

Municipal Solid Waste Management Strategy



Wigan Metropolitan Borough Council



October 2006

1 HEADLINE STRATEGY

This Municipal Solid Waste Management Strategy (MWMS) has been prepared by Wigan Metropolitan Borough Council. It provides a framework for managing municipal solid waste ⁽¹⁾ (MSW) between now and 2020. As a Unitary Authority, Wigan Council is responsible for providing both waste and recycling collection and disposal services. This Strategy Document has been prepared to comply with Government Guidance for the Development of Municipal Waste Management Strategies.

The Strategy sets out how the Borough intends to manage waste arisings within the context of the waste management hierarchy. In simple terms, it answers the following questions:

- Where are we now?
- Where do we want to be and when? and
- How do we get there?

This Headline Strategy is supported by a number of Annexes and Technical Appendices which explain how and why the objectives and targets contained herein have been formulated and how they will be implemented. Together, they form the MSW Strategy.

The Annexes are:

- Annex A – Baseline Report
- Annex B – Action Plan

The Technical Appendices are:

- Technical Appendix A: Legislation, Policies and Targets
- Technical Appendix B: Contextual Data
- Technical Appendix C: Summary of Options Appraisal for Residual Waste Treatment Technology

1.1 SCOPE & CONTEXT

Amongst other legal requirements, Authorities must now meet statutory recycling and composting targets for waste from households by 2006 and must progressively reduce the amount of biodegradable municipal waste (BMW) landfilled each year between 2005 and 2020. Additionally, the tax on landfilling waste is likely to almost double in the next six years. The penalty for not diverting sufficient amounts of BMW from landfill will be around £150 for each tonne over the permitted amount. This provides further incentive for reducing waste.

(1) This includes waste produced by households, as well as trade wastes, fly-tipped materials and abandoned vehicles

Other documents that should be considered with regards to the management of wastes within Wigan include:

- Regional Waste Strategy for the North West, September 2004
- Draft Wigan Unitary Development Plan, January 2006
- Draft Regional Spatial Strategy, January 2006
- Greater Manchester Development Planning Document
- Regional Technical Advisory Body Report

1.2 CURRENT PERFORMANCE - WHERE ARE WE NOW?

In 2004/05, 258,000 tonnes of municipal solid waste was generated within Wigan MBC. During this period, Wigan achieved a recycling rate of 15.04%, exceeding the statutory recycling target of 10% set by Central Government. In 2003/4 a recycling rate of 11.89% was achieved, exceeding the statutory target of 10%. In preparation for the targets set for 2005/6, kerbside collection of both paper and garden waste commenced, in addition to improvements to all Household Waste Recycling Centres (HWRCs). However, the amount of waste continues to grow in Wigan.

1.3 STRATEGY OBJECTIVES – WHERE ARE WE GOING?

In order to meet Government targets and to reduce the impact of waste on the environment, the following objectives have been developed to guide waste management within Wigan.

The way we manage waste must improve. Wigan is no different to many other areas in that we still send large quantities of waste to landfill. We are improving the way we manage waste and recycling more and more of our waste, but we have a long way to go to maximise the amount of waste we recycle.

As we move to a more sustainable way of living we must utilise our resources better including materials we have finished with or discarded.

Reducing the amount of waste must be a priority, along with increasing recycling levels to deliver a more sustainable way of life in Wigan Borough.

Our objectives are to:

- Promote home composting of green and kitchen waste through the continued provision of reduced price compost bins and support for residents composting their waste
- To undertake a comprehensive waste education and awareness programme in the Borough to explain waste management issues, and to provide information to residents of all ages, provided sufficient funding is available
- Promote the authorised recycling and disposal of commercial waste and actively enforce the new access policy for household waste recycling centres
- Promote waste minimisation and recycling in schools, council buildings, depots, and businesses

- Increase the number of bring recycling sites in the Borough to 150 to ensure that all residents have a bring site within 1km of their home
- Provide 80,000 properties with kerbside collection of garden waste by the end of 2006
- All suitable properties to be provided with the following recycling collections by the end of 2009:
 - Fortnightly collection of dry recyclables such as plastics, glass, cans and paper
 - Fortnightly collection of green waste (for properties generating green waste)
- Improve existing HWRCs to increase accessibility to recycling for residents and investigate an additional HWRC in the Borough
- Maximise cost-effective recycling and composting of waste before utilising residual waste management technology
- Utilise residual waste treatment technology (either Energy from Waste or Mechanical Biological Treatment) to meet the medium to long term requirements of the Borough under the Landfill Allowance Trading Scheme. Consideration will be given to partnership working with other authorities if this can provide demonstrable benefits to the Council

Our targets are to aim to:

- Reduce municipal waste growth to 1% by 2010 and to 0% by 2020
- Achieve statutory recycling and composting standards for 2005/6
- Recycle or compost 30% of waste by 2009/10, 33% in 2015/16 and 50% by 2020
- Recover 45% of waste by 2009/10 and 67% in 2015/16
- Reduce biodegradable municipal waste landfilled to levels consistent with those set for Wigan by the Secretary of State for the Environment, Food and Rural Affairs, pursuant to section 4 of the Waste and Emissions Trading Act
- Serve all households with a recycling collection of at least two materials by 2010 to meet the requirements of the Household Waste Recycling Act 2003
- Increase recycling at HWRCs to 60%+ by 2010

1.4 ACTION PLAN - HOW DO WE GET THERE?

Wigan will achieve the targets set out in this Strategy by working in partnership with the community, contractors and other stakeholders. Specific actions are set out in the Action Plan (*Annex B*). Wigan will update the Action Plans periodically, at least every two years, as a minimum. If the Action Plan no longer fits with the overarching Strategy, this will trigger a review of this high-level document.

This Strategy has been developed in line with the waste hierarchy – seeking waste prevention and reuse, prioritising the recycling and composting of wastes that are produced, recovering energy from residual waste and disposing only as a last resort once these options have been exhausted.

Annex A

Baseline Report

A1 MANAGING WASTE GROWTH: WASTE MINIMISATION, RECYCLING AND COMPOSTING, AND RESIDUAL WASTE MANAGEMENT

A1.1 WHERE ARE WE?

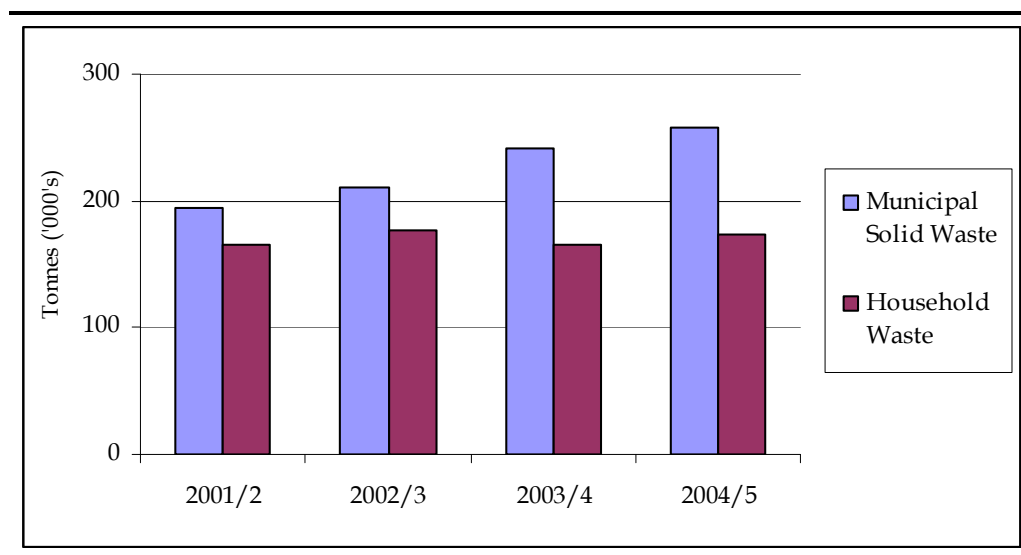
As a Unitary Authority, Wigan Council provides both waste and recycling collection and disposal services. Wigan achieved a recycling rate of 11.89% in 2003/4, exceeding the statutory recycling target of 10% set by Central Government. In preparation for the targets set for 2005/06, kerbside collection of both paper, cardboard and garden waste commenced, in addition to improvements to all Household Waste Recycling Centres (HWRCs). However, the amount of waste continues to grow in Wigan. *Table 1.1* presents the municipal waste collected over the last four years; *Figure 1.1* provides a diagrammatical representation of the information.

Table 1.1 Municipal and household waste

Year	Tonnage of Municipal Solid Waste (MSW)	Tonnage of MSW that is household waste	Percentage increase/decrease of household waste
2001/2	194,005	165,544	N/A
2002/3	210,318	177,013	+6.9%
2003/4	242,090	166,005	-6.2%
2004/5	258,056	174,172	+4.9%

Note: the drop in household waste in 2003/4 was due to a more accurate measure of household and trade refuse.

Figure 1.1 Diagrammatical representation of waste growth in Wigan MBC



A1.1.1 Waste and recycling services

Refuse collection

A weekly refuse collection service is provided to 131,518 domestic properties. In 2004/5, 109,663 tonnes of domestic waste was collected through the refuse collection service. This equates to 0.83 tonnes per household.

Kerbside paper collection

In September 2003, a trial kerbside collection scheme was introduced to one-third of properties in the Borough. This was subsequently expanded Borough-wide between January and April 2004. The scheme operates using a re-usable bag, which is emptied every fortnight on the same day as refuse collection. In 2004/5, 7,053 tonnes of paper was collected through this service. It is anticipated that this service will continue.

Kerbside garden and cardboard waste collections

In April 2005, a trial kerbside collection of garden and cardboard waste was introduced to one-third of households within the Borough. A green wheelie bin is collected fortnightly on the same day as refuse collection. This service has been increased to collect green waste from 80,000 properties. In 2005/6, approximately 5,000 tonnes of garden waste were collected. This material is taken to a transfer station and used for on-farm composting.

Bulky waste collections

An on-request bulky waste collection service is operated within the Borough. A £10 charge was introduced for the collection of up to seven items per household in April 2005. In 2004/5, this service generated 1,682 tonnes of waste, which was taken to the Kirkless transfer station where recyclable materials were separated. Over twenty per cent of this material was recyclable metals and white goods.

Bring sites and voluntary recycling

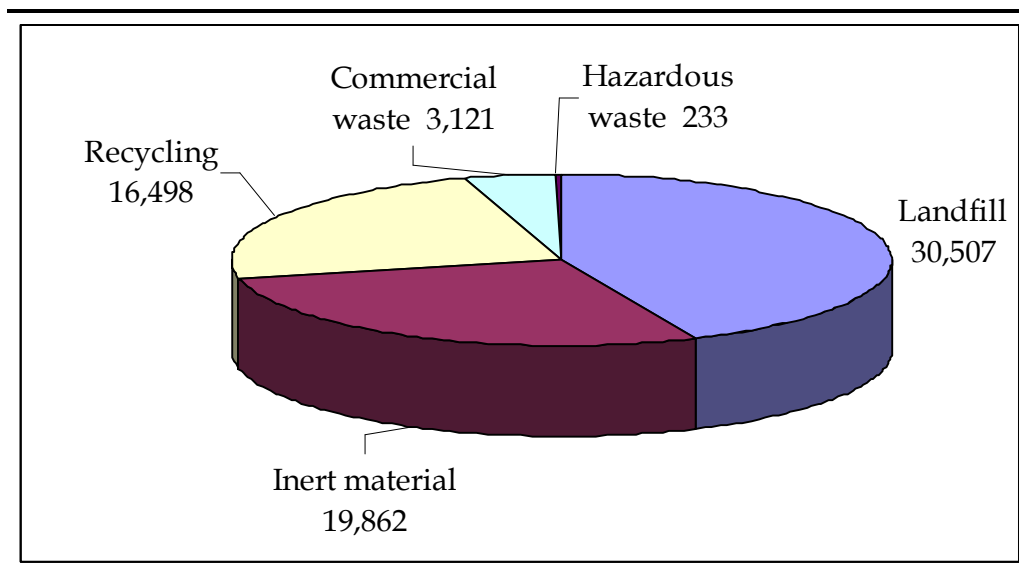
The Council currently operates 120 bring sites. The majority of these sites are situated at supermarkets and public houses. 2,251 tonnes of waste was collected for recycling at bring site in 2004/5.

Twelve tonnes of waste was collected at the kerbside by voluntary groups within the Borough for recycling in 2004/5.

Household Waste Recycling Centres

Waste Recycling Group (WRG) Ltd manages the Borough's five household waste recycling centres on behalf of the Council. In 2004/5, the centres received 70,211 tonnes of waste; the composition of this material is displayed in *Figure 1.2*.

Figure 1.2 Composition of materials collected at HWRC sites



The following improvements to the sites have been undertaken in the last two years:

- **Slag Lane HWRC** - redevelopment of this site has resulted in improved traffic flow to make recycling easier and safer for residents. There is a new internal access road to the site and a new lay-by for recycling glass, cans, paper, textiles and oil. A bay has been created for the recycling of cardboard.
- **Frog Lane HWRC** - compactor skips have been installed for some recyclable materials (cardboard, timber and garden waste) on this site to maximise use of space on the site and make it easier for people to recycle. These skips are on ground level, therefore eliminating the need to walk up steps onto a gantry to unload these materials.
- **Chanters HWRC** - improvements to the road markings and signage on the site have been undertaken to make it clearer for traffic and make recycling easier.

Trade waste

In October 2005, the Council sold its trade waste and skip service. In 2004/5, 7,000 tonnes of commercial waste was collected through trade waste collections and 9,186 tonnes of waste collected through the skip service. This waste is no longer counted as part of the municipal solid waste produced in Wigan.

Street Cleansing

In 2004/5, 4,595 tonnes of waste was collected from street sweeping and 1,762 tonnes from litter collections. None of this material was recycled, but consideration to recycling may be given in the future.

Highways work

31,284 tonnes of highways waste was recycled in 2004/5 and 12,787 tonnes sent to landfill. The recycled material was non-biodegradable.

Charities waste

The Council operate a free tipping service for charities at specific waste recycling centres. 559 tonnes of waste was received from charities in 2004/5.

A1.1.2 Waste Arisings, Composition & Growth

One of the major issues to be tackled in the Borough is the continued growth in waste arisings. *Figure 1.3* shows the anticipated changes in waste arisings to 2019/2020, based on expected recycling rates⁽²⁾. Successful waste prevention schemes will be critical if Wigan is to sustain these low waste growth rates.

Reducing the amount of waste generated will impact on:

- the cost of waste management
- the need for new facilities
- the amount of material requiring treatment to meet various targets

Figure 1.3 Future municipal solid waste arisings for Wigan MBC

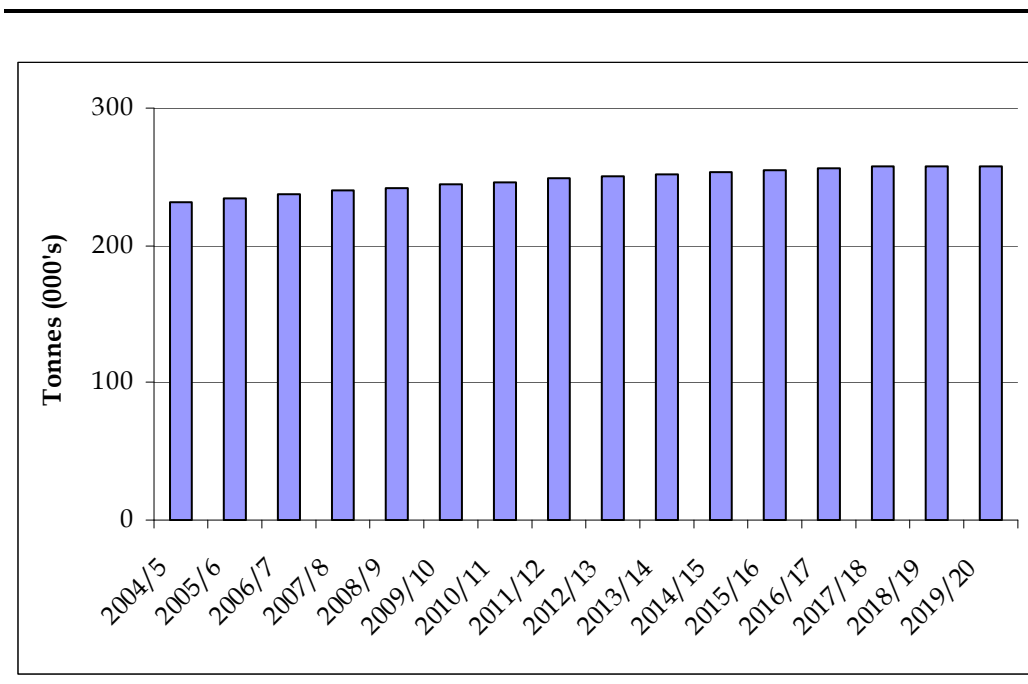
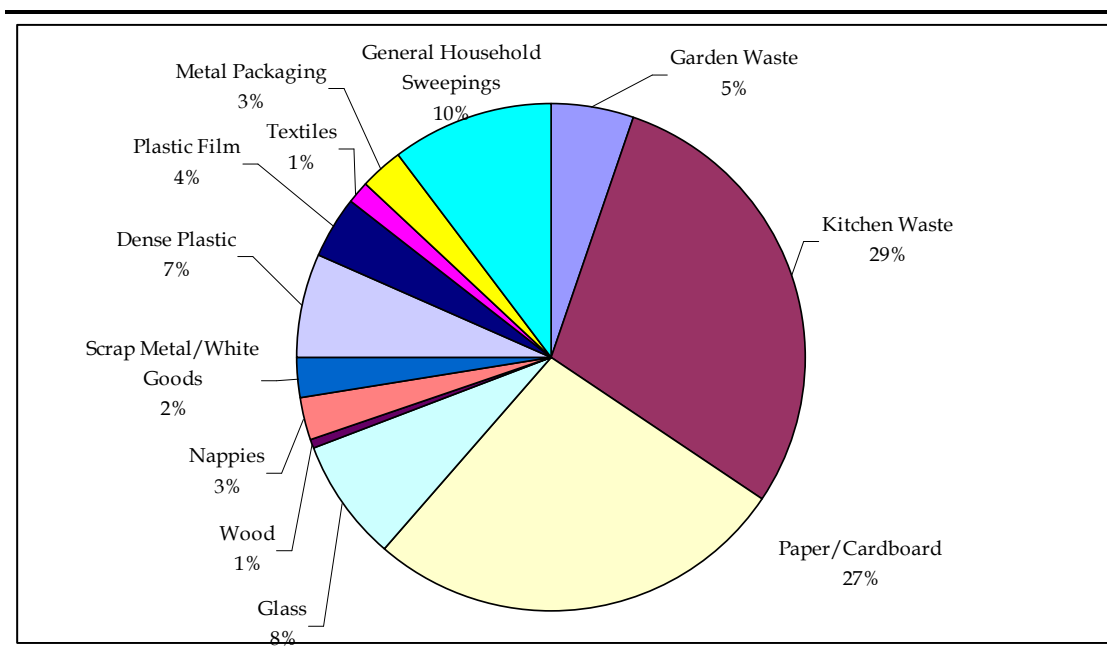


Figure 1.4 shows the composition of household waste in Wigan following a waste analysis in February 2004. Due to seasonal variations in waste composition, some fractions of the waste, such as garden waste, are likely to be significantly higher in summer months. From this waste analysis, kitchen waste and paper/cardboard are the most significant fraction of the municipal waste produced in Wigan in winter.

(2) The Recommendations for a Revised Waste Management Strategy (ERM, March 2005) based modelling on Scenario 5, which assumes municipal waste arisings will increase at a rate that falls year on year from a starting point of 1.8%.

Figure 1.4 Composition of household waste in Wigan



A1.2 WHERE DO WE WANT TO GET TO?

Wigan MBC will meet its recycling and composting targets, and will aim to reduce the potential for LATS penalties. As a result, waste prevention and recycling and composting initiatives need to be developed and implemented. Various programmes are listed below, along with associated objectives that can be met through them.

A1.2.1 Waste Prevention and Minimisation

Waste prevention conserves resources, saves energy, reduces pollution, promotes the provision of cheaper goods and reduces the demand for waste treatment and disposal facilities. Wigan has encouraged waste prevention and minimisation through:

- Partnership work with the Waste & Resources Action Programme (WRAP) to provide reduced price home compost bins since 2004
- Supporting local businesses promote waste minimisation and recycling

In addition to targeting reductions in household waste, the Authority has promoted responsible waste management of other municipal wastes. This has included commercial waste and waste generated through the Authority's activities through the:

- Development of a new access policy for household waste recycling centres (HWRCs). In April 2005, trade waste was banned from all HWRCs, and a new permit scheme introduced for vans and twin axle trailers entering the HWRCs to prevent unauthorised deposits of trade waste

Related objectives

Wigan Council will promote home composting of green and kitchen waste through the continued provision of reduced price compost bins and support for residents composting their waste.

A1.2.2 Recycling & Composting**Kerbside recycling collections**

To date, the Authority has concentrated efforts on the biodegradable fractions of the waste stream. This material represents a significant proportion of the waste stream in Wigan, and recycling has proven to be successful.

Wigan currently conducts a Borough-wide weekly refuse collection, fortnightly kerbside paper collections, a fortnightly green and cardboard waste collection to 80,000 properties, and bulky waste collections.

76% of residents on the Citizens' Panel have stated that they would prefer to have their garden waste collected on the same day that their paper and other refuse is collected between 7.30 am and 4.00 pm. It is intended to provide green waste collections to meet these requirements to promote high participation and capture rates.

There are a high proportion of terraced properties/flats, which would be unsuitable for green and cardboard waste collections within the borough, however, the service could be expanded to additional suitable properties within the borough. Further expansion of the green waste collections to a further 24,000 properties would cost an estimated £350,000 capital and £260-300,000 revenue.

Kerbside collection of other materials, such as glass, cans and plastic, are planned to commence by the end of 2008, provided sufficient funding is available. Costs are estimated at up to £1.8 million capital and £2.0-2.3 million revenue. Collection of these materials would be undertaken using an additional wheeled bin or kerbside recycling box. It is expected that implementation of this service will have a significant positive impact on Wigan achieving its BVPI recycling targets.

Additional approaches include:

- Provision and promotion of recycling services in Council buildings
- Recycling a significant proportion of highways waste
- Consideration of further kerbside collections e.g. kitchen waste collections

Managing kerbside recycling and refuse collection

The collection of glass, cans and plastic in addition to paper and garden waste will result in a significant portion of the waste stream being recycled. These collections will result in additional costs to the authority.

Once the scheme has been established on a voluntary basis with continued use of education and communication, the authority will examine methods to encourage further use of the scheme. This will initially include consideration of compulsory recycling collections followed by reducing the frequency of waste collection by moving to alternate managed weekly collection of recycled materials and residual waste. It is evident from other local authority experience that effective management of change to refuse collection and recycling services is essential to the success of refuse and recycling collections. For this reason the following factors will be monitored from the commencement of the collection of glass, cans and plastic bottles to ensure the service is operating effectively:

- Customer satisfaction of refuse and recycling services
- Costs of refuse and recycling services
- Recycling rate
- Waste reduction to landfill

The need to balance the above factors will determine the rate of change to compulsory collection and then a managed alternate weekly waste collection service. A move to compulsory collection and subsequent fortnightly collection of residual waste will only be considered when the following criteria are met:

- Good Customer satisfaction of refuse and recycling services (at least 70% satisfaction)
- A significant proportion of recyclable material (greater than 20% of the bin contents) is evident in the average residual bin or detrimental levels of contamination are evident in recycling collections
- There is the potential to increase recycling rates by more than 2% and reduce waste to landfill

In addition, any move to fortnightly residual waste collection would need to demonstrate significant cost savings to the authority.

Bulky waste

Bulky waste is currently taken to the Kirkless site for re-use and recycling. Wigan Council will look to increase the amount of material re-used through working with the voluntary and community sector.

Bring recycling sites

There are approximately 120 bring recycling sites at convenient locations within the Borough. The majority of sites are situated at supermarkets and close to public houses. Most sites have facilities for recycling glass, cans, and paper. At the larger sites, there are also facilities for recycling textiles and shoes.

Related objectives

To increase the number of bring recycling sites in the Borough to 150 to ensure that all residents have a bring site within 1km of their home.

80,000 properties to be provided with kerbside collection of garden waste by the end of 2006.

All suitable properties to be provided with the following recycling collections by the end of 2009:

- Fortnightly collection of dry recyclables such as plastics, glass, cans and paper
- Fortnightly collection of green waste (for households with gardens)

Facilities - Household Waste Recycling Centres (HWRCs)

The Authority will work with the waste disposal contractor to improve performance at each HWRC. This will include consideration of improved recycling facilities and increased recycling targets; improvements to the infrastructure at sites; and improved staffing levels. Improvements to infrastructure may cost up to £1 million per site. Frog Lane and Chanters sites have the greatest potential for redevelopment and should be investigated for development by 2008. Orrell site is in a poor condition and an alternative site will be investigated for development by 2008. In addition, the Authority will investigate the potential for re-use of materials at HWRCs and the possibility of an additional HWRC in the north of the Borough.

Related objectives

Wigan Council will continue to improve existing HWRCs to improve accessibility to recycling for residents and investigate an additional HWRC in the Borough.

A1.2.3 Residual waste

Wigan Council commenced a waste disposal contract with WRG Ltd in 2000. It covers the operation of the Borough's five household waste recycling centres, the aftercare of some landfill sites and the provision of landfill capacity.

Since the start of the contract, the existing civic amenity sites have been developed as HWRCs, resulting in recovery levels of over 50% by weight at two of the sites.

In 2002, WRG constructed a waste reception and recycling facility at Kirkless. This facility, was designed to receive all of the Borough's waste and to provide an undercover facility for household waste recycling. It was intended that mixed waste would be partially segregated, with the residual material composted. However, on 1st July 2003 the Animal By-Products Regulations (ABPR) 2003 came into effect. As a result of this legislation, open windrow composting (separate piles of organic material) of waste was no longer permitted. This affected the recycling and composting regime intended for the Kirkless site. Wigan is currently investigating the most appropriate way forward, which will inform negotiations with future Contractors.

Meanwhile, in order to achieve the statutory recycling targets, the Authority implemented kerbside collection of paper from all households within the Borough.

Related objectives

Wigan Council will maximise cost-effective recycling and composting of waste before utilising residual waste management technology.

Wigan Council will utilise residual waste treatment (either an Energy from Waste or Mechanical Biological Treatment) to meet the medium to long-term requirements of the Borough under the Landfill Allowance Trading Scheme. Consideration will be given to partnership working with other authorities if this can provide demonstrable benefits to the Council.

A1.2.4 Education and Community Awareness

Attitudes and behaviour must be changed to ensure waste prevention and minimisation and to increase recycling and composting in the future. This will require engaging with the public and using education to underpin and to reinforce each part of the waste hierarchy. Specific waste education campaigns undertaken in Wigan have included:

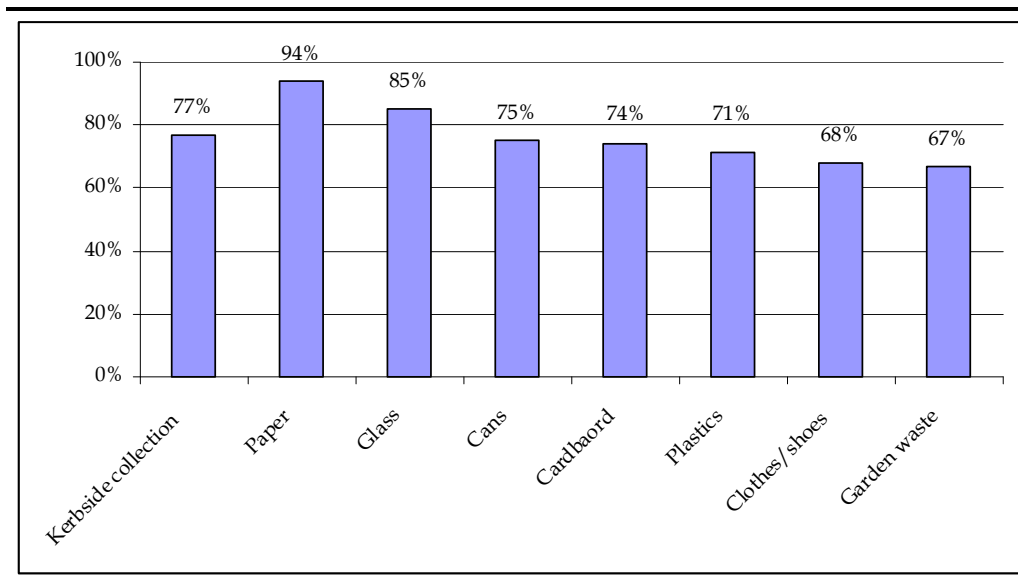
- Partnership working with WRAP to provide a 12 month communications campaign to promote recycling of paper, including canvassing of residents
- Presentations, waste activities, and provision of recycling facilities in schools
- Road-shows to promote waste minimisation and recycling

The appointment of a waste education officer will allow a dedicated resource to improve waste education and communication to all sectors of the community, including schools and local businesses.

Community consultation

Citizens' Panel surveys are undertaken four times a year aimed at obtaining an 'ordinary person's perspective' view of Council services. In December 2002, the Citizens' Panel were consulted prior to the introduction of kerbside collection of recyclables in Wigan. *Figure 1.5* shows the percent of residents willing to participate in various kerbside collection schemes.

Figure 1.5 Proportion of residents willing to participate in various kerbside collection schemes



Related objectives

Wigan Council aim to continue to undertake a comprehensive waste education and awareness programme in the Borough to explain waste management issues, and to provide information to residents of all ages.

Wigan Council will promote the authorised recycling and disposal of commercial waste and actively enforce the new access policy for household waste recycling centres.

Wigan Council will promote waste minimisation and recycling in schools, council buildings, depots and businesses.

Annex B

Action Plan

B1 Action plan: how do we get there?

The Guidance on Municipal Waste Management Strategies – July 2005 states that

‘long term strategic planning is vital to all authorities in securing both the infrastructure and service developments necessary to deliver more sustainable waste management.’

One of the Key Strategy Requirements is the development of an action plan that outlines short term actions that will assist with meeting the policy objectives of the Headline Strategy. It is recommended that this Action Plan be regularly reviewed, updated and developed as decisions are made in line with the timetable that has been set out, and at least annually. Key to the progress of this action plan will be the necessary officer and financial resources to implement the action plan.

Waste prevention and reuse						
<ul style="list-style-type: none"> Reduce municipal waste growth to 1% by 2010 and 0% by 2020 						
Objective	How do we achieve the action?	What is the outcome of the action?	What resources are required?	What are the risks associated with achieving this action?	When does the action need to be completed?	Who is responsible for the action?
Promote home composting of green and kitchen waste through the continued provision of reduced price compost bins and support for residents composting their waste	Ensure ongoing availability of compost bins and appropriate education materials	<ul style="list-style-type: none"> Increased home composting Reduced MSW arisings Reduction in potential LATS penalties 	<ul style="list-style-type: none"> Officer time Finances (depending on external support) 	<ul style="list-style-type: none"> Low participation LATS penalties Lack of officer time Lack of finance 	Ongoing until Dec 2006 Aim to continue to 2020 Review annually	Waste Disposal Manager
Waste prevention and re use – other	Support businesses to reduce waste	<ul style="list-style-type: none"> Increased recycling Reduced waste arisings 	<ul style="list-style-type: none"> Officer time 	<ul style="list-style-type: none"> Low participation Lack of officer time 	Ongoing	Recycling Officer, Monitoring Officers, Education Officer
Waste prevention and re use - other	Reduce trade waste at HWRC sites	<ul style="list-style-type: none"> Reduced MSW arisings Reduced LATS penalties 	<ul style="list-style-type: none"> Officer time Contractor time 	<ul style="list-style-type: none"> Receipt of trade waste at HWRC sites Fly tipping Lack of officer time 	Ongoing	Monitoring Officers

Recycling and Composting

- Achieve statutory recycling and composting standards for 2005/6
- Recycle or compost 25% of waste in the period 2007/8 – 2009/10
- Reduce biodegradable municipal waste landfilled to levels consistent with those set for Wigan by the Secretary of State for the Environment
- Serve all households with a recycling collection of at least two materials by 2010

Objective	How do we achieve the action?	What is the outcome of the action?	What resources are required?	What are the risks associated with achieving this action?	When does the action need to be completed?	Who is responsible for the action?
Provide 80,000 properties with kerbside collection of garden waste	Arrange for the Council to commence collection	<ul style="list-style-type: none"> • Diversion of biodegradable waste • Reduction in potential LATS penalties 	<ul style="list-style-type: none"> • Collection infrastructure • Finances for collection • Officer time 	<ul style="list-style-type: none"> • Low participation • LATS penalties • Cost excessive • Lack of officer time 	Dec 2006	Waste Disposal Manager Waste Management Officer (Kerbside Recycling) Senior Waste Management Co-ordinator
<p>All suitable properties to be provided with the following recycling collections by the end of 2009, provided sufficient funding is available:</p> <ul style="list-style-type: none"> • fortnightly collection of dry recyclables such as plastics, glass, cans and paper • fortnightly collection of green waste (for properties generating green waste) • maintain paper collection 	Develop collection service, ensure funding is available and develop an appropriate education campaign	<ul style="list-style-type: none"> • Increased recycling • Increased composting • Reduced MSW arisings • Reduction in potential LATS penalties 	<ul style="list-style-type: none"> • Collection infrastructure • Finances for additional green waste collections to 24,000 properties (approx. £350,000 capital and £300,000 revenue) • Finance for collection of glass, cans and plastic bottles (up to £1.8 million capital and £2.3 million revenue) • Education budget • Contractor time / Contract negotiations re sorting facility and markets for recyclables 	<ul style="list-style-type: none"> • Low participation • Lack of required funds • LATS penalties • Lack of officer time 	Dec 2009	Waste Disposal Manager
Recycling and composting - other	Increase recycling within Council buildings	<ul style="list-style-type: none"> • Increased recycling • Reduced MSW arisings 	<ul style="list-style-type: none"> • Officer time • Finances for collection 	<ul style="list-style-type: none"> • Low participation • Lack of officer time 	Ongoing	Senior Waste Management Co-ordinator
Recycling and composting – other	Recycle relevant components of highways waste	<ul style="list-style-type: none"> • Increased recycling • Reduced MSW arisings 	<ul style="list-style-type: none"> • Officer time 	<ul style="list-style-type: none"> • Low recovery of recyclable materials 	Ongoing	Highways DLO

Objective	How do we achieve the action?	What is the outcome of the action?	What resources are required?	What are the risks associated with achieving this action?	When does the action need to be completed?	Who is responsible for the action?
Recycling and composting – other	Consider mechanism to encourage use of kerbside recycling including education, compulsory recycling and fortnightly refuse collection	<ul style="list-style-type: none"> Increased recycling Reduced MSW arisings 	<ul style="list-style-type: none"> Officer time Finance 	<ul style="list-style-type: none"> Low participation Lack of officer time Reduced customer satisfaction 	Ongoing	Waste Disposal Manager
Recycling and composting – other	Recycle bulky waste	<ul style="list-style-type: none"> Increased recycling Reduced MSW arisings 	<ul style="list-style-type: none"> Officer time Contract negotiations 	<ul style="list-style-type: none"> Low recovery Lack of officer time 	Ongoing	Waste Disposal Manager

Residual Waste

- Recover 40% of waste in the period 2007/8 – 2009/10

Objective	How do we achieve the action?	What is the outcome of the action?	What resources are required?	What are the risks associated with achieving this action?	When does the action need to be completed?	Who is responsible for the action?
Maximise cost-effective recycling and composting of waste before utilising residual waste management technology	Implement recycling and composting actions	<ul style="list-style-type: none"> Reduced finances required for residual waste infrastructure Increased recycling 	<ul style="list-style-type: none"> Finances for recycling and composting options Contract negotiations 	<ul style="list-style-type: none"> Low recycling and composting participation and capture rates Finances 	Dec 2009	Waste Disposal Manager
Utilise residual waste treatment (either Energy from Waste or mechanical biological treatment) to meet the medium to long term requirements of the Landfill Allowance Trading Scheme. Consideration will be given to partnership working with other authorities if this can provide demonstrable benefits to the Council.	Consider technology, partnerships and procure waste facilities/contracts	<ul style="list-style-type: none"> Sustainable waste management Reduce potential LATS fines 	<ul style="list-style-type: none"> Finances for infrastructure (in the region of £80 per tonne gate fee) Contract negotiations 	<ul style="list-style-type: none"> Finances Inability to meet LATS targets Planning Reliability of technology Licensing Lack of officer time 	Dec 2009	Director of Environmental Services, Assistant Director Engineering Consultancy, Waste Disposal Manager

Facilities

- Increase recycling at HWRCs by 60%+ by 2008/09

Objective	How do we achieve the action?	What is the outcome of the action?	What resources are required?	What are the risks associated with achieving this action?	When does the action need to be completed?	Who is responsible for the action?
Increase the number of bring recycling sites in the Borough to 150 to ensure that all residents have a bring site within 1km of their home	Investigate suitable sites and arrange for installation of new infrastructure	<ul style="list-style-type: none"> • Increase recycling • Reduced MSW arisings 	<ul style="list-style-type: none"> • Bring banks • Finances for installation 	<ul style="list-style-type: none"> • Low participation • Lack of required funds 	Dec 2007	Recycling Officer
Improve existing HWRCs to improve accessibility to recycling for residents and investigate an additional HWRC in the Borough	Investigate suitable sites and arrange for installation of new infrastructure	<ul style="list-style-type: none"> • Increased recycling • Increased composting • Reduced MSW arisings 	<ul style="list-style-type: none"> • Finances for infrastructure (up to £1 million per site for improvements) • Contract negotiations 	<ul style="list-style-type: none"> • Low participation • LATS penalties 	Dec 2008	Waste Disposal Manager Monitoring Officers
Improve existing HWRCs to improve accessibility to recycling for residents and investigate an additional HWRC in the Borough	Increase the number of staff at facilities	<ul style="list-style-type: none"> • Increased recycling • Reduced MSW arisings 	<ul style="list-style-type: none"> • Finances for staffing costs • Contract negotiations 	<ul style="list-style-type: none"> • Low recovery rates 	Dec 2008	Waste Disposal Manager Monitoring Officers

Education and Community Awareness

Objective	How do we achieve the action?	What is the outcome of the action?	What resources are required?	What are the risks associated with achieving this action?	When does the action need to be completed?	Who is responsible for the action?
Continue to undertake a comprehensive waste education and awareness programme in the Borough to explain the waste management issues, and provide information to residents of all ages	Develop a programme based upon the demography of Wigan MBC	<ul style="list-style-type: none"> • Increased recycling • Increased composting • Reduced MSW arisings 	<ul style="list-style-type: none"> • Officer time • Finances to implement the programme 	<ul style="list-style-type: none"> • Low participation • Lack of available resources to implement • Lack of officer time 	Ongoing Review Dec 2006	Waste Disposal Manager Senior Waste Management Co-ordinator Education Officer
Promote the authorised recycling and disposal of commercial waste and actively enforce the new access policy for HWRCs	Educate commercial waste producers on their responsibilities	<ul style="list-style-type: none"> • Increased recycling • Increased composting • Less waste for disposal 	<ul style="list-style-type: none"> • Officer time • Contractor time 	<ul style="list-style-type: none"> • Low participation 	Ongoing	Waste Disposal Manager Senior Waste Management Co-ordinator Monitoring officers
Promote waste minimisation and recycling in schools, council buildings and depots	Prepare education material to be distributed and promoted	<ul style="list-style-type: none"> • Increased recycling • Increased composting 	<ul style="list-style-type: none"> • Officer time 	<ul style="list-style-type: none"> • Low participation • Low uptake 	Dec 2007	Waste Disposal Manager

Technical Appendix A

Legislation, Policies & Targets

A1 LEGISLATION, POLICIES AND TARGETS

A1.1 NATIONAL LEGISLATION, POLICIES AND TARGETS

The need to develop a revised strategy has arisen primarily from the introduction of one key piece of national legislation, the Waste and Emissions Trading Act (2003) (the WET Act). Nevertheless, it is important to include and to review a wider range of legislative information to ensure full understanding of statutory obligations, and to ensure that any impending legislation is considered in making revisions to the existing strategy. The WET Act, together with other national policies that are shaping waste management in Wigan, have been summarised below.

A1.1.1 Environmental Protection Act 1990 (and Environment Act 1995)

The Environment Protection Act (EPA) 1990 introduces a regulatory regime that is designed to implement an integrated (air, land and water) approach to environmental regulation and protection. It sets out a wide range of environmental legislation and is the primary act (along with the associated regulations) that controls how waste is managed.

Part II of the Act sets out the main legislation for dealing with duties and responsibilities in relation to waste management.

Duty of Care

Section 34 of the EPA 1990 introduces a statutory Duty of Care applicable to all those producing and handling waste. This places a general duty on anyone who has responsibility for controlled⁽³⁾ waste (waste producers, or anyone else who imports, carries, keeps, treats or disposes of it) to ensure that it is managed properly and recovered or disposed of safely.

The Duty of Care Regulations 1991 provides the basis for a mandatory system of transfer notes, which must be completed when waste is transferred between parties. However, the Duty of Care is designed to be self-regulating system, based on a code of good practice. In order to meet their duty, Wigan is required to: prevent the escape of waste in their control; transfer waste only to someone who is authorised to accept it; ensure that waste is handled lawfully by others; and, upon transfer, provide details of the waste including a written description.

Recent attention has been focused on the trans-boundary shipment of recyclables for reprocessing outside the UK and the duty of care placed on local authorities to ensure that wastes are not being exported. There is debate around whether shipments made by waste management companies legitimately constitute transfer of recyclables, or whether the material exported is so contaminated as to constitute waste. Guidance is expected from the Environment Agency shortly⁽⁴⁾.

Wigan's Responsibilities

Sections 45-61 of the EPA 1990 set out the roles of waste collection and disposal authorities, which must be reflected in any strategy. These were amended by Section 62 of Schedule 22 of the Environment Act 1995.

(3) 'Controlled Waste' is defined in section 75 of the EPA 1990. It includes: household waste; industrial waste; and commercial waste. Wastes handled by local authorities are controlled wastes and subject to regulation.

(4) http://www.environment-agency.gov.uk/subjects/waste/232044/?lang=_e.

A1.1.2 Landfill Regulations 2002

The Landfill (England and Wales) Regulations 2002 came into force in 2002. They implement the requirements of the EU Landfill Directive (1999/31/EC) in the two countries.

The Landfill Directive aims to deal with the social, environmental and economic impacts of landfill over its whole life cycle. It contains a mix of strategic objectives for reducing the amount and nature of wastes going to landfill, together with strict provisions for the regulation and management of landfills.

Key Directive provisions for Wigan relate to the gradual reduction biodegradable municipal waste (BMW)⁽⁵⁾ going to landfill and the promotion of alternatives such as recycling, composting and energy recovery from waste. To this effect, the Directive contains three targets at the national level that will reduce the amount of BMW disposed to landfill⁽⁶⁾:

- by 2010: reduce the amount of BMW landfilled to 75 percent of that produced in 1995;
- by 2013: reduce the amount of BMW landfilled to 50 percent of that produced in 1995; and
- by 2020: reduce the amount of BMW landfilled to 35 percent of that produced in 1995.

To ensure that the UK will meet these targets, the Government has set BMW disposal allowances for each waste disposal authority. These are controlled by provisions made under the WET Act, and have a direct impact on Wigan's strategy for management of BMW.

The Directive has also brought other changes in waste management that have implications for Wigan, including:

- a complete ban on the landfill of liquid wastes, infectious clinical wastes and certain hazardous wastes;
- a complete ban on the landfill of tyres by 2006;
- the requirement for separate landfills for hazardous, non-hazardous and inert wastes; and
- the introduction of a requirement for treatment of waste prior to landfill and the establishment of acceptance criteria for waste arriving at sites.

Meeting the requirements of the Landfill Regulations 2002 will increase the cost of using landfill as a means of disposal, which may have significant implications for waste collection and disposal budgets, particularly for the landfill of hazardous waste.

(5) The Directive defines BMW as that which is capable of undergoing anaerobic or aerobic digestion, such as food and garden waste, paper and cardboard.

(6) The target dates include a four-year derogation for the UK allowed because of the proportion of BMW landfilled in the base year of 1995.

A1.1.3 Landfill Tax Regulations 1996

In addition to the increased costs of using landfill that will result from the Landfill Regulations 2002, the Landfill Tax Regulations 1996 impose a duty on landfill based on the weight of waste deposited. The rate of tax varies according to the type of waste disposed, with a lower rate set for inert waste than active wastes.

Since 1996, the Landfill Tax has been increasing for active wastes at a rate of £1 per tonne per year. From April 2005, the tax will increase from a base of £15 per tonne by a rate of at least £3 per year, to reach a ceiling of £35 per tonne by 2011/12 at the latest (earlier if increments are greater than £3 per tonne).

A1.1.4 Waste and Emissions Trading (WET) Act 2003

The WET Act is intended to ensure the country meets its national targets for reducing the amount of BMW disposed to landfill. It is implemented through the Landfill (Scheme Year and Maximum Landfill Amount) Regulations 2004, which came into force on 22 July 2004.

The Act provides a framework for the Landfill Allowance Trading Scheme (LATS), a system whereby tradable landfill allowances will be allocated to waste disposal authorities each year. Each waste disposal authority will be able to determine how to use its allocation of allowances in the most effective way. It enables allowances to be traded with other authorities, saved for future years (banked) or use some of its future allowances in advance (borrow).

Inter-year trading may be allowed, ie authorities can expend allowances issued in one year in a different year (ie banking and borrowing). However, in each of the three 'target' years (2010, 2013 and 2020), authorities will only be able to use the allowances issued in that specific year. This will ensure that the country as a whole meets its obligations under the Landfill Directive.

A fixed penalty of £150 per tonne⁽⁷⁾ of excess BMW landfilled is likely to be enforced if local authorities do not have sufficient permits for the waste they landfill.

LATS will be launched in full on 1 April 2005 and has significant implications for Wigan. Defra has released the final allocation of landfill allowances to each waste disposal authority in England. For Wigan, these are shown in *Table 1.1*

Table 1.1 Wigan's Final LATS Allocation (8)

Year	LATS allocation from Central Government (tonnes)	Estimated amount of biodegradable waste sent to landfill (tonnes)	Shortfall (extra biodegradable waste to be sent to landfill for which Wigan Council does not have permits) (tonnes)	Potential Cost to Council (£) @£150 per tonne fines
2005/6	127,850	137,669	9,819	1,472,874
2006/7	119,710	134,859	15,149	2,272,327
2007/8	108,856	137,286	28,430	4,264,546
2008/9	95,289	139,757	44,468	6,670,269
2009/10	79,008	142,273	63,265	9,489,764
2010/11	70,213	144,834	74,621	11,193,151

(7) <http://www.defra.gov.uk/environment/waste/localauth/managewaste/> Viewed December 2004.. Note, will be subject to amendments to Landfill Allowance and Trading Scheme (England) Regulations 2004.

(8) <http://www.defra.gov.uk/environment/waste/localauth/lats/pdf/tableb-latsallocat%20.pdf>

Year	LATS allocation from Central Government (tonnes)	Estimated amount of biodegradable waste sent to landfill (tonnes)	Shortfall (extra biodegradable waste to be sent to landfill for which Wigan Council does not have permits) (tonnes)	Potential Cost to Council (£) @£150 per tonne fines
2011/12	61,419	147,441	86,022	12,903,303
2012/13	52,625	150,095	97,470	14,620,494
2013/14	50,367	152,797	102,430	15,364,450
2014/15	48,110	155,547	107,437	16,115,551
2015/16	45,853	158,347	112,494	16,874,078
2016/17	43,595	161,197	117,602	17,640,315
2017/18	41,338	164,099	122,761	18,414,097
2018/19	39,081	167,052	127,971	19,195,713
2019/20	36,823	170,059	133,236	19,985,455

A1.1.5 National and Statutory Recycling and Composting Standards (9)

In order to contribute to the Landfill Directive targets for the diversion of BMW, the Government and National Assembly for Wales established a series of recycling and recovery targets for household and municipal wastes in *Waste Strategy 2000*. Government recognised that an essential part of achieving diversion would be the drive towards greater recycling and composting of household waste. The key national targets are:

- by 2005: recycle or compost at least 25% of household waste and recover value from 40% of municipal waste (through recycling, composting, other forms of material recovery or energy recovery via waste combustion);
- by 2010: recycle or compost at least 30% of household waste and recover value from 45% of municipal waste; and
- by 2015: recycle or compost at least 33% of household waste and recover value from 67% of municipal waste.

In order to achieve the national recycling and composting level of 25% of household waste across the country by 2005, statutory Best Value performance standards have been set for both waste collection and waste disposal authorities. The intention of these standards is to increase the national recycling rate to around 25% in 2005/06.

A1.1.6 Local Government Act 1999

All local authorities with responsibility for waste management, were designated Best Value authorities under the Local Government Act 1999, and are subject to the duty of Best Value. Under this duty, authorities are required to deliver services to clearly defined standards, including cost and quality. This must be done by the most effective, efficient and economic means available, with a view to continuously improving services.

Performance standards for recycling and composting household waste were set for 2003/04, 2005/06, and 2007/8. The statutory standards for Wigan are summarised in *Table 1.2*.

(9) Recycling & Composting means the collection of materials such as glass, paper and textiles for recycling and the composting of garden waste and other organic materials such as food wastes. Recovery means all options for recovering value from waste and includes recycling and composting, but it also can include using waste to produce energy.

Table 1.2 Statutory Recycling & Composting Standards

BVPI Target 2003/04	BVPI Actual 2003/04	BVPI Target 2005/06	BVPI Target 2007/08
10%	11.9%	18%	20%

Source: www.defra.gov.uk/environment/waste/management/guidance/mwms/10.htm

Wigan's BVPIs provide residents with clear targets and indicators on which to judge services, in accordance with strategy objectives.

A1.1.7 Household Waste Recycling Act 2003

The Household Waste Recycling Act 2003 came into force on the 30 October 2003. It requires English waste collection authorities to collect at least two recyclable materials from households separate from residual waste by 31st December 2010.

The Government have issued draft guidance⁽¹⁰⁾ for consultation that explains what the definition of one recyclable material would be and how waste collection authorities should interpret this act. The consultation closed in October 2004. The paper and green waste collections help to achieve this requirement.

A1.1.8 Waste Minimisation Act 1998

The Waste Minimisation Act became law in November 1998. It gives a local authority the power to "do or arrange for the doing of anything which in its opinion is necessary or expedient for the purpose of minimising the quantities of controlled waste, of any description, generated in its area".

Waste collection authorities are already active in this area. Current measures include: encouraging waste minimisation measures within the home; promoting reuse through charity shops, jumble sales and local organisations; and promoting home composting through the sale of subsidised composting bins.

A1.1.9 Animal By-products Regulations 2003

The Animal By-Products Regulations (ABPR) 2003 came into force in England on 1 July 2003 following the Foot and Mouth disease outbreak. This is the enforcing legislation for the EU Regulation on Animal By-Products (No. 1774/2002), laying down health rules concerning animal by-products not intended for human consumption.

These regulations impose a number of restrictions on the handling and treatment of waste that contains, or potentially contains, animal by-products. It is likely to affect all those who deal with animal by-products, including waste collection and disposal authorities.

The ABPR divide animal by-products into three categories and stipulate the means of collection, transport, storage, handling processing and use or disposal for each category. The issuing of approvals is the responsibility of the State Veterinary Service.

The regulations are likely to have implications on recycling and composting through the different controls placed on composting processes (depending on the types of waste being composted). They have particular implications for composting kitchen waste. Wigan must take this into account when developing composting services.

(10) Draft Guidance for Waste Collection Authorities on the Household Waste Recycling Act 2003 Issued July 2004

A1.1.10 Hazardous Waste Regulations

Changes in the way that hazardous wastes are classified are likely to enlarge the proportion of municipal solid waste that is classed as hazardous. Hazardous materials need separating from other household and commercial waste and must be dealt with through separate collection arrangements. This will have implications for the cost of management of this waste and for capacity at existing facilities (particularly HWRCs) for accepting this material.

The municipal waste stream contains waste that may have hazardous properties and require special handling and disposal arrangements as part of the waste collection service. There are increasing legislative requirements for the separate collection of specific hazardous household wastes that have implications for waste management strategies.

An important piece of legislation that will impact hazardous household waste is the Hazardous Waste Directive (HWD) (91/689/EEC), which aims to provide a precise and uniform European-wide definition of hazardous waste and to ensure the correct management and regulation of such waste.

The HWD defines hazardous waste as wastes featuring on a list, the European Waste Catalogue (EWC), drawn up by the European Commission, because they possess one or more of the hazardous properties set out in the HWD. The EWC is subject to periodic review, the most recent being in 2002.

The EWC 2002 came into force on January 2002. Its introduction means that some waste streams previously defined as non-hazardous are classified as hazardous. EWC 2002 has yet to be formally transposed into UK law but, when it is, certain household items such as fridges and items with cathode ray tubes (television and computer monitors) will be classified as hazardous. Defra is considering how these items will be treated under proposed new regulations for hazardous waste. Two sets of regulations are currently being proposed and are subject to public consultation: the List of Wastes Regulations, which will transpose the EWC and; the Hazardous Waste Regulations, which will replace the Special Waste Regulations 1996.

A1.1.11 Abandoned Vehicles and End of Life Vehicles Regulations 2003

Wigan officers and police officers have powers to deal with abandoned vehicles, but generally it is local authorities that take the lead. Thus, officers must have due consideration of the law when dealing with abandoned cars. The main elements are summarised below:

- The Refuse Disposal (Amenity) Act 1978 makes abandoning a vehicle a criminal offence, punishable by a fine up to £2500 or 3 months imprisonment, or both. However, there are very few prosecutions due to the difficulties in tracing the current owners of vehicles.
- The Environmental Protection Act 1990 classifies ELVs as hazardous waste, and imposes a fine up to £20,000 or 6 months imprisonment, or both in a Magistrates Court; and an unlimited fine or five year's imprisonment, or both in the Crown Court.

- The End of Life Vehicles (ELV) Directive was issued in October 2000, and started to have practical effects in April 2002. It may have a significant effect on the disposal of ELVs. Particularly, the Directive:
 - Requires the producer to meet all, or part, of the costs of collection and treatment of vehicles that are of no value, or of negative value (from 2007);
 - Requires a Certificate of Destruction to be issued, proving that a vehicle has been moved to an approved treatment centre, before removal from official vehicle records (held with the DVLA). This has to be free of charge to the last owner; and
 - Requires treatment facilities to meet tightened environmental standards and remove polluting components from vehicles.

Under the ELV Directive, depollution is to consist of the removal of battery; removal of LPG tank; removal or activation of explosive devices-airbags and pre-tensioners; and removal and separate storage of fuel; motor oil; transmission oil; gearbox oil; hydraulic oil; cooling liquids; anti-freeze; brake fluids; and air conditioning fluids; except where fluid is retained to allow reuse of the part.

Sites carrying out treatment to remove pollutants must hold a site licence (a form of waste management licence).

Storage, even temporarily, of any waste motor vehicle prior to treatment is allowed only at a site which has impermeable pavement and a sealed drainage system. Treatment sites are to provide impermeable pavement and sealed drainage system in "appropriate areas" and provide storage tanks for the separate segregated storage of fluids. There are also to be appropriate storage facilities for dismantled spare parts, including impermeable storage for spare parts contaminated with oil.

A1.1.12 Ozone Depleting Substances Regulation 2000 (2037/2000)

Wigan ensures that fridges and freezers are recovered appropriately, through an agreement with WRG. The introduction of the Ozone Depleting Substances Regulation 2000 (2037/2000) brought about new requirements for the disposal of fridges and freezers. The regulations came into effect on the 1 January 2002 and require that CFCs are extracted from the insulation foam in domestic fridges and freezers prior to final disposal or recovery. This recovery is in addition to the 'degassing' of cooling circuits that authorities have carried out for some time.

A1.1.13 Waste Incineration Regulations 2002

The Waste Incineration Regulations 2002 came into effect on 28 December 2002, in order to implement the EC Waste Incineration Directive (WID) (2000/76/EC).

The main aim of the WID is to 'prevent and limit negative environmental effects by emissions into air, soil, surface and ground-water, and the resulting risks to human health, from the incineration and co-incineration of waste'. It seeks to achieve this by requiring the setting and maintaining of stringent operational conditions, technical requirements and emission limit values for plants incinerating and co-incinerating waste. As such, it is not directly concerned with the place of incineration in waste management strategies, but with ensuring that incinerators continue to be tightly regulated.

The requirements of the WID apply to virtually all waste incineration and co-incineration plants, going beyond the requirements of the 1989 Municipal Waste Incineration (MWI) Directives (89/429/EEC and 89/369/EEC). The WID also incorporates the Hazardous Waste Incineration Directive (94/67/EC) forming a single text on waste incineration. The WID will repeal these three Directives from 28 December 2005.

A1.1.14 Producer Responsibility Obligations (Packaging Waste) Regulations 1997

The Producer Responsibility Obligations (Packaging Waste) Regulations 1997 came into force in the UK in March 1997. They aim to achieve a more sustainable approach to packaging waste, reduce the amount of packaging waste going to landfill and implement the recovery and recycling targets set out in the EC Directive 91/62/EC on Packaging and Packaging Waste.

The regulations place legal obligations on businesses with a turnover of more than £2 million and who handle more than 50 tonnes/year of packaging to recover and recycle certain tonnages of packaging waste each year. Companies can reduce their obligation by reducing the amount of packaging they handle.

Obligated producers need to obtain Packaging Recovery Notes (PRNs) from an accredited reprocessor as evidence that recycling or recovery has occurred. An accredited reprocessor is a company that performs a recognised reprocessing activity (for example, glass recycling or energy recovery), which has been accredited by the Environment Agency.

Accredited reproducers sell most PRNs to compliance organisations (eg Valpak, Wastepack) who need high numbers of PRNs to meet their members' legal obligations. PRNs can also be bought on the market through trading organisations.

In the early years of the system, it was difficult to gauge the number of PRNs available and this unpredictable supply led to an increase in PRN prices. Prices have generally stabilised at lower levels in recent years. PRN prices do not directly reflect the cost of reprocessing waste.

Compliance schemes and reproducers generally favour the PRN system, although individual companies often criticise the system believing it places too much power in the hands of recyclers. In a national context, it has been shown to provide a low cost method of meeting the Directives targets.

The regulations have no direct obligations for Wigan. Waste collection and disposal authorities are not considered reproducers of waste and can therefore not issue PRNs. However, in order for the UK to meet increased targets for packaging waste, more packaging waste will need to be extracted from the domestic waste stream. Wigan has a role to play in achieving this, by expanding kerbside recycling collection and promoting other recycling schemes and facilities.

A1.1.15 Forthcoming Legislation

The EU Directive on Waste Electrical and Electronic Equipment (WEEE) became European law in February 2003 and should have been transposed into UK law by 13 August 2004. However, the Government has yet to transpose this Directive. A final round of stakeholder consultation ended in October 2004.

In terms of WEEE in the household waste stream, the Directive sets a collection target of 4kg per householder per year. It requires the UK to establish separate collection systems to allow householders to return WEEE free of charge – a so-called network of designated collection facility (DCFs)

DCFs are likely to include take back facilities at retailers and civic amenity sites. The criteria for becoming a DCF have not yet been established.

The Government are currently proposing that retailers (who have collection obligations under the Directive) pay into a fund to help local authorities provide improved WEEE collection facilities at civic amenity sites.

All WEEE which is separately collected must be transported for specialist treatment and recycling although importantly producers (importers and manufacturers of goods) will be required to meet both these onward transport costs and processing costs.

There are practical difficulties associated with requiring producers to organise the collection of WEEE from DCFs. Problems include the high number of producers relative to the number of DCFs, the need to ensure sites are cleared quickly and efficiently, contractual arrangements between DCFs and producers etc.

Developing legislation which is both workable and enforceable is complex and this is the reason for the delay in implementation. Recent indications are that legislation will be in place by June 2006.

Batteries Directive Proposals

Proposals for a new Directive on batteries and accumulators were issued by the European Commission on 24 November 2003. The reasons proposed for a new Directive are that existing legislation on batteries (Directive 91/157/EEC on Batteries and Accumulators Containing Dangerous Substances) only covers an estimated 7% of consumer batteries on the EU market. These are batteries with a certain mercury, lead and cadmium content. The new Directive will apply to all types of batteries irrespective of their shape, weight, composition or use.

The main aspects of the legislation that are likely to affect authorities are the following proposed collection and monitoring obligations:

- collection schemes for used consumer batteries are to be established. These are to be free of charge to the consumer;
- a collection target of 160 grams per inhabitant for spent consumer batteries is to be met within four years of the Directive being transposed into UK law;
- 80% of portable nickel cadmium batteries are to be collected within four years of the Directive being transposed; and
- the quantity of spent portable nickel cadmium batteries entering the municipal solid waste stream is to be monitored.

There are also recycling obligations, including a proposed 90% of collected consumer batteries to be recycled, with a 55% recycling efficiency.

Although it is undecided who is to finance the collection and recycling of batteries, all authorities are likely to see some increased costs through monitoring and reporting requirements.

Defra anticipate that, if adopted, the Directive would need to be transposed into national law by 2007 to be implemented in 2008. The collection, monitoring and recycling efficiency targets for all battery types would then need to be reached by 2011.

EC Working Document – Biological Treatment of Biowaste

The European Commission has published a discussion document on the biological treatment of biowaste, which is expected to be proposed as an EU Directive, possibly through the Soils Thematic Strategy. The paper raised the prospect of establishing rules and targets on the safe use, collection, recovery, recycling and disposal of biowaste, in order to control potential land contamination and to encourage the use of certified compost. Any Directive that emerges is likely to focus on BMW and complements the BMW diversion targets of the Landfill Directive.

The Commission is investigating whether an obligation to separately collect biowaste (greenwaste and kitchen waste) should be introduced across the EU. This would have implications for Wigan, as a collection service for biowaste is not currently operated within the Borough.

The separately collected biowaste would be subject to a defined composting process, encompassing time and temperature requirements, in order to produce compost meeting specified quality standards (maximum tolerable levels of certain pollutants and pathogens).

Any Biowaste Directive would also be likely to address the biological treatment of catering waste, which is currently controlled by the Animal By-Products Regulations 2003. Once a Directive is in force, its provisions would supersede the requirements of the Animal By-Products Regulation with regard to the composting of catering waste.

A1.1.16 Regional waste policy

In September 2004, a regional waste strategy for the North-West was produced. It sets targets for reducing the growth in waste, recycling/composting, and recovery of waste in a similar way to the national strategy.

Technical Appendix B

Contextual Data

B1 CONTEXTUAL DATA

B1.1 POPULATION INFORMATION

B1.1.1 Population

Current Population

The number of people in an area is the single biggest contributor to the quantity of household waste. Population growth is therefore a key driver for waste growth within a local community.

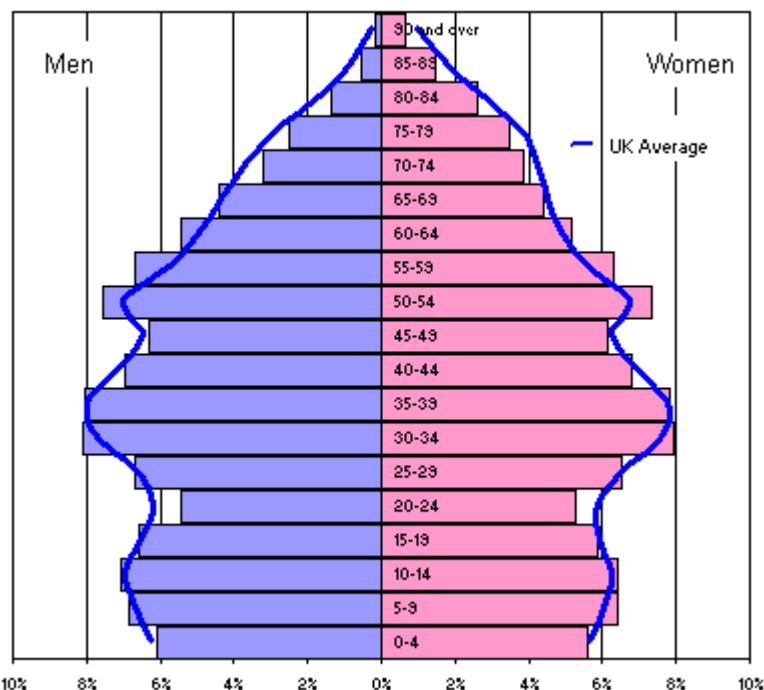
In mid 2003, Wigan had a total population of 303,800. Between 1982 and 2002, there was a one per cent decrease in the population, compared to a two per cent decrease for the North West Region as a whole. *Table 1.1* and *Figure 1.1* show that the greatest proportion of people living in Wigan are aged between 30 and 39 years of age.

Table 1.1 Age Distribution in Wigan (5 year age brackets)

Age range	Total no. of residents	No. of male residents	No. of female residents
0 - 4	17561	8969	8592
5 - 9	19936	10112	9824
10 - 14	20364	10479	9885
15 - 19	18672	9686	8986
20 - 24	16140	8074	8066
25 - 29	19880	9907	9973
30 - 34	24188	12013	12175
35 - 39	23968	11931	12037
40 - 44	20659	10248	10411
45 - 49	18708	9313	9395
50 - 54	22432	11158	11274
55 - 59	19532	9860	9672
60 - 64	15939	8039	7900
65 - 69	13310	6522	6788
70 - 74	10708	4780	5928
75 - 79	9060	3681	5379
80 - 84	6031	2019	4012
85 - 89	3068	804	2264
90 and over	1259	261	998
Totals	301415	147856	153559

Source: National Statistics, Census 2001

Figure 1.1 Wigan Population Pyramid



Source: National Statistics, Census 2001

B1.1.2 Population Projections

Population projections are available on Wigan’s website. The population of Wigan has been projected to steadily increase as shown in Table 1.2.

Table 1.2 Population projections for Wigan MBC (11)

Year	Projected population for Wigan
2006	306,200
2007	307,000
2008	307,800
2009	308,600
2010	309,500
2011	310,300
2012	311,300
2013	312,200
2014	313,100
2015	314,100
2016	315,000
2017	315,900
2018	316,700
2019	317,600
2020	318,400

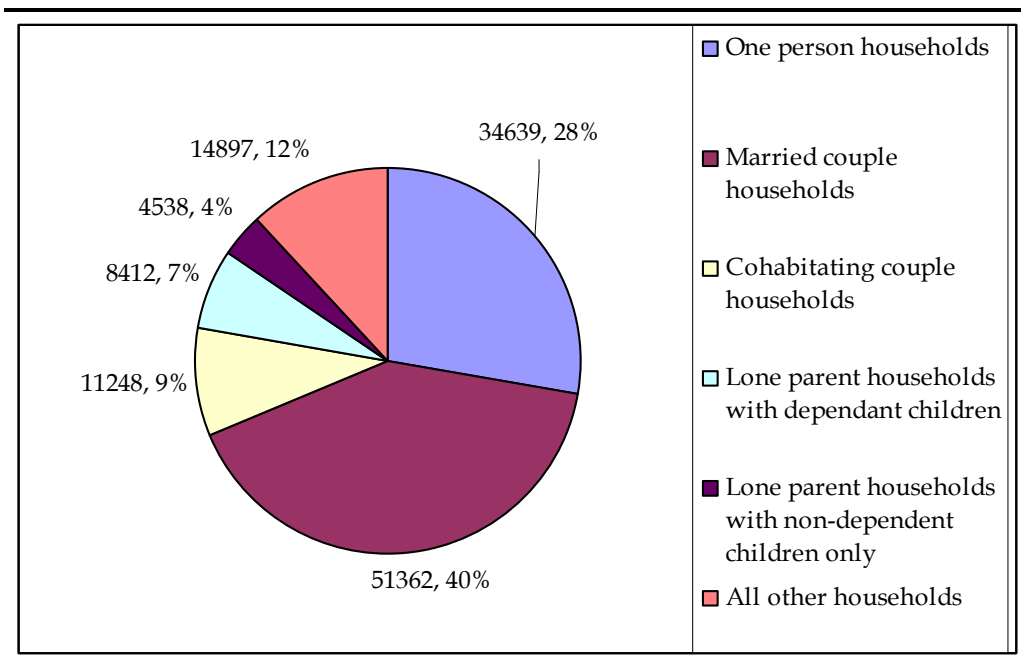
(11) <http://www.wiganmbc.gov.uk/pub/planning/sta317,600ts/>

B1.1.3 Housing Structure

The number of households is closely related to population. However, due to a fall in average family size, households are nationally growing at a faster rate than population. Although the amount of household waste declines with a decrease in household size, the amount of waste per capita tends to increase.

In Wigan there were 125,096 households with residents in 2001. The majority of households consisted of married couple households (40%). The next highest household category is one person households (28%). Lone parent households with non-dependent children only make up the smallest proportion (4%) (*Figure 1.2*).

Figure 1.2 Household Composition in Wigan



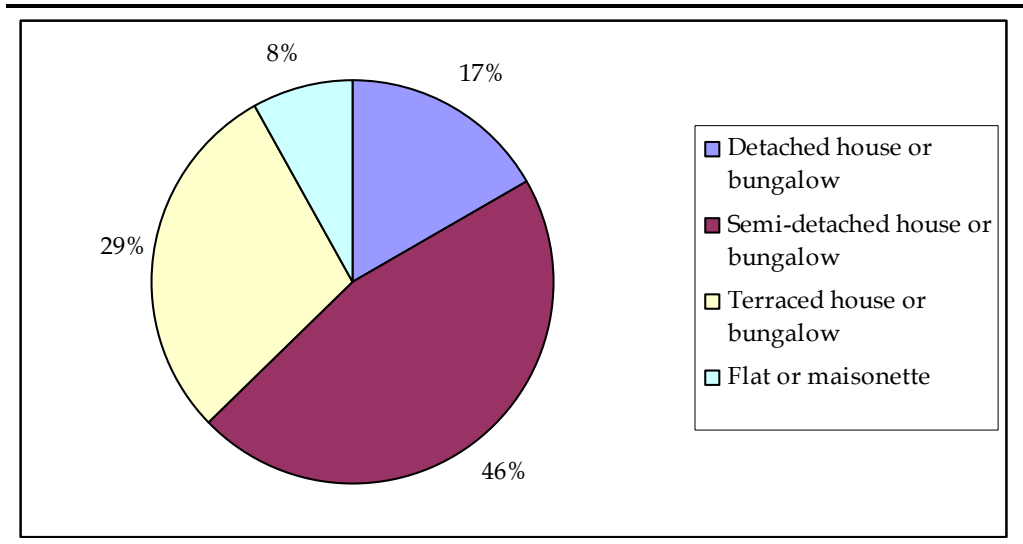
Source: National Statistics, Census 2001

B1.1.4 Household Type and Density

The type and density of households is likely to have a number of effects on produced waste. Houses with gardens, eg terraced, semi-detached and detached houses are likely to have gardens which will lead to the generation of garden waste. Fewer flats have gardens but are generally considered to be harder to service for recycling. Denser housing enables more efficient collection of materials from higher numbers of houses due to a reduction in travel time between properties.

In Wigan, in 2001, 99% of the resident population lived in households and 1% lived in communal establishments. The majority of households are semi-detached (46%), compared with 32% in England as a whole. Approximately 17% detached houses and only 8% flats, compared to 19% flats in England as a whole, and 23% detached houses. (*Figure 1.3*). Household density equates to 16 persons per hectare, approximately 5 times the national average of 3.4.

Figure 1.3 Housing types in Wigan



Source: National Statistics, Census 2001

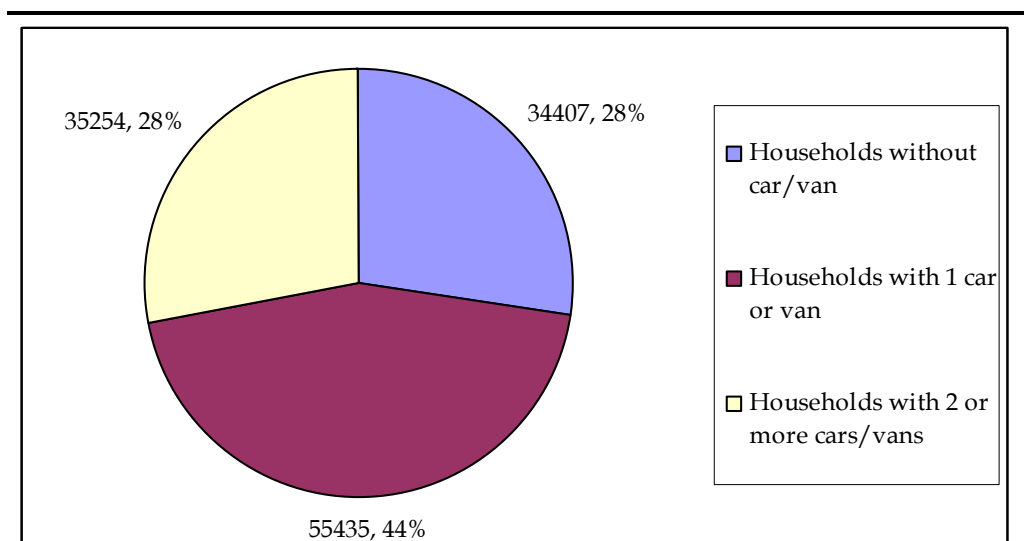
B1.1.5 Ethnicity

Principally, an ethnically diverse population is likely to require approaches to communication and consultation that take account of language and cultural differences. Ethnic communities can also have different household waste generation habits. For example, Asians tend to have a preference for freshly prepared food and will therefore likely generate more food preparation waste and less packaging. In Wigan, 297,506 of the population's ethnic group are white and the largest minority ethnic group is Indian, with 681 individuals (12).

B1.1.6 Mobility

Higher levels of car and van ownership influence greater participation for CA and bring site facilities. Many inner city and economically deprived areas are likely to have lower levels of car ownership. In Wigan, 72% of households own a car or van (Figure 1.4).

Figure 1.4 Mobility



Source: National Statistics, Census 2001

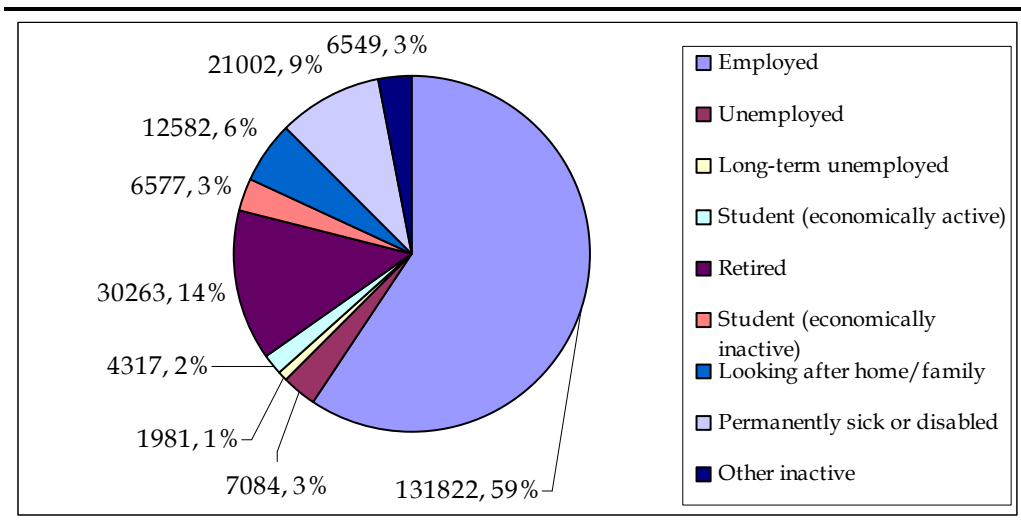
(12) Source: National Statistics, Census 2001

B1.1.7 Employment

Employment is a key economic indicator that is highly correlated with levels of consumption and social deprivation. Areas of high unemployment can benefit from a job creation & local economic development approach to waste and recycling issues (for example utilising social businesses and the community sector for recycling service provision). In addition, these areas will respond to different approaches to consultation and communication in respect of recycling and waste minimisation messages.

Wigan has an employment rate of 59%, slightly lower than the national average of 60.6%. Wigan has less unemployed (3%) and students (5%) than average (4.4% and 7.3%) (Figure 1.5).

Figure 1.5 Employment in Wigan



Source: National Statistics, Census 2001

B1.1.8 Education

Education is correlated with participation in recycling and waste minimisation. An awareness of levels of education can therefore be helpful in modelling capture rates, as well as in designing systems and targeting education material.

The residents of Wigan have a higher percentage of residents qualified to degree level or higher, and a lower percentage of residents with no qualifications than average of England and Wales (Table 1.3).

Table 1.3 Education in Wigan

	Wigan (%)	England and Wales %
No qualifications	35.3	29.1
Qualified to degree level or higher	12.9	19.8

Source: National Statistics, Census 2001

Technical Appendix C

Summary of Options
Appraisal for Residual
Waste Treatment Technology

C1 SUMMARY OF OPTIONS APPRAISAL FOR RESIDUAL WASTE TREATMENT TECHNOLOGY

In March 2005 ERM undertook an assessment of options for the management of waste in Wigan. The aim of this project was to identify and to explore options for diverting waste from landfill, in order that the Authority can aim to reduce the amount of biodegradable municipal waste (BMW) municipal waste sent to landfill in line with LATS.

The initial work by ERM identified and evaluated a range of options that would help Wigan to meet landfill allowances for BMW and meet its statutory performance targets. In addition to examining current waste management performance (the 'do nothing' scenario) and a high recycling and composting scenario, seven waste management solutions were developed, as follows:

- Option 1 – recycling & composting, Energy from Waste (EfW), and landfill
- Option 2 – recycling & composting, mechanical biological treatment (MBT) and landfill
- Option 3- recycling & composting, autoclaving, and landfill
- Option 4- recycling & composting, anaerobic digestion and landfill
- Option 5- recycling & composting, MBT with gasification of outputs and landfill
- Option 6 – high recycling & composting, EfW and landfill
- Option 7 – high recycling & composting, MBT with gasification if outputs and landfill

Each option was assessed against key environmental, financial and deliverability objectives and ranked accordingly. A rank was assigned to the performance of the options to place all the criteria on a common index. Criteria scores were also converted to a 'value', a measure of performance that retains the cardinal nature of the data, whilst still allowing performance against all criteria to be placed on a common scale. The 'value' of each performance score was assessed by converting actual scores into a scale of 0-1, where 0 was the worst performance and 1 the best.

Table 1.1 indicates that Option 1 performed best, followed by Option 2. The preferred Option (1) assumes a recycling and composting rate of 38%, with residual waste going to an EfW facility and landfill.

As part of this options appraisal, consultation exercises were undertaken to establish the importance of each evaluation criterion and to gain feedback on the options from key stakeholders. Results from the consultation exercises suggest that the relative importance of 'reliability of delivery' and 'liability of end product' should be strengthened. In doing so, the preferred option remains the same, as Option 1 performs best against both these criteria.

Following the initial appraisal of options and the findings from the consultation exercises, the most promising options were short-listed and two treatment technologies were taken forward for further consideration, namely EfW and MBT.

The short listed options were:

- Do nothing
- Energy from Waste
- MBT with gasification of RDF
- High recycling & EfW
- High recycling & MBT with gasification of RDF

Table 1.2 shows a summary of these waste management options.

Table 1.1 Summary of Results, Actual Scores and Ranks and Value Scores

Criterion	Score	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7
Depletion of resources (,000 tonnes of crude oil equivalents)	Raw	-422,715	-505,218	-711,771	-179,940	-441,225	-403,515	-469,337
	Rank	5	2	1	7	4	6	3
	Value	0.46	0.61	1.00	0.00	0.49	0.42	0.54
Air acidification (tonnes of sulphur dioxide equivalents)	Raw	-3,744	-7,041	-7,129	-2,138	-4,623	-3,921	-5,047
	Rank	6	2	1	7	4	5	3
	Value	0.32	0.98	1.00	0.00	0.50	0.36	0.58
Greenhouse gas emissions (,000 tonnes of carbon dioxide equivalents)	Raw	-493,523	-648,950	-1,049,447	-227,813	-172,930	-481,620	-274,861
	Rank	3	2	1	6	7	4	5
	Value	0.37	0.54	1.00	0.06	0.00	0.35	0.12
Extent of water pollution (water assessment score)	Raw	7289	7229	7229	7293	7767	7289	7767
	Rank	3	1	1	5	6	3	6
	Value	0.89	1.00	1.00	0.88	0.00	0.89	0.00
Total road kilometres (te-km)	Raw	4,794,339	7,573,488	9,338,189	5,587,738	5,328,066	6,266,784	6,531,783
	Rank	1	6	7	3	2	4	5
	Value	1.00	0.39	0.00	0.83	0.88	0.68	0.62
Financial cost (£ per tonne)	Raw	81.89	80.42	85.60	88.48	80.72	86.97	83.70
	Rank	3	1	5	7	2	6	4
	Value	0.82	1.00	0.36	0.00	0.96	0.19	0.59
Reliability of delivery (likelihood of implementation) (total option score)	Raw	3.00	2.67	2.00	2.67	2.00	3.00	2.00
	Rank	1	3	5	3	5	1	5
	Value	1.00	0.67	0.00	0.67	0.00	1.00	0.00
Liability of end product (total option score)	Raw	5.60	8.29	10.00	6.92	5.76	6.05	5.71
	Rank	1	6	7	5	3	4	2
	Value	1.00	0.39	0.00	0.70	0.96	0.90	0.98
Total Valued Performance Score		5.85	5.58	4.36	3.14	3.80	4.78	3.43

Table 1.2 Summary Table of Integrated Management Options for Municipal Waste

	Year	Do Nothing	Option 1	Option 5	Option 6	Option 7
			EfW	MBT with Gasification	High Recycling & EfW	High Recycling & MBT
Recycling & Composting	2010	28%	36%	36%	48%	48%
	2015	29%	37%	37%	48%	48%
	2020	29%	38%	38%	49%	49%
Energy from Waste	2010		45%		32%	
	2015		43%		31%	
	2020		43%		31%	
MBT	2010			32%		36%
	2015			47%		35%
	2020			46%		35%
Gasification ⁽ⁱⁱ⁾	2010			13%		16%
	2015			19%		15%
	2020			18%		15%
Direct to Landfill ⁽ⁱ⁾	2010	72%	19%	31%	20%	16%
	2015	71%	20%	16%	21%	17%
	2020	71%	20%	16%	20%	17%

Footnotes:

⁽ⁱ⁾ Direct to landfill does not include residues from treatment technologies which are disposed to landfill, but these are taken account of in the analysis of each option against LATS targets.

⁽ⁱⁱ⁾ Where the total for a year does not equal 100%, this has resulted from rounding errors, with the exception of Options 5 and 7, where the percentage of waste 'to gasification' relates to residues from the MBT process. These figures have been italicised.

The size of the treatment facility for each of the options is shown in *Table 1.3*. This is based on a growth rate for municipal waste falling year on year from a starting point of 1.8%.

Table 1.3 Additional Residual Treatment Capacity Required

Scenario	Additional Treatment Capacity
Do Nothing	No additional waste management treatment facilities, residual waste disposed of to landfill.
Option 1 (EfW)	Energy from Waste facility treating 110,000 tonnes per annum from 2009.
Option 5 (MBT with Gasification)	MBT facility managing 80,000 tonnes per annum from 2009, 120,000 tonnes from 2012. Gasification plant treating 31,000 tonnes per annum from 2009, 50,000 tonnes from 2012.
Option 6 (High Recycling with EfW)	Energy from Waste facility managing 80,000 tonnes per annum from 2009.
Option 7 (High Recycling with MBT)	MBT facility managing 90,000 tonnes per annum from 2009 onwards. Gasification plant treating 39,000 tonnes per annum from 2009.

Each option was examined in further detail and tested against the following criteria:

- requirement for construction/contracting of new capacity;
- ability to achieve LATS allowances;
- capital costs;
- likely risks and benefits of implementation; and
- likely environmental issues.

Following the initial study by ERM, a further study was undertaken to provide advice on the development of an implementation and procurement plan for waste facilities in Wigan. The scope of this work included an assessment of any partnering potential with other local authorities and an examination of funding mechanisms together with associated timescales.

The recommendations from this work included:

- Wigan MBC pursue only partnerships that will provide demonstrable benefits to the Council
- Wigan MBC considers EfW as the preferred waste treatment option. If an EfW facility is not viable, that an MBT with gasification be the next considered option.

Table 1.4 Summary of Key Issues from Options Evaluation

	Do Nothing	Option 1 (EfW)	Option 5 (MBT with Gasification)	Option 6 (High Recycling with EfW)	Option 7 (High Recycling with MBT)
(a) What is the scale of additional capacity required?	None	Moderate site and capacity requirement within Wigan (110,000 tpa)	Moderate-large site and capacity requirements within Wigan (120,000 tpa MBT & 50,000 tpa Gasification plant)	Moderate site and capacity requirement within Wigan (80,000 tpa)	Moderate-large site and capacity requirements within Wigan (90,000 tpa MBT & 40,000 Gasification plant)
(b) Does option meet WET act requirements?	No, fails to meet targets from early years (2007)	Will meet LATS and will have allowances to sell with the exception of 2008/9 when allowances will need to be purchased.	Will meet LATS and will have allowances to sell with the exception of 2008/9 when allowances will need to be purchased.	Yes, given growth rate assumptions	Yes, given growth rate assumptions
(c) What are the estimated capital costs of treatment facility? ⁽¹⁾	None, but high costs in terms of LATS penalties and increasing landfill charges. ⁽²⁾	Significant capital and operational costs of development. (EfW capital costs c. £30m)	Significant capital and operational costs of development. (MBT & gasification plant capital costs c. £35m).	Significant capital and operational costs of development. (EfW capital costs c. £18m)	Significant capital and operational costs of development. (MBT & gasification plant capital costs c. £35m).
(d) What are the key additional risks/benefits	Lack of landfill capacity requirements with the region.	Risks of obtaining planning permission. Low risk of reliability of delivery: In terms of proven technology. Low liability of end products risk.	Risks of obtaining planning permission. Risk of reliability of gasification plant.	Risk of obtaining planning permission. Non-performance: difficulties raising participation & capture rates for recycling.	Risk of obtaining planning permission. Non-performance: difficulties raising participation & capture rates for recycling. Risk of reliability of gasification plant.
(e) What are the likely environmental impacts?	Environmental impacts from landfill.	Visual impact, site-specific impacts. Energy recovery benefits. Reduced total road kilometres.	Visual impact, site-specific impacts. Energy recovery benefits.	Visual impact, site-specific impacts. Energy recovery benefits.	Visual impact, site-specific impacts. Energy recovery benefits.

(1) Capital costs for waste treatment facilities sourced from Strategy Unity Waste Report. <http://www.number-10.gov.uk/su/waste/report/downloads/al.pdf>

(2) The cost of doing nothing