT), tends to be unpopular with householders due to issues of equity and fairness, especially for those with families or from low-income households. It is also seen as paying for the same thing twice due to waste disposal charges being part of Council Tax charges. Support for variable charging increases if it is only introduced after measures to make recycling easier have been brought in and charges are only levied on unsorted or residual waste.

²⁹*Household waste behaviour in London, (2001)*, MORI & Brook Lyndhurst, Resource Recovery Forum
Public attitudes towards recycling and waste management, (2002), MORI, Cabinet Office
Public attitudes to waste and waste management, (2000), Burnley, S. & Parfitt, J., Department of Environmental and Mechanical Engineering, The Open University
Public Attitudes to Reduce, Reuse, Recycle in Scotland, Waste Aware Scotland
Environment Agency Household Waste Survey 2002, (2002), Environment Agency
Gravesham blue bag trail end of project report, Sweatman, I, Resource Recovery Forum
Assessment of kerbside collection schemes for dry recyclables, (2001), Waste Research Limited & AEA
Technology, Resource Recovery Forum
Effective implementation of a marketing communications strategy for kerbside recycling: a case study from Rushcliffe, UK, (2004), Mee, N., Clewes, D., Phillip, P.S. & Read, A.D., Resources, Conservation and Recycling, 42, pp1-26



2.41 There is a strong correlation between the environment and recycling, although environmental reasons alone are not a strong enough motivation to recycle for most people. When asked, most people state that they would recycle if it was made easier e.g. provision of containers by the council, kerbside collection, more recycling points, more information about how, where and what to recycle, etc.

2.42 While most people think that more people should recycle, they also have deep-seated reasons as to why they personally should not or could not recycle more. Commonly stated reasons for not recycling or taking part in recycling schemes include:


- lack of interest;
- lack of storage space;
- lack of time to separate waste;
- not having enough waste to make it worthwhile.

2.43 The importance of information, education and awareness cannot be overstated in achieving high recycling participation rates and high waste diversion rates. Low rates of recycling can be due to the public not being fully aware of what can and cannot be recycled, while myths about recycling persist and continue to undermine the recycling message. Education needs to be sustained to ensure participation and diversion remains high.³⁰

2.44 People are keen to know that their efforts are being appreciated and are actually making a difference. Publicity is important in providing motivation and reinforcing positive behaviour.³¹ Feedback and personally relevant messages work best at reinforcing positive recycling behaviour. Most people would make more of an effort if they could be sure that it was making a difference.

³⁰ *Recycling achievement in North America, (2000)*, Enviro Consulting, Resource Recovery Forum

³¹ *Public participation in plastics recycling schemes, (1998)*, McDonald, S. & Ball, R., Resources, Conservation and Recycling, 22, pp123-141



2.45 National and regional campaigns such as 'slim your bin' and 'rethink rubbish' have not produced measurable behavioural changes.³² Schemes should highlight local as well as global issues, as concern for the local community is a strong influence.³³ Most people (two thirds) do not know what happens to the material they collect for recycling and a similar proportion claim that they would recycle more if they had a better understanding of the environmental benefits.

³²*Government targets versus public participation: bridging the gap*, (2003), Tucker, P. in Sustainable Waste Management, Proceedings of the International Symposium held at the University of Dundee on 9-11 September 2003, ed Dhir, R.K., Newlands, M.D. & Dyer, T.D., Thomas Telford, pp225-234

³³*Using the Theory of Planned Behaviour to investigate the determinants of recycling behaviour: a case study from Brixworth, UK*, (2004), Tonglet, M., Phillips, P.S. & Read, A.D., Resources, Conservation and Recycling, 41, pp191-214



3 The Inquiry

3.1 The Committee heard evidence in formal Committee meetings between November 2004 and April 2005.

3.2 The Minister for Environment, Planning and Countryside presented evidence, as did officials from the Waste Policy Unit and the Waste Strategy Unit of the Welsh Assembly Government. Evidence was also heard from representatives of the waste industry, the community sector, organisations promoting the use of and markets for recycle and Environment Agency Wales.

3.3 A consultation letter was sent to every local authority in Wales as part of the inquiry. A copy of the letter is at Annex 2. Written responses were received from nine local authorities and evidence was presented to the Committee by the Welsh Local Government Association (WLGA).

3.4 In addition, Committee members visited several waste management and recycling sites across Wales to gather information and discuss issues directly with those working in the industry.

3.5 A full list of contributors to the inquiry, including the sites visited, can be found at Annex 3 and a summary of the evidence at Annex 4.



4 Conclusions and Recommendations

4.1 The Committee welcomes the achievement of local authorities in meeting the all-Wales target of recycling and composting 15 per cent of municipal waste by 2003-04, which represents a considerable achievement by local authorities and the Welsh Assembly Government in a relatively short space of time. Nonetheless, the Committee is disappointed that nine local authorities missed their individual 15 per cent targets.

4.2 Despite the overall increase in performance, Wales still faces considerable challenges if it is to increase the rate of recycling and composting from 16 per cent³⁴ to 40 per cent by 2010. This will be much more difficult than progress made to date, but the Committee believes that ultimately, Wales should aim to exceed this target.

4.3 Based on the evidence received, the Committee considers that the key issues that need to be addressed are:

- minimising the production of municipal waste;
- encouraging higher recycling and composting participation levels among the public by making it as easy to recycle and compost as possible;
- putting in place and funding the necessary regional and local infrastructure to deal with the waste collected, and, associated with this, deciding where new waste facilities should be located, who should provide them, and overcoming public anxiety to their development. As a consequence, there needs to be a clear understanding of the regional and local infrastructure necessary to deliver targets;
- ensuring that markets are available for the recyclables and compost produced.

4.4 While progress has been made on many of these issues, more needs to be done. Having considered the evidence, the Committee makes the following recommendations.

³⁴ Rate measured at 2003-04 by NAWPI data



Targets – recycling / landfill / composting / waste minimisation

4.5 The Committee considers that there is a danger that the Welsh Assembly Government's 2009-10 recycling / composting target could be missed, and that as a consequence, its statutory landfill diversion target may also be missed.

4.6 The Committee considers that further action is needed to ensure that the rates of recycling and composting at poor-performing authorities are improved. It also believes that it is important for local authorities, in partnership with key stakeholders such as the community, voluntary and private sectors, to plan for the delivery of longer-term targets. Furthermore, sustainable waste management could be improved by removing some of the barriers to recycling and home composting that currently exist.

4.7 The Committee considers that the following recommendations would contribute to meeting, or exceeding, future targets:

Recommendation 1: That the Welsh Assembly Government identifies local authorities that may struggle to meet the 40 per cent recycling / composting target for 2009–10 and works with them to ensure appropriate measures are put in place to achieve the target.

Recommendation 2: That the Welsh Assembly Government ensures that municipal waste management strategies are used as the main tool for individual local authorities to plan for their waste management needs and the delivery of Welsh Assembly Government and European targets.

Recommendation 3: That local authorities fully utilise source segregation of recyclable materials and make this as user-friendly as possible. (In making this recommendation, the Committee agrees with the Welsh Assembly Government's view that while householders should segregate recyclable material at source, local authorities should be allowed the flexibility to choose how segregated materials are collected, e.g. kerbside sorting, clean MRF or bring sites).

Recommendation 4: That the Welsh Assembly Government removes the perverse incentive for local authorities not to encourage home composting, and develops a mechanism that allows home composting to count towards local authority landfill diversion targets. Local authorities should encourage householders to compost at home.



Recommendation 5: That the Welsh Assembly Government introduces material-specific targets for recycling of bulky but low weight materials such as plastics.

Recommendation 6: That local authorities continue to work in partnership with the community, voluntary and private sectors in developing minimisation, re-use and recycling schemes in their areas, recognising the particular skills and expertise that these organisations can contribute to the delivery of targets.


Recommendation 7: That the Welsh Assembly Government makes representations to the UK Government to introduce measures to promote waste minimisation / penalise unnecessary waste creation. The Committee believes that the UK Government should consider producer-responsibility levies and tax reductions on more environmentally-friendly products. The UK Government's response should be made available to the Committee.

Planning / regional working

4.8 The Committee recognises the importance of the planning process for delivering the regional and local infrastructure needed to meet targets in 2009-10 and beyond. The Committee is concerned that much of this infrastructure, particularly at the regional level, is not yet in place. This is of particular concern to the Committee given the potential scarcity of landfill capacity in certain parts of Wales that has been identified by Environment Agency Wales.

4.9 The Committee welcomes the regional planning process that has been initiated by the Welsh Assembly Government and local authorities. While recognising that it is a step in the right direction, the Committee considers that it has not been successful in identifying the locations of the new facilities that are needed, and accordingly enabling firm commitments to be put in place for their development. In addition, the Committee is not convinced that *Technical Advice Note 21: Waste* (and the supplementary policy clarification note) provides sufficient direction and clarity so that local authorities and the private sector have the guidance they need to deliver regional waste facilities.

4.10 The Committee believes it is essential for the Welsh Assembly Government to provide a clear, long-term vision, and guidance, on the types of waste facilities and technologies that should be used to deliver recycling, composting and landfill diversion targets. This should be based on



current and forthcoming UK and EU legislation. Such an approach should aim to provide more long-term certainty for local authorities, the private sector and community / voluntary sector, to enable them to invest and plan for new facilities with confidence. It should also aim to help improve the public's understanding of various waste management options.

4.11 The Committee endorses the recommendation of the National Assembly's Audit Committee that Regional Waste Plans should be revised in order to indicate the types of locations where regional facilities could be situated, and that the Welsh Assembly Government issues direction to local authorities to ensure Unitary / Local Development Plans identify potential sites for waste management activities.

4.12 In view of the Assembly's statutory duty to promote sustainable development, the Committee also considers that the sustainability of all waste management options needs to be assessed. This would enable comparisons to be made, for example, between sending plastic to China for use and local reprocessing.

4.13 The Committee recognises that waste facilities are unpopular with the public and can face difficulties in receiving planning permission. Nonetheless, important decisions need to be taken now, and cannot be delayed any longer. The Committee is in no doubt that facilities are needed, which must be located somewhere.

Recommendation 8: That Regional Waste Plans should be made statutory.

Recommendation 9: That, in the meantime, Regional Waste Plans should be revised to ensure they identify suitable geographical locations for regional facilities and that the Welsh Assembly Government provides local authorities with clearer guidance to deliver this objective.

Recommendation 10: That private sector engagement with local authorities should be promoted more vigorously via the Wales Waste Forum, Welsh Local Government Association and regional waste groups.

Recommendation 11: That the Welsh Assembly Government provides clear advice and guidance on the sustainability of different waste management options.



Recommendation 12: That the Welsh Assembly Government provides clearer guidelines to local authorities on:

- i. which technologies it would like to see operating in Wales and which it wishes to discourage;
- ii. which technologies should be used to deal with residual waste until it is possible to eliminate it.

Recommendation 13: That the Welsh Assembly Government provides assistance and guidance to local authorities on how best practice from elsewhere in the UK, Europe and worldwide can be applied in Wales.

Funding

4.14 The Committee acknowledges the significant funding that the Welsh Assembly Government has provided to local authorities and that this has been a major factor in securing higher levels of recycling and composting. The Committee considers that meeting the targets for 2009–10 and beyond will require substantial capital and operational funding, and at significantly higher levels than currently provided.

Recommendation 14: That the Welsh Assembly Government provides an indication to local authorities of the level of capital and operational funding that will be available to them until at least 2013, in order to enable long-term planning and business security.

Recommendation 15: That the Welsh Assembly Government provides regional hypothecation of some waste management funding to encourage local authorities to work together on developing regional facilities, especially for more specialised facilities such as composting of kitchen waste.

Recommendation 16: That the Welsh Assembly Government provides sufficient funding to ensure that local authorities are able to roll out kerbside collection systems to a level consistent with securing the delivery of recycling, composting and landfill diversion targets.

Recommendation 17: That the Welsh Assembly Government provides a central source of advice to local authorities on legal, contractual and funding issues to enable them to access expertise, reduce expenditure and improve success in securing external sources of funding, including European funds.



Public Awareness

4.15 The Committee considers that education and changing public attitudes and behaviour is vitally important and that successful outcomes can only be achieved if recycling is made easy. The Committee recognises the valuable role that many organisations, including the community and voluntary sectors, play in raising public awareness, and the positive impact this can have on increasing public participation in recycling and composting schemes. The Committee believes that ensuring there is community buy-in to new waste facilities, together with an understanding of what those facilities will do and how they can benefit communities, may help overcome the planning difficulties often associated with them. Public awareness and education is therefore essential.

Recommendation 18: That sustained, local, targeted education should be introduced to reduce, re-use and recycle. Liaison officers should be appointed in each local authority to visit residents and schools, to run road shows, etc., to increase householders' knowledge of what they can do, what can be done with recycled materials and how individuals' actions impact on the local environment and community. Initiatives should include the use of incentive schemes and positive feedback on how well schemes are doing and how they benefit the local community.

Recommendation 19: That the Welsh Assembly Government encourages more schools to be part of the 'eco-schools' programme run by Keep Wales Tidy. The benefits of the programme should be more widely promoted in terms of education, compatibility with curricula and the potential for cost savings for the school.

Recommendation 20: That the Welsh Assembly Government works with Environment Agency Wales and local authorities to build public confidence in the monitoring and pollution prevention processes in place for waste treatment facilities. This could include education initiatives in schools and communities near such facilities, tours of facilities, community liaison officers and working with schools / eco-schools.

Recommendation 21: That the Welsh Assembly Government maintains funding of organisations that contribute to promoting recycling and composting.

Markets / business support

4.16 The Committee feels strongly that it is important to create an environment in which it is more commercially viable for companies to operate responsibly with regard to recycling and re-use. It agrees with those that suggested there is a need to ensure the creation of a sustainable loop including recyclers, processors and manufacturers that will not change if the market changes, and believes that such an approach offers significant training and job creation opportunities. The Committee considers that local authorities and other public sector bodies should be encouraged to work with Welsh companies to provide the goods and services they need.

Recommendation 22: That the Welsh Assembly Government encourages and supports business to create recycled products and markets by:

- i. providing greater financial and business support, including research and development funding, for new and existing businesses in Wales to use recycle from the municipal waste stream, create recycled products and develop markets for recycled goods and services;
- ii. encouraging business to apply for European funding to help develop their businesses;
- ii. supporting the development of a recycling facility for farm plastics and a market for the products. (While not directly within the remit of the inquiry, the Committee recognises that agricultural waste and farm plastics are important issues).

Recommendation 23: That the Welsh Assembly Government provides help and advice to public sector organisations, including local authorities, to procure more recycled products and that this should be built into the normal procurement process. The Welsh Assembly Government should be an exemplar in procuring recycled products.

Recommendation 24: That the Welsh Assembly Government encourages and supports businesses to reduce, re-use and recycle waste by:

- i. working with Wales-based businesses, particularly large retailers, to encourage waste minimisation, consumer education and provision of recycling facilities;
- ii. providing advice and support for Wales-based companies to reduce waste and make the best use of waste, in particular by providing a central source of advice for businesses / organisations on how to audit waste streams, reduce and recycle waste and make cost savings.



Research and development

4.17 To help with the delivery of longer-term targets, the Committee makes the following recommendation:

Recommendation 25: That the Welsh Assembly Government

- i. encourages the setting up of exemplar / demonstration projects to illustrate to local authorities and the general public how different technologies operate;
- ii. funds research and development and commercial-scale field trials / demonstration projects for potential treatment options for residual waste, until it is possible to eliminate it, in order to inform local authority choices;
- iii. funds research and development into the innovative use of recycled materials to make new products.

Recommendations of recent waste management reports in Wales

National Assembly for Wales Audit Committee: Environment Agency Wales: Regulation of waste management: Committee Report (2) 01-05, (2005), Audit Committee.

- i. in future, when there is new legislation or when legislation is updated, the Assembly Government seeks to ensure that all relevant powers are devolved to the Assembly;
- ii. the Assembly Government continues to encourage recycling and diversion of municipal waste away from landfill, but also focuses its efforts on reducing the 24 million tonnes of waste generated by other waste streams, particularly agricultural waste;
- iii. regional waste plans are revised in order to indicate the types of locations where regional facilities could be situated. We further recommend that the Assembly Government issues direction to local authorities to ensure that Unitary / Local Development Plans identify potential sites for waste management activities;
- iv. the Assembly Government and the Agency give consideration to identifying how the obstacle of inadequate data on site capacity might be overcome;
- v. as part of the Assembly Government's waste awareness campaign, it considers how it might better educate and engage the public on waste disposal options;
- vi. the Assembly Government, with the assistance of the Agency, give due consideration to the findings of the research project on health and ensure that health is made an essential consideration of the planning process in relation to waste facilities and other developments which could have a potential effect on the environment and human health;
- vii. the Agency and the Assembly Government regularly update businesses involved in the production and management of hazardous waste on the current situation in regard to hazardous waste disposal in Wales;
- viii. in carrying out its licensing and permitting functions the Agency keeps in view the risk of protracted public consultations leading to exorbitant costs being placed on the operator and thus increasing the risk of charges acting as a disincentive to opening much needed waste disposal and treatment facilities;

- ix. Environment Agency Wales carries out a detailed review of its exemptions register and earmarks those activities which are of greatest risk to the environment and ensure that they are afforded proportionate regulatory control both before and after the new regulations take effect;
- x. the Assembly Government ensures that all local authorities register and use the *Flycapture* system without further delay;
- xi. the Assembly Government and Environment Agency Wales consider whether distribution of the leaflets through local authorities is the most effective method of educating businesses on the waste duty of care system and consider other methods of raising awareness; and
- xii. the Agency and the Assembly Government undertake a review of environmental sentencing in Wales and seek to influence the appropriate bodies in Westminster. We also recommend that the Agency develops the 'Costing the Earth' toolkit in a Welsh context to raise awareness of environmental crime with Welsh magistrates and the judiciary.

Waste Management, A Challenging Agenda for the Welsh Public Sector (2005), Themed Paper 9, Audit Commission in Wales

Issue	Action required	Responsibility
<p>Wales is continuing to produce too much waste. We are producing more waste than ever before. This is a problem largely outside of local authority influence.</p>	<p>This issue is not a Wales specific issue. The problem extends across the UK. A legislative lead is needed from the UK government. Nevertheless, the Assembly can help to address this issue by identifying and promoting effective waste-minimisation measures, (for example through its Waste Awareness Wales Campaign, which was set up partly for this purpose). This will help householders create less waste and provide businesses with an incentive to, for example, produce goods with less packaging.</p>	<p>UK Government Welsh Assembly Government Waste producers</p>



Issue	Action required	Responsibility
<p>The proposed Local Development Plan proposals may delay investment decisions on major infrastructure until 2010. However investment is necessary now if the EC diversion targets are to be achieved. The planning process is therefore out of step with Wales' waste needs.</p>	<p>Pending the production of Local Development Plans, the Welsh Assembly Government needs to ensure that local authorities have planned for the development of an effective waste infrastructure within their Unitary Development Plans or Local Development Plans.</p>	<p>Welsh Assembly Government</p>
<p>Despite its importance waste management is still not given the priority it deserves by some authorities.</p>	<p>Addressing this issue will require more robust risk assessments and member awareness raising.</p>	<p>Local authorities Regulators</p>
<p>Some Welsh authorities continue to develop waste management policy without reference to wider sustainability issues. Waste management is one part of sustainable development and is tied to social, economic and environmental regeneration. Effective policy is dependent on waste management being dealt with as part of this wider agenda.</p>	<p>Authorities need to ensure that waste management policy is addressed within the overall 'sustainability' agenda. It is essential that plans and policies are integrated and consistent. Authorities need to ensure that waste management policy is an integral part of their Community Strategies.</p>	<p>Local authorities</p>

Issue	Action required	Responsibility
<p>The quality of Local Authority Municipal Waste Management Strategies is very variable. Some of these strategies are inadequate to address the issues being faced.</p>	<p>It is essential that these Strategies are prepared to a consistently high standard. To achieve this it is important that:</p> <ul style="list-style-type: none"> • The Welsh Assembly Government issues more detailed guidance on the expected content of these strategies; • authorities devote more resource to refining and developing the strategies; • regulators review the robustness of the Plans and report accordingly. 	<p>Welsh Assembly Government Local authorities Regulators</p>
<p>Waste management services tend to be organised on an authority area basis. Regional working needs to be pursued more vigorously and alternative service models and need to be considered.</p>	<p>The opportunity for joint and regional waste planning and procurement needs to be explored urgently if public funds are not to be unnecessarily used in duplicated feasibility studies and the possible over-provision of facilities. Such a review should encompass not only models for service delivery but also address whether the current structural framework, (organisationally based on 22 local authorities), is the most effective for the delivery of sustainable waste management in Wales.</p> <p>Welsh Assembly Government has proposed the development of an information website and this could also provide an important conduit to facilitate regional working.</p>	<p>Local authorities Welsh Assembly Government Regulators</p>



Issue	Action required	Responsibility
<p>Landfill capacity is very limited throughout Wales and in some areas the situation is becoming critical.</p>	<p>In the long term this can only be addressed by diverting waste from landfill.</p> <p>In the short term, there is an urgent need to examine where there is still capacity and develop a strategic approach across Wales regarding the use of this capacity.</p>	<p>Welsh Assembly Government Local authorities Environment Agency</p>
<p>Welsh local authorities are facing extremely rigorous targets for diverting waste from landfill. There is significant variation in the performance of Welsh authorities. Nine of the twenty-two Welsh local authorities failed to fully meet the 2003/2004 Wales waste strategy target. Future targets are even more demanding. Failure to achieve the EC targets may result in substantial financial penalties.</p>	<p>Urgent action is needed at those authorities which have failed to achieve the first target. These authorities will need to address the issue; they will need to review their strategy for addressing the targets and should seek to learn from those authorities which have achieved significant improvement. Regulators will need to work with these authorities to ensure appropriate actions are put in place to achieve the future targets.</p>	<p>Local authorities Regulators</p>

Issue	Action required	Responsibility
<p>The performance data on waste (especially cost data) held by many local authorities is poor. This is impacting on their ability to develop effective waste strategies. Furthermore, performance management of waste management services is underdeveloped at a number of authorities.</p>	<p>Resources need to be provided within local authorities to develop better information systems. Local authorities need to collect and analyse data relating to litter bins, collection routes, participation in waste schemes, costs of collection, recycling and disposal schemes, tonnages and fly-tipping.</p> <p>Authorities need to do more to develop robust performance management frameworks. This may include benchmarking with other authorities or engaging in peer review.</p>	<p>Local authorities Regulators</p>
<p>Authorities in Wales have worked hard to improve their waste services. However, improvement could have been faster if authorities had greater access to examples of good practice from sources in the UK and internationally, highlighting what works and how it can be implemented.</p>	<p>Regulators, government agencies and academic research institutions have a key role to play in this area, gathering and collating examples of good practice, facilitating benchmarking and encouraging Welsh authorities to adopt a more international focus.</p>	<p>Regulators Welsh Assembly Government Government Agencies Research and professional institutions</p>
<p>Whilst much work has been undertaken to improve compost quality, the quality of the end product from some facilities is still variable due to the processes employed, particularly those which are not seeking to achieve the British Standard PAS 100 accreditation.</p>	<p>Compost processes must be designed, developed and refined to ensure that composting inputs meet the PAS 100 quality standard developed by WRAP in association with the Composting Association.</p> <p>Local authorities are encouraged to join the Composting Association.</p>	<p>Local authorities, WRAP Other research organisations Local Authorities</p>



Issue	Action required	Responsibility
Public perception of local authority street cleansing performance is frequently at odds with reported performance.	Authorities need to develop an evaluation system that has credibility and use it.	Local authorities – potentially through benchmarking groups. LEAMS operators Keep Wales Tidy
Improvement is dependent upon understanding the customer. It is essential to ascertain what changes the customer will accept, what would encourage greater participation in waste schemes and how to provide incentives for the customer to minimise waste production. Whilst there is some good practice in this area, several authorities have done little to understand the needs of users of waste services.	Greater engagement is needed with waste service users, to gauge views of current services and to inform strategy for the future. Engagement may include customer surveys and citizen focus groups.	Local authorities Regulators
A number of Welsh local authorities have not yet sought to subject their own waste generation to rigorous scrutiny. They are not leading by example on issues such as waste minimisation and waste reuse.	<p>Authorities need to scrutinise their existing activities and determine whether there is scope to reduce waste production and to reuse waste that is currently being landfilled.</p> <p>Authorities should sign up to the Wales Public Sector Waste Minimisation Campaign and should consider applying for environmental accreditation (eg, Green Dragon) in respect of the management of their own waste.</p>	Local authorities Regulators

Issue	Action required	Responsibility
<p>There is data available on enforcement activity by local authorities in respect of dog-fouling and littering offences is variable. In some authorities enforcement action is rarely taken.</p>	<p>All authorities should put in place systems to record enforcement activity. Authorities should review whether their enforcement policy is sufficiently robust and whether it is being appropriately applied.</p>	<p>Local authorities</p>
<p>The Code of Practice on Litter and Refuse (1999) is out of date and does not reflect recent changes to society, eg the growth of the 24-hour economy.</p>	<p>The Assembly needs to update the Code in consultation with local authorities, Keep Wales Tidy and other stakeholders.</p>	<p>Welsh Assembly Government Keep Wales Tidy Local authorities</p>
<p>Fly tipping is a growing problem in many local authority areas.</p>	<p>Authorities need to approach this issue in a number of ways. Measures should include:</p> <ul style="list-style-type: none"> • robust action against offenders • promoting pride in communities • providing facilities to dispose of waste eg trade waste disposal at civic amenity sites • reporting information on the FlyCapture database. 	<p>Local authorities</p>
<p>There is limited information available on the effectiveness of some waste initiatives.</p>	<p>Greater resource needs to be devoted to assessing new waste initiatives. Work is needed to identify, consolidate and disseminate available research on innovative schemes operating outside Wales and to assess the extent to which innovations are capable of being transferred. In areas where there is limited existing research, further research should be commissioned.</p> <p>Outcomes of the monitoring scheme set up by the Welsh Assembly Government for the Welsh Exemplar schemes should be disseminated to local authorities and other key stakeholders as soon as this information is available.</p>	<p>Welsh Assembly Government Local authorities Regulators Professional and research institutions</p>



Issue	Action required	Responsibility
<p>Whilst the Welsh Assembly Government is financing the operation of WRAP and has contributed £1 million to the Objective 1 Project 'Creating Welsh markets for Recyclate' (CWMre), some local authorities have indicated that they are finding it difficult to identify commercially viable markets for the recycled material they collect.</p>	<p>Local authorities need to collaborate in this area; to share notable practice and jointly contract to achieve economies of scale wherever possible, (a joint contract for glass already exists). Welsh Assembly Government, local authorities, WRAP and Wales Environment Trust (WET) need to work together to ensure that existing and new markets are better accessed in Wales and that further markets are developed where required.</p> <p>The Welsh Assembly Government, WLGA, WRAP and WET should work together to develop a survey to get an accurate picture of available recyclate markets and how well local authorities are accessing them.</p> <p>A Directory should be developed setting out existing recyclate markets and the quality requirements of processors for different recyclate materials.</p> <p>Greater interaction is needed between local authorities and WRAP to identify local authority needs and to make authorities of existing and developing markets.</p>	<p>Local authorities Welsh Assembly Government WRAP WET WDA</p> <p>Welsh Assembly Government WRAP WET Wales Audit Office</p> <p>Welsh Assembly Government WRAP WET</p> <p>Local authorities WRAP</p>
<p>Recycling rates tend to be lower in areas of high deprivation.</p>	<p>Authorities need to consider adopting differing approaches to recycling within their local areas to maximise participation in all areas, ie a single recycling scheme across an entire local authority area may not be appropriate.</p>	<p>Welsh Assembly Government Local authorities Regulators Research Institutions</p>



Consultation letter sent to Welsh local authorities

Pwyllgor yr Amgylchedd, Cynllunio a Chefn Gwlad
Environment, Planning and Countryside Committee
Bae Caerdydd / Cardiff Bay
Caerdydd / Cardiff CF99 1NA

To: Chief Executives of Local Authorities

5 January 2005


Dear Colleague,

The Environment, Planning and Countryside Committee of the National Assembly for Wales is undertaking an inquiry into progress in meeting recycling and landfill diversion targets and is interested in hearing the views of local authorities in Wales.

The terms of reference for the inquiry are to:

- consider progress in meeting the recycling and composting targets set out in *Wise about Waste* by considering policy instruments used for delivery including the planning system, sources and uses of funding, and the role of stakeholders;
- consider the need for any additional measures required to ensure that Wales meets its statutory obligations under the Landfill Directive;
- make recommendations.

The Committee has considered a preliminary draft report 'Progress in Delivering *Wise About Waste*, the National Waste Strategy for Wales' and heard evidence from the Welsh Local Government Association on 2 December.



To assist with the Committee's analysis, we would be particularly grateful if you would provide your authority's views on the following:

- the achievability of 2003-04, 2006-07 and 2009-10 recycling / composting targets and the 2010 landfill allowance target, and any challenges your authority faces in meeting these targets;
- use and effectiveness of kerbside collection and recycling to deliver targets and details of householder participation in your area;
- experience of the land use planning system in relation to waste management, with reference to local and regional waste management strategies, and managing consultation with the public on the siting of waste management facilities;
- what else needs to be done to meet the recycling and landfill diversion targets;
- funding for waste management;
- any other comments in relation to the terms of reference.

Please would you send your comments to me at the above address or by email gareth.woodhead@wales.gsi.gov.uk by 16 February 2005. If you would like any further information, do not hesitate to contact me on 029 2089 8020.

I am copying this letter to Dr Kevin Bishop at the WLGA.

Yours sincerely,

Gareth Woodhead
Deputy Committee Clerk

Information presented to the inquiry

Written submissions

The following local authorities responded to the written consultation:

- The Vale of Glamorgan Council
- Torfaen County Borough Council
- Merthyr Tydfil County Borough Council
- Bridgend County Borough Council
- Wrexham County Borough Council
- Caerphilly County Borough Council
- Newport City Council
- Powys County Council
- Gwynedd County Council

Oral evidence¹

The following individuals and organisations gave evidence to the inquiry at formal Committee meetings:


24 November 2004

- Minister for Environment, Planning and Countryside
- Dr. Andy Rees, Head of Waste Strategy Unit, Welsh Assembly Government
- Robert Williams, Head of Waste Policy Unit, Welsh Assembly Government

2 December 2004

- Cllr Delme Bowen, Cardiff City Council, for the Welsh Local Government Association
- Mark Williams, Caerphilly County Borough Council, for the Welsh Local Government Association

¹Transcripts of oral evidence presented to the Committee can be accessed on the Committee pages of the National Assembly for Wales website at: <http://www.wales.gov.uk/keypubassemcommittees/index.htm>

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- Barry Hankey, Caerphilly County Borough Council, for the Welsh Local Government Association
 - Dr Kevin Bishop, Head of Regeneration and Environment, Welsh Local Government Association
 - Rachel Jowitt, Policy Officer, Environment, Welsh Local Government Association
 - Mal Williams, Chief Executive, Wales Community Recycling Network (Cylch)

12 January 2005

- Berian Griffiths, Welsh Environmental Services Association
- Adrian Stewart, Welsh Environmental Services Association
- Mike Walker, Welsh Environmental Services Association
- Andy Gibbs, Chartered Institution of Wastes Management
- Steve Lee, Chartered Institution of Wastes Management

2 February 2005


- Steve Creed, Director of Business and Procurement, Waste and Resources Action Programme
- Richard Carter, Marketing Development Manager, Wales Environment Trust

2 March 2005

- Dr. Helen Phillips, Director, Environment Agency Wales
- Ceri Phillips, Strategy Unit Wales Manager, Environment Agency Wales
- Nic Parr, Environment Agency Wales

13 April 2005

- Cllr Delme Bowen, Cardiff City Council, for the Welsh Local Government Association
- Mark Williams, Caerphilly County Borough Council, for the Welsh Local Government Association
- Dr Kevin Bishop, Head of Regeneration and Environment, Welsh Local Government Association
- Rachel Jowitt, Policy Officer, Environment, Welsh Local Government Association

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- Dr. Andy Rees, Head of Waste Strategy Unit, Welsh Assembly Government
 - Robert Williams, Head of Waste Policy Unit, Welsh Assembly Government

21 April 2005

- Jeremy Colman, Auditor General for Wales
- Andy Phillips, Wales Audit Office
- John Scrimgeour, Wales Audit Office

Site visits

The Committee visited the following waste and recycling facilities during the course of the inquiry.

27 January 2004

- Newport Wastesavers Cleanstream® Resource Centre, Newport
- Worm Tech Ltd. in-vessel composting facility, Caerwent, Monmouthshire
- Carmarthenshire Environmental Resources Trust (CERT), Nantycaws waste management site, Carmarthenshire
- Cae Post Materials Recycling Facility (MRF), Welshpool, Powys
- Potters Recycling Centre, Welshpool, Powys

24 February 2005

Crymlyn Burrows Materials Recovery and Energy Centre (MREC), Neath Port Talbot



Summary of evidence

	WAG	WLGA	Environment Agency Wales	Wales Audit Office	Cylch	WRAP	WET	WESA	CIWM	The Vale of Glamorgan	Torfaen CBC	Merthyr Tydfil CBC	Bridgend CBC	Wrexham CBC	Caerphilly CBC	Newport City Council	Powys County Council	Gwynedd County Council	
Targets																			
40% recycling and composting will meet the Landfill Directive target	✓																		
Targets are weight based so LAs focus on heavy materials	✓			✓															
Targets and standards must be long-term and not subject to change								✓											
Policies to deliver targets																			
Municipal waste management strategies should not be statutory	✓	✓																	
Peer review will spread best practice	✓	✓																	
Stronger political leadership is needed				✓				✓			✓							✓	✓
Planning/infrastructure/capacity																			
It is up to LAs to decide on the type and location of waste facilities	✓	✓																	
It is up to the market to decide on the size of facilities	✓																		
Wales needs a plant(s) to deal with residual waste				✓						✓								✓	✓
Kerbside collection needs to be more frequent / for more materials										✓								✓	✓
LAs should identify potential sites for facilities	✓																		✓
People are biased against waste facilities	✓			✓			✓							✓					
Community buy-in to facilities reduces planning objections				✓											✓				
Regulatory and contract certainty is needed for investment			✓					✓											
The number of waste facilities is falling			✓					✓											
A presumption in favour of waste facilities should be considered			✓				✓					✓	✓						
Regional waste plans / regional working																			
Regional waste plans should be made statutory								✓											
Regional waste plans have not identified potential sites	✓	✓	✓							✓	✓			✓					✓
LAs need to work together more		✓	✓					✓	✓	✓	✓		✓						✓
Funding																			
LAs use their grants in different ways	✓	✓	✓																
Landfill tax savings should be / are reinvested in waste management	✓	✓										✓							
Subsidies are unsustainable								✓											
Levels of recycling / composting have only been reached with grant aid		✓								✓		✓							
Capital investment / more core funding is needed	✓		✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Procurement																			
LAs need more assistance in procurement and contracts		✓											✓		✓				
Smaller contracts are needed to increase community sector involvement					✓														
Larger, long-term contracts are needed for commercial certainty								✓				✓							
Energy from waste (EfW)																			
EfW will play a part in delivering 2013, 2020 and future targets	✓							✓											✓
There is a lack of public acceptability of EfW	✓		✓					✓										✓	
Composting																			
Home composting should be encouraged					✓														
Encouraging home composting undermines meeting LA targets	✓		✓																✓
Source-segregated targets dont encourage other forms of composting								✓				✓		✓					
Organic waste collections are needed even with home composting						✓	✓												
Poor public perception of composting / collecting kitchen waste							✓									✓	✓	✓	



	WAG	WLGA	Environment Agency Wales	Wales Audit Office	Cylch	WRAP	WET	WESA	GIWM	The Vale of Glamorgan	Torfaen CBC	Merthyr Tydfil CBC	Bridgend CBC	Wrexham CBC	Caerphilly CBC	Newport City Council	Powys County Council	Gwynedd County Council	
Public participation / perception																			
Recycling must be made as easy as possible	✓	✓																	
People are in favour of recycling / composting																			
Need to persuade / educate householders about waste / recycling	✓	✓	✓	✓	✓		✓	✓		✓				✓	✓	✓	✓	✓	✓
Charging should be considered long-term	✓									✓									
Waste should be segregated by the householder		✓			✓														✓
Markets																			
Local markets for recycle are not well developed yet	✓	✓				✓		✓											
Concern over markets if recycling / composting increases		✓							✓									✓	✓
Need to increase buying recycled products		✓				✓			✓										✓
Waste minimisation																			
Need to attack waste at source - producer responsibility		✓	✓	✓	✓				✓							✓	✓		
Waste minimisation pressure must be applied at UK / EU level	✓	✓			✓														
Other																			
All waste streams need to be targeted									✓										