Wigan Council

Waste Strategy

2009 - 2030

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Contents

1 Introduction

1.1 Strategic Environment Assessment

As part of the process of preparing this Municipal Solid Waste Management Strategy, a Strategic Environmental Assessment (SEA) was undertaken on Wigan's Draft Municipal Solid Waste Management Strategy (MSWMS) which was issued for consultation as Wigan's Waste Strategy review (WWSR) to assess the environmental and sustainability impacts of the options and objectives proposed within the Strategy. An Environmental Report was produced as the main outcome of this SEA process which was introduced as a legal requirement for certain plans and programmes such as MSWMS under a European Directive, the 'SEA Directive' (2001/42/EC).

In its application to the MSWMS, the SEA involves the following processes:

- Preparation of an Environmental report on the likely significant effects of the MSWMS;
- Carrying out a consultation on the MSWMS and the accompanying Environmental Report;
- Taking into account the environmental report and the results of consultation in decision making;
- Providing information when the MSWMS is adopted to show the results of the SEA have been taken into account.

2 Executive Summary

2.1 Strategy Objectives - Where are we going?

This Municipal Solid Waste Management Strategy (MSWMS) for Wigan Borough sets out the objectives of municipal solid waste (MSW) management until 2030. The sustainable management of MSW is an important and challenging environmental issue that we face today in order to assist in protecting our environment for the future and meet targets set for us.

Under the European Union Landfill Directive, targets have been set for the UK to reduce the amount of Biodegradable Municipal Waste (BMW) going to landfill, as follows:

- By 2010 to reduce the amount of BMW going to landfill to 75% of that produced in 1995.
- By 2013 to reduce the amount of BMW going to landfill to 50% of the 1995 figure.
- By 2020 to reduce the amount of BMW going to landfill to 35% of the 1995 figure.

These targets are mandatory. Failure to meet them will expose the UK to fines from the European Court of Justice of up to £0.5 million per day. The Waste and Emissions Trading Bill put in place a system to allow the UK to meet its targets and help both tackle climate change and move towards more sustainable waste management. The Bill set limits on the amount of BMW that local authorities may send to landfill.

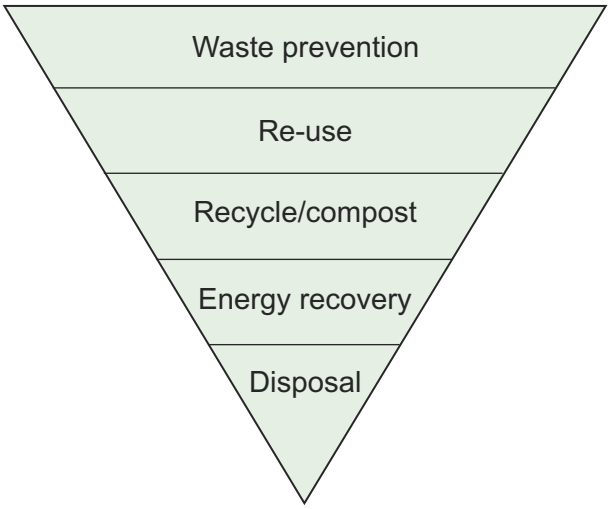
In England the system that was put in place is the Landfill Allowance Trading Scheme (LATS) which regulates and monitors compliance with the Landfill Directive obligations. The scheme sets an amount of BMW that can be sent to landfill by each council until 2020. Councils have to ensure that the amount of BMW sent to landfill by them in any particular scheme year does not exceed the amount allowed by the scheme.

To address these global, European, national, regional and local needs this update to Wigan Borough's 2006 MSWMS has been developed.

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

As we move to a more sustainable way of living we must utilise our resources better, including materials we have finished with or discarded. To achieve this, the council will follow the principles of the waste management hierarchy. The hierarchy sets out the sequence in which we should look to minimise the amount of waste that is sent for disposal, first through reducing the waste produced, then through reusing the waste that is generated and then by recycling. It also sets out the preferences for the disposal of waste, with disposal that has some recovery of either material or energy being preferable to landfill where all of the resources are lost.

Figure 2.1 - The Waste Hierarchy



As indicated by the waste hierarchy, 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.

2.1.1 Our objectives are to:

- Improve the management of MSW, managing the waste in a more sustainable manner to reduce the impact it has on the environment, including reducing greenhouse gas emissions, and to gain the most environmental benefit possible from residual waste.
- To reduce both the amount of MSW produced and the amount sent to landfill.
- To manage waste following the principals of the waste hierarchy.
- To deliver a service that provides best value.
- To fulfil all our statutory obligations.
- To provide proactive education to and engage with residents and stakeholders.

- To ensure that services are accessible to all service users and provide encouragement for community involvement.
- To recognise the need for conservation of natural resources and protection of the environment.
- To seek to continually improve performance.

2.1.2 How will we achieve our objectives?

In order to achieve the stated objectives, we will;

- Provide all suitable properties with recycling collections of:
  - plastics, glass, cans by December 2010
  - green waste (for properties generating green waste) by March 2009
  - compostable kitchen waste by March 2015
- Continue to provide collections of paper from all properties and increase pulpables collected to include cardboard and other suitable paper-based waste by March 2012, using a bin instead of a bag.
- Improve existing Household Waste Recycling Centres (HWRCs) to increase accessibility to recycling for residents and increase recycling and composting rates at all sites.
- Replace the HWRCs that are unsuitable for current and future needs and are poorer performing (Frog Lane and Orrell) with a new purpose built HWRC that will meet future needs.
- Improve the cost-effectiveness, recycling and re-use of bulky waste collections and seek to work with the third sector to deliver social benefits from the material collected.
- Produce waste planning guidance for new developments to ensure appropriate recycling facilities can be provided.
- Actively seek to 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 LATS (Landfill Allowance Trading Scheme). Consideration will be given to partnership working with other authorities if this can provide demonstrable benefits to the Council.
- Introduce a formalised refuse collection policy.
- Undertake proactive local community education schemes to increase awareness of the issues driving the need to recycle, the details of the recycling schemes operated and the materials collected.
- Actively promote waste minimisation and movement up the waste hierarchy.

- Continue 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.
- Continue to promote the authorised recycling and disposal of commercial waste, while actively enforcing the access policy for HWRCs (through the use of the permit scheme, CCTV and Automated Number Plate Recognition systems).
- Ensure that all residents in the borough have access to a bring recycling site (recycling point) by providing them within 1km of all residences.

2.1.3 Our targets are to:

- Stabilise municipal waste growth to 1% by 2010 and reduce it to 0% by 2020.
- Achieve recycling and composting standards of 45% by 2015 and 50% by 2020.
- Recover 67% of waste by 2015 and 75% by 2020.
- Reduce biodegradable municipal waste landfilled to levels consistent with those set for Wigan Council by LATS.
- Serve all households with a recycling collection of at least two materials by December 2010 to meet the requirements of the Household Waste Recycling Act 2003.
- Increase recycling and composting at HWRCs to 70% by 2013.
- Reduce residual household waste per household to 887kg per household by 2008/9, 791kg by 2009/10 and 776 kg by 2010/2011.

3 Baseline Report

3.1 Where are we?

As a Unitary Authority, Wigan Council provides both waste and recycling collection and disposal services. Wigan achieved a recycling and composting rate of 11.89% in 2003/4, exceeding the statutory recycling and composting target of 10% set by central government. In preparation for the targets set for 2005/06, and to assist in meeting the requirements of LATS, kerbside collections of paper, cardboard and garden waste commenced, in addition to improvements to all HWRCs. These measures meant that Wigan Borough's recycling and composting rate increased to 18.1% in 2005/06, again exceeding the statutory target set of 18%. In, 2006/7 this rose to 21.67% and 26.31% in 2007/8.

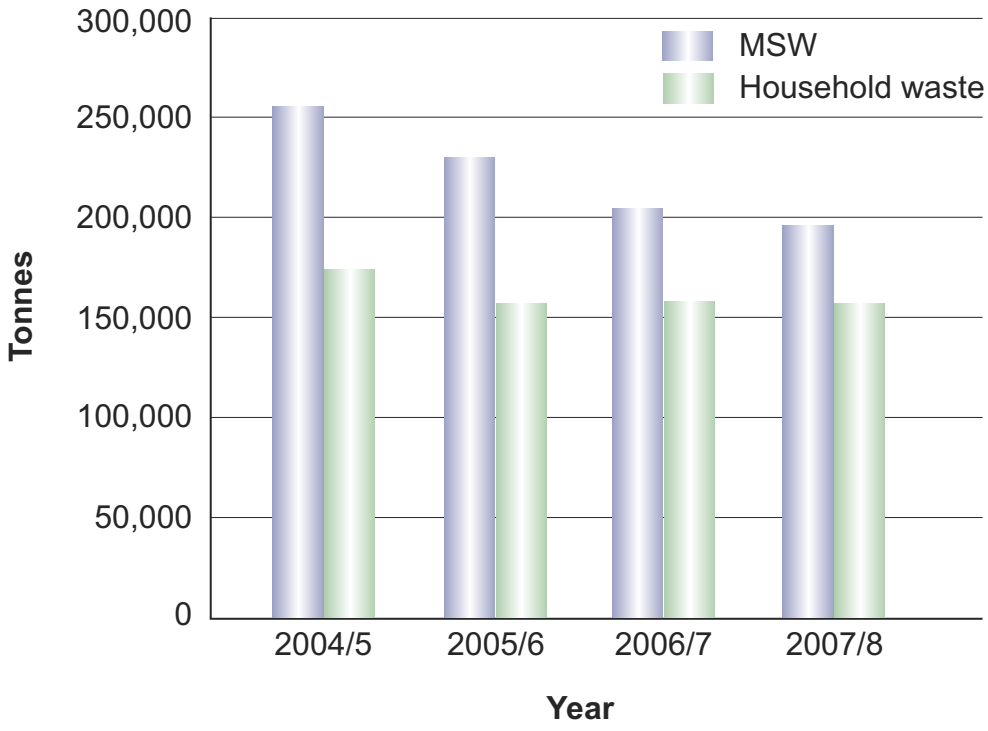
Waste minimisation measures implemented since the last waste strategy have meant that the amount of municipal waste generated by Wigan Borough is decreasing. Household waste has declined or remained level over the last four years.

Table 3.1 presents the municipal waste collected over the last four years; **Figure 3.1** provides a diagrammatical representation of the information.

Table 3.1 - Municipal and household waste

Year	Tonnage of Municipal Solid Waste (MSW)	Tonnage of MSW that is household waste	Percentage increase/ decrease of household waste
2004/5	258,056	174,172	+4.9%
2005/6	228,163	159,466	-8.91%
2006/7	204,618	160,504	+0.23%
2007/8	197,623	159,844	-0.41%

Figure 3.1 - Diagrammatical representation of waste growth in Wigan Borough



3.1.1 Waste and recycling services

Refuse collection

A weekly refuse collection service is provided to 138,300 domestic properties. In 2007/8, 93,400 tonnes of domestic waste was collected through the refuse collection service.

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 to include all the households within the borough, except for the flats, this collection scheme now serves 137,733 properties. (Flats are provided with an internal bring recycling site.) The scheme operates using a re-usable bag, which is emptied every fortnight on the same day as refuse collection. In 2007/8, 7,395 tonnes of paper were collected through this service.

Kerbside garden and cardboard waste collection

In April 2005, a trial kerbside collection of garden and clean brown 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 from 96,717 properties. In 2007/8, 12,963 tonnes of cardboard and garden waste were collected. This material is composted on-farm and used as a soil conditioner.

Kerbside dry recyclables collection
In February 2008 a trial kerbside collection of glass bottles and jars, cans and plastics was introduced to 13,047 households. A brown wheeled bin is collected fortnightly from the properties and to the end of the 2007/8 financial year collected 121 tonnes of recyclables.

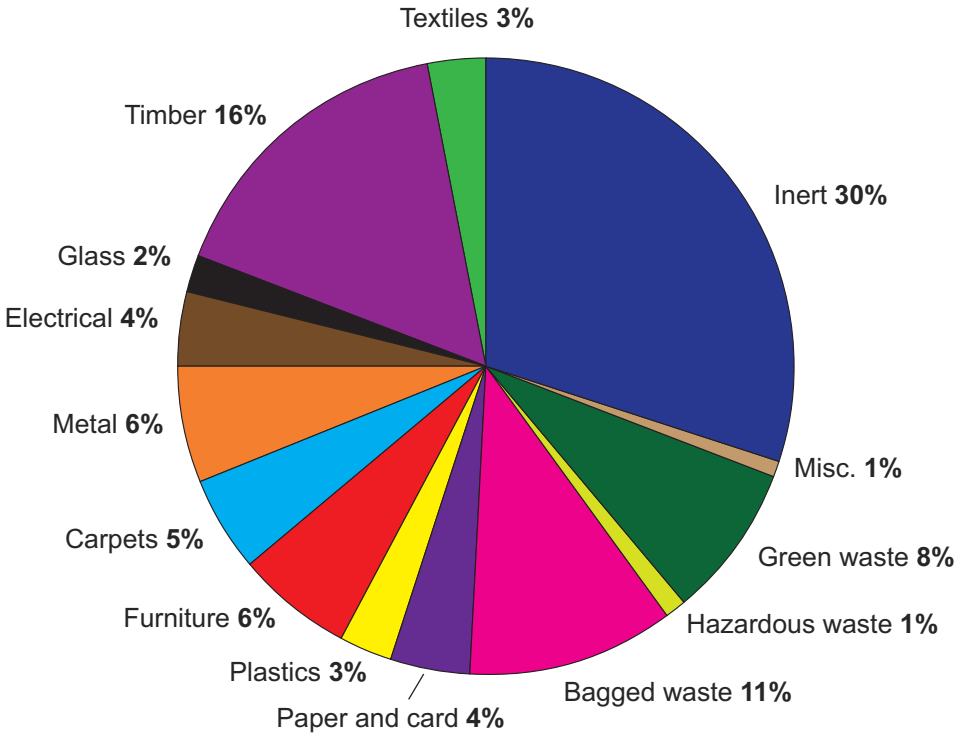
Bulky waste collection
An on-request bulky waste collection service is operated within the borough. A £10 charge was introduced for the collection of up to seven items per household in April 2005. With the exception of Waste Electronic and Electrical Equipment (WEEE), this material is currently not recycled or reused.

Bring sites and voluntary recycling
The Council currently operates 170 bring sites. The majority of these sites are situated at supermarkets and public houses. 3,577 tonnes of waste was collected for recycling at bring site in 2007/8.

Eight tonnes of waste was collected at the kerbside by voluntary groups within the borough for reuse and recycling in 2007/8.

Household Waste Recycling Centres (HWRCs)
Waste Recycling Group Ltd (WRG) manages the borough's five HWRCs on behalf of the council. In 2007/8, the HWRCs received 44,845 tonnes of waste. The composition of this material is displayed in **Figure 1.2**.

Figure 3.2 - Composition of materials collected at HWRCs



Street cleansing
In 2007/8, 6,093 tonnes of waste was collected from street sweeping and 1,608 tonnes from litter collections. None of litter and only some of the street sweepings are currently recycled.

Highways work
26,732 tonnes of highways waste was collected in 2007/8. This material was non-biodegradable and sent for inert recycling.

Charities waste
The Council operate a free tipping service for charities at specific HWRCs. Eight hundred and ninety two tonnes of waste was received from charities in 2007/8.

3.1.2 Waste Arisings, Composition and Growth

One of the major issues to be tackled in the borough has been the continued growth in waste arisings. However, in the last four years the amount of household waste collected has declined or remained level, despite increasing housing numbers, but the amount of waste collected per household is still high. **Figure 3.3** shows the anticipated changes in waste arisings to 2019/2020, based on predicted recycling, waste and housing growth rates. Successful waste prevention schemes will be critical if Wigan Borough is to achieve zero waste growth.

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 3.3 - Future predicted municipal solid waste arisings for Wigan Council

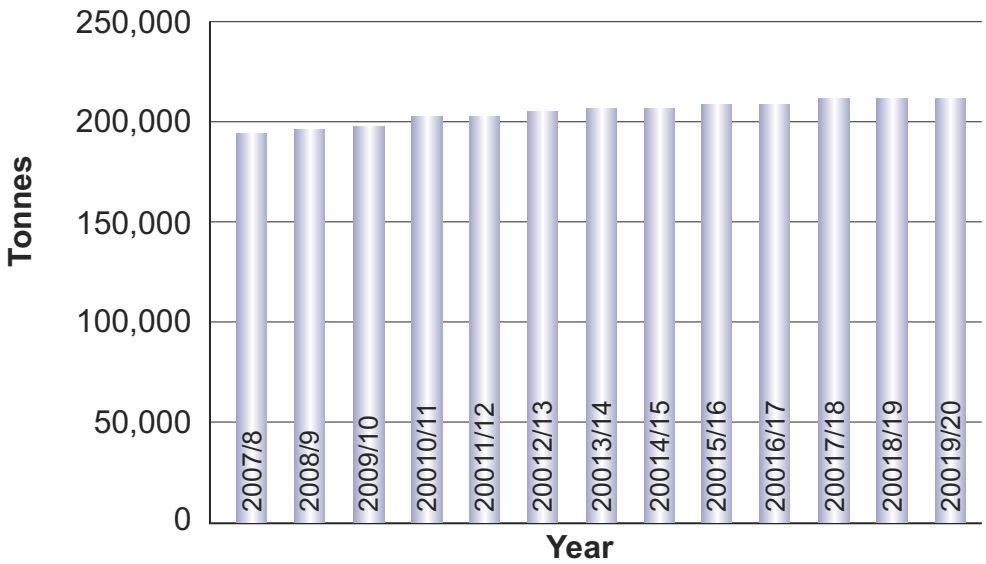
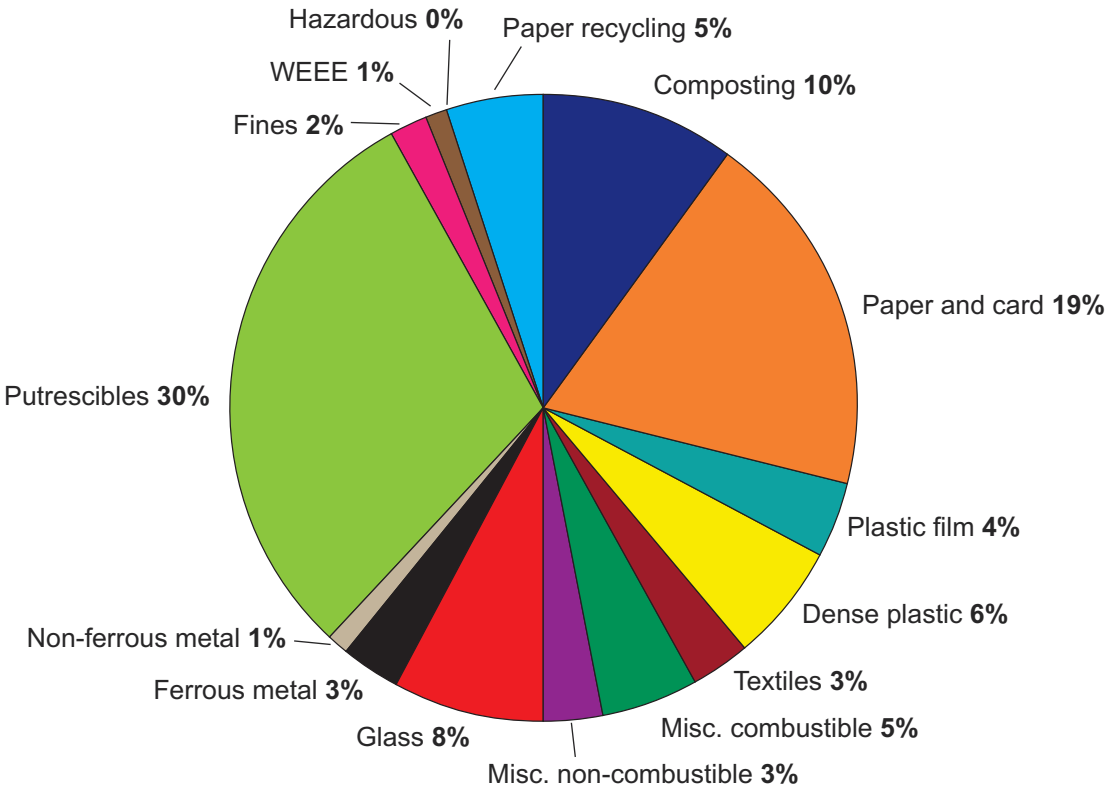


Figure 3.4 shows the composition of the residual household waste fraction in Wigan Borough following a two season waste analysis in February and July 2007. Due to seasonal variations in waste composition, some fractions of the waste, such as garden waste, are likely to be significantly higher in summer months. From this waste analysis, kitchen waste and paper/cardboard are the most significant fraction of household waste produced in Wigan Borough.

Figure 3.4 - Composition of residual household waste in Wigan Borough



3.2 Where do we want to get to?

Wigan Council seeks to improve the management of MSW, managing the waste in a more sustainable manner to reduce the impact it has on the environment, reducing greenhouse gas emissions, and to gain the most environmental benefit possible from residual waste. The sustainable management of MSW is an important and challenging environmental issue that we face today in order to assist in protecting our environment for the future and to meet targets set for us.

Wigan Council will meet recycling and composting targets as set by Government in Waste Strategy for England 2007 (WSE2007), and will aim to reduce the potential for Landfill Allowance Trading Scheme (LATS) penalties through the reduction of biodegradable waste sent to landfill.

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

As we move to a more sustainable way of living we must utilise our resources better, including materials we have finished with or discarded. To achieve this, the council will follow the principles of the waste management hierarchy. As indicated by the waste hierarchy, 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 reduce the both amount of MSW produced and the amount sent to landfill.
- To manage waste following the principals of the waste hierarchy.
- To deliver a service that provides best value.
- To fulfil all our statutory obligations.
- To provide proactive education to and engage with residents and stakeholders.
- To ensure that services are accessible to all service users and provide encouragement for community involvement.
- To recognise the need for conservation of natural resources and protection of the environment.
- To seek to continually improve performance.

Our targets are to:

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- Achieve recycling and composting standards of 45% by 2015 and 50% by 2020.
- Recover 67% of waste by 2015 and 75% by 2020.
- Reduce biodegradable municipal waste landfilled to levels consistent with those set for Wigan Council under LATS.
- Serve all households with a recycling collection of at least two materials by December 2010 to meet the requirements of the Household Waste Recycling Act 2003.
- Increase recycling and composting at HWRCs to 70% by 2013.
- Reduce residual household waste per household to 887kg per household by 2008/9, 791kg by 2009/10 and 776 kg by 2010/2011.

To achieve our objectives and reach our targets there are a range of actions we must undertake. These are detailed in the action plan (Section 3).

3.3 Waste Prevention and Minimisation

Waste prevention conserves resources, saves energy, reduces pollution, promotes the provision of cheaper goods and reduces the demand for and cost of waste treatment and disposal.

A reduction in waste growth and waste going to landfill has been identified as a priority through the inclusion of an ambitious NI191 target in Wigan Council's Local Area Agreement (LAA). The National Indicator (NI) 191 monitors an authority's performance on the amount of residual household waste per household. This is the household waste that is collected minus the household waste that is reused, recycled, composted or anaerobically digested.

Figure 3.5 - National indicator NI 191 targets

	2007/7	2007/8	2008/9	2009/10	2010/11
NI191 - Residual household waste per household (kg)	923	875	887	791	776
	Actual	Actual	LAA target	LAA target	LAA target

Following the principals of the waste hierarchy, Wigan Council will seek to improve the reuse of wastes, through the improvement of the existing community re-paint scheme and supporting third sector furniture and white goods reuse.

In addition to targeting reductions in household waste, Wigan Council will continue to promote responsible waste management of other municipal wastes. This will continue to include the promotion and enforcement of the access policy for HWRCs. In April 2005, trade waste was banned from all HWRCs and a permit scheme introduced for vans and twin axle trailers entering the HWRCs to prevent unauthorised deposits of trade waste. This permit scheme will continue to be developed through the use of the recently introduced CCTV and ANPR system at all sites.

3.4 Recycling and Composting

In Waste Strategy for England 2007 (WSE2007) the Government set out a number of national recycling and composting and waste recovery targets, these are set out in **Table 2.2**. Wigan Council will aim to meet or exceed these targets through the implementation a series or recycling and composting initiatives outlined below.

Figure 3.2 - National recycling and composting and recovery targets as set in WSE2007

Target	2010	2015	2020
Recycling and Composting Rate	40%	45%	50%
Recovery Rate	53%	67%	75%

3.4.1 Kerbside recycling collections

To date, Wigan Council has concentrated efforts on removing the biodegradable fractions of waste from the household waste stream. This material represents a significant proportion of the waste stream in Wigan Borough, and recycling and composting has proven to be successful. However, further kerbside collections are needed in order to meet our objectives and reach our targets.

All suitable properties will be provided with the following recycling collections:

- Paper and other pulpables.
- Dry recyclables, such as plastics, glass and cans.
- Kitchen waste.
- Green (garden) waste.

3.4.2 Managing kerbside recycling and refuse collections

The collection of glass, cans, additional cardboard, plastics and kitchen waste 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 recyclable 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 plastics 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.

3.4.3 Bulky waste

Bulky waste from household collections is currently taken to the Kirkless site. Only WEEE is currently segregated for recycling. Wigan Council will look to increase the amount of material re-used and recycled through working with the third sector and seek to improve the quality and quantity of used and reconditioned furniture, electrical items and other household goods available at low cost to disadvantaged local people.

We will also aim to gain additional benefits by using the bulky waste collected to provide quality training and volunteering opportunities for local people, increasing employment prospects for some of those people.

3.4.4 Bring recycling points

There are approximately 170 bring recycling points at convenient locations within the borough. The majority of sites are situated at supermarkets, car parks and public houses. Most sites have facilities for recycling glass, cans, and paper. At the larger sites, there are also facilities for recycling textiles, shoes, plastic bottles and liquid paper based food containers. To ensure that all residents have access to a bring recycling point, sites will be developed to be within 1km of all homes in the short term.

3.4.5 Household Waste Recycling Centres (HWRCs)

Wigan Council 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. Chanters site has the greatest potential for redevelopment and this shall be investigated.

Improved training for all current and new site staff in customer services and 'meet and greet' methods will help to increase landfill diversion of materials being delivered by the public to all sites.

The Frog Lane and Orrell sites are not suitable for current or future needs and are consequently poor performing. An alternative new purpose built site, in the north of the borough, to replace these sites will be sought. In addition, Wigan Council will investigate the potential for re-use of materials at HWRCs.

3.5 Residual waste

Wigan Council commenced a waste disposal contract with WRG Ltd in 2000. It covers the operation of the borough's five HWRCs, the aftercare of landfill sites and the provision of landfill capacity. This contract is due to end in 2012.

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.

Wigan Council will maximise cost-effective recycling and composting of waste before utilising residual waste management technology. In addition, consideration will be given to partnership working with other authorities, if this can provide demonstrable benefits to the council.

Wigan is currently investigating the most appropriate way forward for its waste treatment and disposal, which will form negotiations with future contractors. An options appraisal of the treatment for residual waste was carried out as part of the Expression of Interest (EOI) for Private Finance Initiative (PFI) credits to the Department of the Environment, Food and Rural Affairs (DEFRA) in March 2008. The two highest scoring technology options were:

1. Mechanical Biological Treatment (MBT) with Anaerobic Digestion (AD) producing Refuse Derived Fuel (RDF)
2. Energy from Waste (EfW) with electricity production

Depending on the location of a facility and the available markets, both of these options could utilise Combined Heat and Power (CHP) though the utilisation of heat in the form of either hot water or steam.

The incorporation of CHP improves the thermal efficiency of the processes and increases the environmental benefits of treatment by further offsetting the need to burn fossil fuels for space heating.

A further options appraisal study is currently being completed to explore the possibility of treating Wigan Borough's waste through MBT-AD or EfW technologies before disposal. The chosen technology from this ongoing process will lead to Wigan Borough being able to deal with all its residual waste more sustainably in the future.

The provision of a more local residual waste treatment facility, as well as the provision of more Household Waste Recycling Centres, referred to in the previous section, would bring benefits in terms of reduced road haulage and mileage by private motorists thereby reducing greenhouse gas emissions, in line with a sustainable transport system which minimises climate change impacts.

3.6 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. Community engagement and education can act to improve the public's perception of the services provided and improve the quality of material presented for recycling. It allows for the two way communication of issues which ensures that residents concerns and suggestions can be taken on board during the planning of service improvements. These factors are key to obtaining the highest levels of recycling and composting from the available schemes.

Wigan Council will 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.

3.6.1 Community consultation

Consultation on the direction of waste management has previously occurred between Wigan Council and its residents and this MSWMS review and ongoing options appraisal regarding the future direction of the borough's residual waste treatment into the future will be no exception. This waste strategy review will be subject to a public consultation process to enable ownership to be established by residents, staff and Members alike.

3.7 Planning for Sustainable Waste Management

3.7.1 Planning Policy Statement 10 (PPS10)

Planning policy statements (PPS) set out the Governments national policy on different aspects of land-use planning in England. Planning Policy Statement 10 deals with waste management and forms part of the national waste management plan for the UK.

The introduction to PPS 10 specifies that the policies within it are to be taken into account by waste planning authorities in discharging their responsibilities. It also specifies that the policies complement other national planning policies and should be read in conjunction with Government policies for sustainable waste management, in particular those set out in the national waste strategy.

Paragraph 16 of PPS 10 is part of a section dealing with the preparation of Local Development Documents, a key local part of the Development Plan system. It discusses the core strategy of a waste planning authority which sets out policies and proposals for waste management and ensures sufficient opportunities for the provision of waste management facilities in appropriate locations. It then goes on to specify that the core strategy should inform and in turn be informed by any relevant municipal waste management strategy.

3.7.2 Greater Manchester Joint Waste Development Plan Document

The 10 Metropolitan Councils of Greater Manchester are currently preparing a Joint Waste Development Plan Document (DPD) for all of Greater Manchester. The Plan will set out the vision and spatial objectives relating to waste for Greater Manchester and how waste management will be considered alongside other spatial concerns. The Plan will detail how each of the districts will contribute to meeting the overall needs for different waste streams, develop policies and the broad framework for implementation and monitoring, and plan for the provision of new capacity based on clear policy objectives. It will be prepared with the onus on the importance of site identification and self-sufficiency in waste management.

Table 3.3 below details the timetable for the adoption of the Greater Manchester Joint Waste Development Plan Document.

Table 3.3 - GMJWDPD Timetable

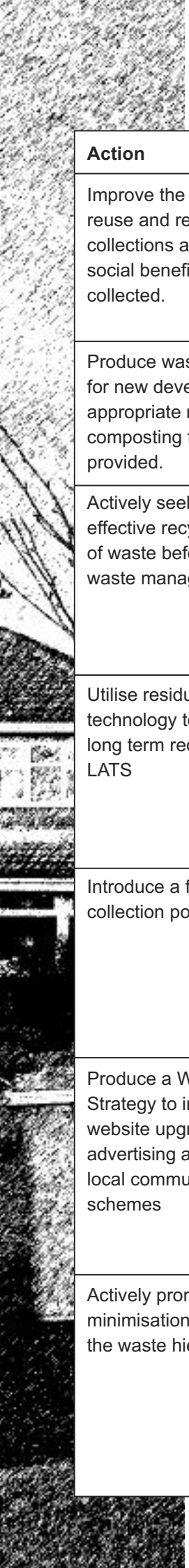
Stage	Target Date
Commencement of preparation (evidence base/survey)	Sept 2006
Prepare Stage One issues and alternative options in consultation	Sept 2006 - June 2007
Prepare Stage Two issues and alternative options in consultation	July 2008 - April 2009
Public participation on preferred options	Dec 2009 - Jan 2010
Consultation on Proposed Submission DPD	Nov 2010 - Jan 2011
Submission of Development Plan Document to Secretary of State	March 2011
Pre-hearing meeting	April 2011
Independent Examination-in-Public	June - July 2011
Receipt of Inspector's binding report	October 2011
Adoption and publication of Development Plan Document and revised Proposal Map	January 2012

This strategy has been prepared in close liaison with the Joint Waste Development Plan Document. The initiatives of one are reflected in the other. The sites and areas for waste management facilities which will be identified by the Joint Waste Development Plan Document will inform the provision of facilities listed in the Action Plan in section 3 and any further reviews of it. The Plan therefore provides the planning basis for the delivery of the waste strategy.

4 Action Plan: How do we get there?

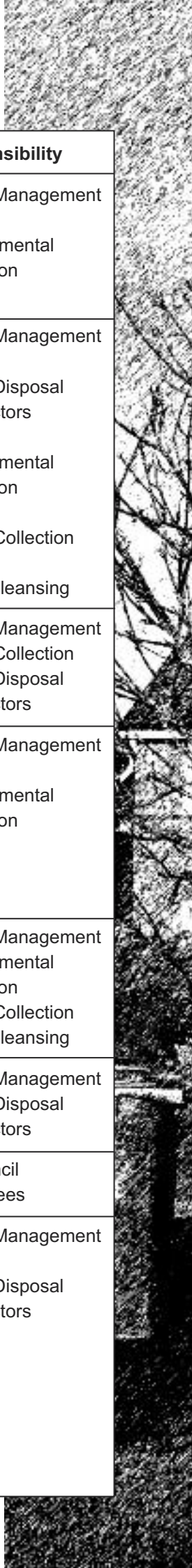
One of the key strategy requirements is the development of an action plan that outlines short term actions that will assist with meeting the policy objectives of the MSWMS. This action plan contains updates from the review process and has been developed as decisions have been made. Reviews will take place to this action plan at least annually. Key to the progress of this action plan will be the necessary officer and financial resources.

Action	Outcome	Timescales	Responsibility
Provide all suitable properties with recycling collections of plastics, glass and cans.	• Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Meet the requirements of the Household Waste Recycling Act	Dec 2010	Waste Management Finance Waste Collection
Provide all suitable properties with recycling collections of green waste.	• Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Meet the requirements of the Household Waste Recycling Act • Reduce BMW landfilled	March 2009	Waste Collection Waste Management
Provide all suitable properties with recycling collections of kitchen waste.	• Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Reduced MSW arisings • Reduce BMW landfilled	March 2015	Waste Management Finance Waste Collection
Continue to provide collections of paper from all properties and increase pulpables collected. Move from a bag to a bin for collections, for all suitable properties.	• Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Reduce BMW landfilled	March 2012	Waste Management Finance Waste Collection
Improve existing HWRCs to increase accessibility to recycling for residents and increase recycling and composting rates at all sites.	• Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Reduce BMW landfilled	Ongoing	Waste Management Finance Planning
Replace Orrell and Frog Lane HWRCs with a new purpose built HWRC that will meet future needs.	• Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Reduced MSW arisings • Reduce BMW landfilled	March 2013	Waste Management Waste Disposal Contractors Finance Planning



Action	Outcome	Timescales	Responsibility
Improve the cost effectiveness, reuse and recycling of bulky waste collections and seek to deliver social benefits from the material collected.	• Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Reduced MSW arisings • Reduce BMW landfilled	Ongoing	Waste Management Waste Disposal Contractors Finance Waste Collection
Produce waste planning guidance for new developments to ensure appropriate recycling and composting facilities can be provided.	• Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Reduce BMW landfilled	June 2009 Review annually	Waste Management Planning Waste Collection
Actively seek to maximise cost effective recycling and composting of waste before utilising residual waste management technology.	• Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Reduce BMW landfilled • Recover 67% of waste by 2015 and 75% by 2020	Ongoing	Waste Management Waste Disposal Contractors Finance Waste Collection
Utilise residual waste treatment technology to meet the medium to long term requirements under LATS	• Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Reduce BMW landfilled • Recover 67% of waste by 2015 and 75% by 2020		Waste Management Waste Disposal Contractors Planning Finance Legal
Introduce a formalised refuse collection policy	• Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Reduce BMW landfilled	June 2009 Review annually	Waste Collection Waste Management Other Cleansing Environmental Education
Produce a Waste Communications Strategy to include leaflets, website upgrades and media advertising and undertake proactive local community education schemes	• Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Reduce BMW landfilled	June 2009 Review annually	Waste Management Waste Collection Other Cleansing Environmental Education Sustainability IT Communications
Actively promote waste minimisation and movement up the waste hierarchy	• Reduced MSW arisings • Achieve recycling and composting targets • Reduce residual waste per household to 776kg by 2010/11 • Reduce BMW landfilled	Ongoing	Waste Management Waste Collection Other Cleansing Environmental Education Sustainability IT Communications

Action	Outcome	Timescales	Responsibility
Promote"real nappies" and "bags for life" to actively encourage waste minimisation	• Reduced MSW arisings • Reduce municipal waste growth to 1% by 2010 and 0% 2030 • Reduce residual waste per household to 776kg by 2010/11	Ongoing	Waste Management Environmental Education
Continue to promote the authorised recycling and disposal of commercial wastes, while continuing to reduce trade waste abuse at HWRC sites through CCTV monitoring and ANPR surveillance systems and appropriate enforcement where necessary. Develop and actively enforce the access policy at HWRCs	• Reduced MSW arisings • Reduced LATS penalties • Reduce municipal waste growth to 1% by 2010 and 0% 2030 • Reduce residual waste per household to 776kg by 2010/11 • Reduce BMW landfilled • Increase recycling and composting at HWRCs to 70% by 2013	Ongoing	Waste Management Waste Disposal Contractors Environmental Education Waste Collection Other Cleansing
Ensure that all residents have access to a bring recycling point by providing them within 1km of all residences	• Reduce residual waste per household to 776kg by 2010/11 • Achieve recycling and composting targets	Ongoing	Waste Management Waste Collection Waste Disposal Contractors
Continue to promote home composting of green and kitchen waste through the continued provision of reduced price compost bins, support for residents composting their waste and use of the Love Food Hate Waste campaign	• Increased home composting • Reduced MSW arisings • Reduced LATS penalties • Reduce municipal waste growth to 1% by 2010 and 0% 2020 • Reduce residual waste per household to 776kg by 2010/11	Ongoing Review annually	Waste Management Environmental Education
Support businesses to reduce waste. Provide business advice, individual business waste analysis and bespoke services	• Increased recycling • Reduced waste arisings	Ongoing	Waste Management Environmental Education Waste Collection Other Cleansing
Expand the existing community repaint scheme to all HWRCs	• Reduced MSW arisings • Reduce residual waste per household to 776kg by 2010/11	Dec 2009	Waste Management Waste Disposal Contractors
Increase recycling within council buildings	• Increased recycling	Ongoing	All council employees
Produce a HWRC development plan	• Reduced MSW arisings • Reduced LATS penalties • Reduce residual waste per household to 776kg by 2010/11 • Reduce municipal waste growth to 1% by 2010 and 0% 2020 • Recover 67% of waste by 2015 and 75% by 2020 • Increase recycling and composting at HWRCs to 70% by 2013	June 2009 Review annually	Waste Management Waste Disposal Contractors



5 Technical Appendix A - Legislation, Policies and Targets

5.1 Legislation, Policies and Targets

5.1.1 Local Area Agreement (LAA) Target

A reduction in waste growth and waste going to landfill has been identified as a priority through the inclusion of an ambitious NI191 target in Wigan Council's Local Area Agreement (LAA). The National Indicator (NI) 191 monitors an authority's performance on the amount of residual household waste per household. This is the household waste that is collected minus the household waste that is reused, recycled, composted or anaerobically digested.

The ambitious targets set for NI191, from a baseline of 875g/household/annum in 07/08, are 887kg for 2008/9, 791kg for 2009/10 and 776kg for 2010/11.

5.1.2 Environmental Protection Act 1990 (and Environment Act 1995)

The Environment Protection Act (EPA) 1990 introduced 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 introduced 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 (1) 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

(1) '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.

practice. In order to meet their duty, Wigan Council 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.

Wigan Council'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.

5.1.3 Landfill Regulations 2002

The Landfill (England and Wales) Regulations 2002 came into force in 2002. They implement the requirements of the European Union 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 Council relate to the gradual reduction Biodegradable Municipal Waste (BMW) (2) 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 (3):

- by 2010: reduce the amount of BMW landfilled to 75% of that produced in 1995.
- by 2013: reduce the amount of BMW landfilled to 50% of that produced in 1995.
- by 2020: reduce the amount of BMW landfilled to 35% 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 Waste Emissions Trading (WET) Act, and have a direct impact on Wigan Council's strategy for management of BMW.

(2) The Directive defines BMW as that which is capable of undergoing anaerobic or aerobic digestion, such as food and garden waste, paper and cardboard.
(3) The target dates include a four-year derogation for the UK allowed because of the proportion of BMW landfilled in the base of 1995.

The Landfill Directive has also brought other changes in waste management that have implications for Wigan Borough, 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 from 2006.
- the requirement for separate landfills for hazardous, non-hazardous and inert wastes.
- 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 continue to increase the cost of using landfill as a means of disposal, which will have significant implications for waste collection and disposal budgets.

5.1.4 Landfill Tax Regulations 1996

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.

Between 1996 and 2005, Landfill Tax for active wastes increased at a rate of £1 per tonne per year. Between 2005 and 2007, the tax increased from a base of £15 per tonne by a rate of £3 per year. From April 2008 landfill tax increased at a rate of £8 per tonne for active wastes and will continue to do so at that rate until 2011.

5.1.5 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 are allocated to waste disposal authorities each year. Each waste disposal authority is 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 is allowed, ie. authorities can expend allowances issued in one year in a different year (i.e. banking and borrowing). However, in each of the three ‘target’ years (2010, 2013 and 2020),

authorities are only 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 (4) of excess BMW landfilled will be enforced if local authorities do not have sufficient permits for the waste they landfill.

LATS was launched in full on 1 April 2005 and has significant implications for Wigan Council. DEFRA released the final allocation of landfill allowances to each waste disposal authority in England. For Wigan Council, these are shown in **Table 5.1**.

Table 5.1 - Wigan Council's Final LATS Allocation (5)

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			
2006/7	119,710			
2007/8	108,856	99,816	-9,040	0
2008/9	95,289	100,314	5,025	*753,800
2009/10	79,008	97,953	18,945	2,841,778
2010/11	70,213	97,335	27,112	4,068,238
2011/12	61,419	96,764	35,345	5,301,823
2012/13	52,625	96,062	43,437	6,515,555
2013/14	50,367	91,830	41,463	6,219,475
2014/15	48,110	87,076	38,966	5,844,957
2015/16	45,853	84,485	38,632	5,794,796
2016/17	43,595	82.780	39,185	5,877,813
2017/18	41,338	82,488	41,150	6,127,462
2018/19	39,081	81,337	42,871	6,430,712
2019/20	36,823	81,337	44,514	6,677,099

*The Council have sufficient allowances carried forward from previous years to meet the landfill liability in 2008/09 without the need to pay any fines. Currently 2009/10 allowances are being traded for £30 a tonne, although it is recognised that the trading price will increase in future years when the allowances allocated by Central Government reduce markedly as illustrated in the table above.

(4) http://www.defra.gov.uk/environment/waste/localauth/managewaste/ Viewed December 2004. Note: will be subject to amendments to Landfill Allowance and Training Scheme (England) Regulations 2004.
(5) http://www.defra.gov.uk/environment/waste/localauth/lats/pdf/tableb-latsallocat%20.pdf

5.1.6 Local Government Act 1999

Currently there has been no new recycling or composting targets set for individual local authorities.

5.1.7 Waste Strategy for England 2007 (WSE2007)

The Government published Waste Strategy for England 2007 on 24 May 2007. This sets out the Government's vision for sustainable waste management. Despite major progress since 2000, England's performance on waste still lags behind many European countries. The strategy states that:

- **producers** will have to make products using more recycled materials and less newly extracted raw materials. They will have to design products that are less wasteful and take responsibility for the environmental impact of their products throughout their life.
- **retailers** will have to reduce packaging, source and market products that are less wasteful, and help their consumers to be less wasteful.
- **consumers** - both business and individual households - will have the opportunity to reduce their own waste, purchase products and services that generate less waste and reduce environmental impacts, and separate their waste for recycling.
- **local authorities** will have to commission or provide convenient recycling services for their residents and commercial customers and advice and information on how to reduce waste. They will also have to work with their communities to plan and invest in new collection and reprocessing facilities.
- **the waste management industry** will have to invest in facilities to recycle and recover waste, and provide convenient waste services to their customers to recycle and recover their waste.

This new strategy builds on Waste Strategy 2000 (WS2000) and the progress since then, but aims for greater ambition by addressing the key challenges for the future through additional steps.

The Government's key objectives are to:

- decouple waste growth (in all sectors) from economic growth and put more emphasis on waste **prevention and re-use**.
- meet and exceed the **Landfill Directive diversion targets** for biodegradable municipal waste in 2010, 2013 and 2020.
- increase diversion from landfill of **non-municipal waste** and secure better integration of treatment for municipal and non-municipal waste.
- secure the **investment in infrastructure** needed to divert waste from landfill and for the management of hazardous waste.

- get the most environmental benefit from that investment, through **increased recycling of resources and recovery of energy** from residual waste using a mix of technologies.

The main targets concerning local authorities from the WSE07 are laid out in the table below:

Target	2010	2015	2020
Recycling and Composting Rate	40%	45%	50%
Recovery Rate	53%	67%	75%
Residual waste arising per head per annum	310kg	270kg	225kg

5.1.8 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.

5.1.9 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.

5.1.10 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 European Union 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. 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 have implications on 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 Council must take this into account when developing composting services, particularly kitchen waste composting.

5.1.11 Hazardous Waste Regulations

Changes in the way that hazardous wastes are classified have increased the proportion of MSW that is classed as hazardous. Hazardous materials need separating from other household and commercial waste and dealing 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 impacts 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. Under EWC 2002 certain household items such as fridges and items with cathode ray tubes (television and computer monitors) are now classified as hazardous and are subject to disposal in designated hazardous waste landfills or through recycling processes.

5.1.12 Waste Electrical and Electrical Equipment (WEEE) Directive

The Waste Electrical and Electronic Equipment Directive (WEEE) Directive aims to minimise the impact of electrical and electronic goods on the environment, by increasing re-use and recycling and reducing the amount of WEEE going to landfill. It seeks to achieve this by making producers responsible for financing the collection, treatment, and recovery of waste electrical equipment, and by obliging distributors to allow consumers to return their waste equipment free of charge.

The Waste Electrical and Electronic Equipment (WEEE) Directive was agreed on 13 February 2003, along with the related Directive on Restrictions of the use of certain Hazardous Substances in electrical and electronic equipment (RoHS).

The UK Regulations implementing the WEEE Directive came into force on 2 January 2007. Amending Regulations entered into force on 1 January 2008. These WEEE (Amendment) Regulations 2007 clarified how reuse can be counted as part evidence compliance and the recording of WEEE arising.

The UK WEEE regulations do not place obligations on local authorities in their capacity as a Waste Collection Authority (WCA) or Waste Disposal Authority (WDA). However, because most household WEEE will be collected via HWRCs, Councils can volunteer their HWRCs as Designated Collection Facilities (DCFs). Councils can then either opt to sign up with a designated collection scheme which will entitle them to free collections of the WEEE or operate as an un-aligned DCF with responsibility for finding their own outlets for the material and reporting tonnages collected directly to the Environment Agency.

5.1.13 Abandoned Vehicles and End of Life Vehicles Regulations 2003

Wigan Council and police officers have powers to deal with abandoned vehicles under the Abandoned Vehicles and End of Life Vehicles (ELV) Regulations. 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, de-pollution consists of the removal of battery; removal of LPG tank; removal or activation of explosive devices-airbags and pre-tensioners, 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.

5.1.14 Ozone Depleting Substances Regulation 2000 (2037/2000)

Wigan Council ensures that fridges and freezers are recovered appropriately, through an agreement with WRG Ltd. 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.

5.1.15 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).

5.1.16 Producer Responsibility Obligations (Packing 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 reprocessors 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.

The regulations have no direct obligations for Wigan Council. Waste collection and disposal authorities are not considered reprocessors 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 Borough has a role to play in achieving this, by expanding kerbside recycling collection and promoting other recycling schemes and facilities.

5.1.17 The Batteries Directive

The Batteries Directive was published in the Official Journal on 26 September 2006. The UK and all other Member States now have a deadline of 26 September 2008 to transpose the provisions into national law.

The directive seeks to improve the environmental performance of batteries and accumulators and of the activities of all economic operators involved in the life cycle of batteries and accumulators, eg. producers, distributors and end users and, in particular, those operators directly involved in the treatment and recycling of waste batteries and accumulators.

When the directive is transposed in the UK, the directive will reduce the quantity of hazardous and non hazardous waste batteries going to landfill and increase the recovery of the materials they contain. This is consistent with the objectives outlined in the Government's waste and sustainable development strategies.

Direct measures for local authorities are still being consulted on. Consultation is expected to end in autumn 2008, with implementation of the directive in late 2008 or early 2009. The main aspects of the legislation that are likely to affect local 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.
- 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 the finer details of who is to finance the collection and recycling of batteries, all authorities are likely to see some increased costs through monitoring and reporting requirement.

5.2 Forthcoming Legislation

European Waste Framework Directive

The Revisions to the European Waste Framework Directive agreed by the European Union in June 2008 means that there will be a legal requirement for countries to achieve a 50% recycling rate for household wastes and 70% for commercial and industrial wastes. The revisions also allow for the classification of waste disposal technologies to be classified as recovery should they reach a minimum energy recovery efficiency. The revisions have yet to be transposed into national legislation.

6 Technical Appendix B - Contextual Data

6.1 Population Information

6.1.1 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.

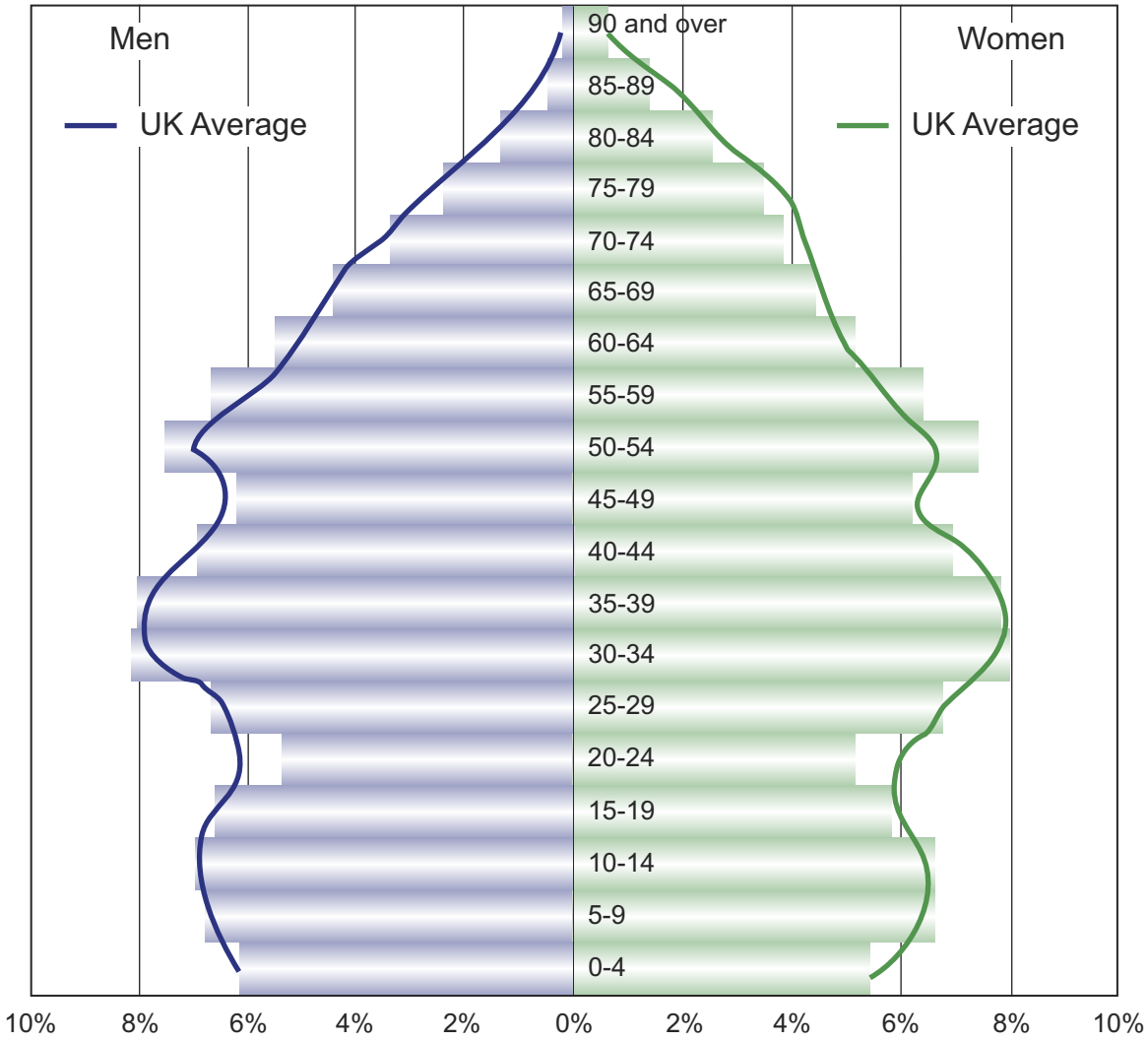
In mid 2003, Wigan Borough had a total population of 303,800. Between 1982 and 2002, there was a one per cent decrease in the population, compared to a two per cent decrease for the North West Region as a whole. **Table 6.1** and **Figure 6.1** show that the greatest proportion of people living in Wigan Borough are aged between 30 and 39 years of age.

Table 6.1 - Age Distribution in Wigan (5 year age brackets)

Age range	Total number of residents	Number of male residents	Number of female residents
0 - 4	17561	8969	8592
5 - 9	19936	10112	9824
10 - 14	20364	10479	9885
15 - 19	18627	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**	**154559**

Source: National Statistics, Census 2001

Figure 6.1 - Wigan Borough Population Pyramid



Source: National Statistics, Census 2001

6.1.2 Population Projections

Population projections are available on Wigan's website. The population of Wigan has been projected to steadily increase as shown in **Table 5.2**.

Figure 6.2 - Population projections for Wigan Borough (6)

Year	Projected population for Wigan
2008	307,800
2009	308,600
2010	309,500
2011	310,300
2012	311,300
2013	312,200
2014	313,100
2015	314,100

Year	Projected population for Wigan
2016	315,000
2017	315,900
2018	316,700
2019	137,600
2020	318,400

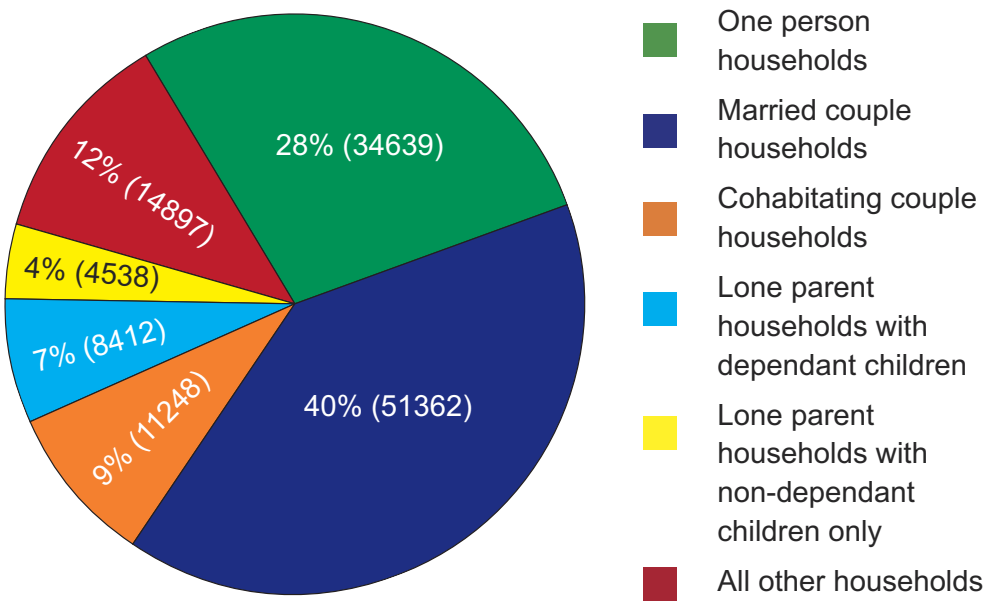
(6) http://www.wiganmbc.gov.uk/pub/planning/sta317,600ts/

6.1.3 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 Borough there were 125,096 households with residents in 2001. This had risen to 138,300 in 2008. 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 6.2**).

Figure 6.2 - Household Composition in Wigan Borough



Source: National Statistics, Census 2001

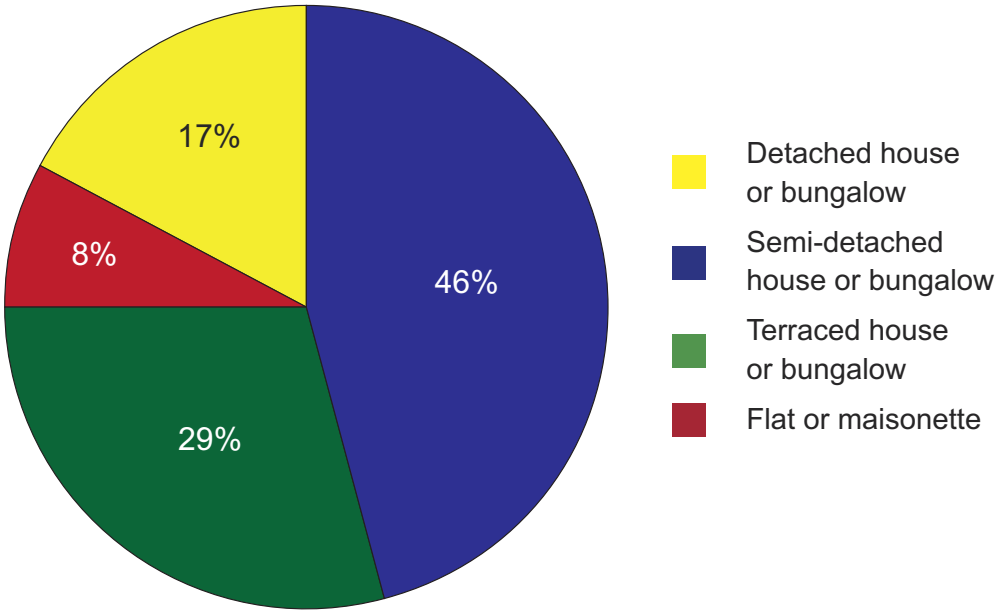
6.1.4 Household Type and Density

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 Borough, 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 6.3**). Household density equates to 16 persons per hectare, approximately 5 times the national average of 3.4

Figure 6.3 - Housing types in Wigan Borough



Source: National Statistics, Census 2001

6.1.5 Ethnicity

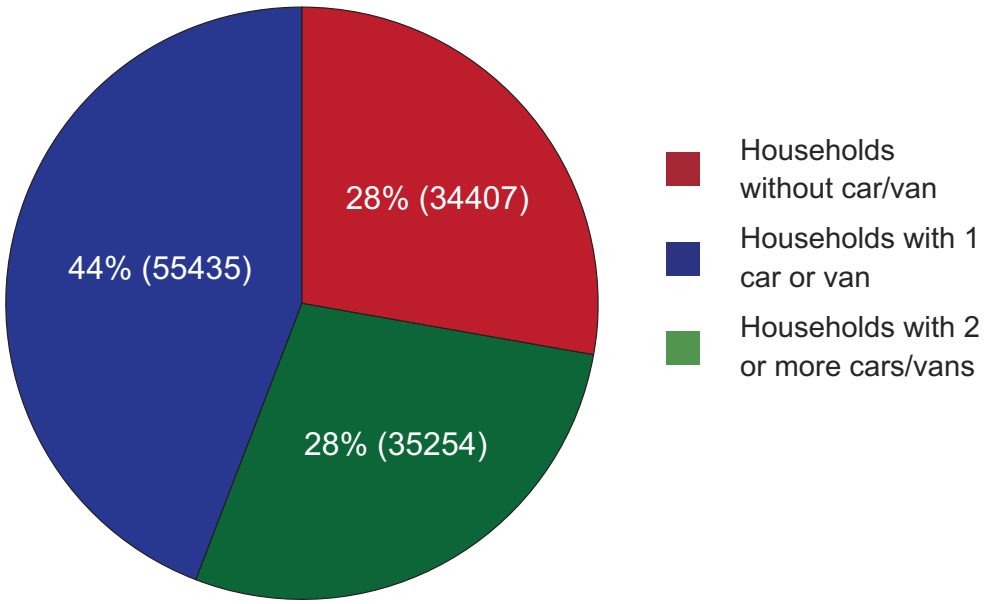
Principally, an ethnically diverse population is likely to require approaches to communication and consultation that take account of language and cultural differences. Ethnic communities can also have different household waste generation habits. For example, Asians tend to have a preference for freshly prepared food and will therefore likely generate more food preparation waste and less packaging. In Wigan Borough, 297,506 of the population's ethnic group are white and the largest minority ethnic group is Indian, with 681 individuals (7).

6.1.6 Mobility

Higher levels of car and van ownership influence greater participation for HWRC and bring site facilities. Many inner city and economically deprived areas are likely to have lower levels of car ownership. In Wigan Borough, 72% of households own a car or van (**Figure 6.4**).

(7) Source: National Statistics, Census 2001.

Figure 6.4 - Mobility



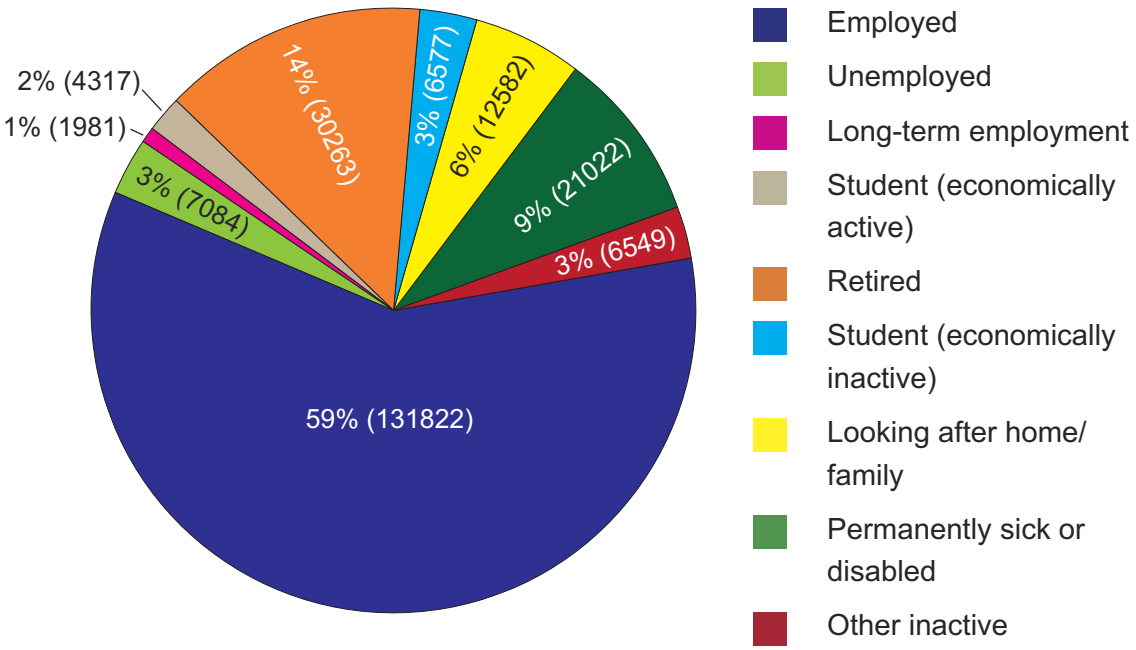
Source: National Statistics, Census 2001

6.1.7 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 and 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 Borough has an employment rate of 59%, slightly lower than the national average of 60.6%. Wigan Borough has fewer unemployed (3%) and students (5%) than average (4.4% and 7.3%) (**Figure 6.5**).

Figure 6.5 - Employment in Wigan Borough



Source: National Statistics, Census 2001

6.1.8 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 Borough have a lower percentage of residents qualified to degree level or higher, and a higher percentage of residents with no qualifications than average of England and Wales.

Table 6.3 - Education in Wigan Borough

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

Source: National Statistics, Census 2001

7 Technical Appendix C - Options Appraisal for Residual Waste Treatment Technology

In March 2007, on behalf of Wigan Council, Entec UK undertook a residual waste management options appraisal in order to determine the most appropriate methods for managing the waste not reused, recycled or composted, in order to reduce amount of biodegradable material sent to landfill and so reduce the council's Landfill Allowance Trading Scheme (LATS) liabilities.

A series of future waste management scenarios were identified based on well established technologies, including those being procured locally to allow for the opportunity of partnership working. These scenarios were subjected to a detailed financial, technical and environmental assessment and evaluation dictated by the previous municipal waste management strategy.

A number of variables were considered when defining the future scenarios. These included:

- The assumed level of recycling and composting.
- How much of the residual waste would be sent to the treatment facility.
- Residual treatment technology.
- The market for the outputs from the process.

Using the strategy as a guide, it was agreed that waste minimisation and waste growth were central to the project. The waste minimisation would be at the highest possible levels, with the aim of bringing waste growth to zero. All scenarios modelled would assume the same level of waste minimisation and waste growth.

Only 'front end' recycling was included to give 50% recycling and composting at the kerbside, as this was both the National and Wigan Council's strategic targets. Meeting the 50% recycling and composting targets will require considerable additional effort, including additional procurements beyond the residual waste treatment procurement.

A range of treatment technologies and facility sizes were then considered for the residual waste streams. From this ten scenarios were identified to be modelled and undergo an options appraisal, these were:

1 Do Nothing - No further service developments.

2 Do Strategy - HWRC recycling and composting increased to 60%, overall recycling and composting increased to 50%.

3 EfW (Meet LATS) - Based on ‘do strategy’, EFW facility sized to meet LATS allowance, with 10% headroom.

4 EfW (Max Diversion) - Based on ‘do strategy’, EFW facility sized to maximise BMW diversion.

5 MBT – AD with RDF (Meet LATS) - Based on ‘do strategy’, MBT-AD facility sized to meet LATS allowance with 10% headroom.

6 MBT – AD with RDF (Max diversion) - Based on ‘do strategy’, MBT-AD facility sized to maximise BMW diversion.

7 MBT Biostabilisation output to landfill (Meet LATS) - Based on ‘do strategy’, MBT biostabilisation facility sized to meet LATS allowance, with 10% headroom, assuming that there is no market for the output so it has to be sent to landfill.

8 MBT Biostabilisation output to market (Meet LATS) - Based on‘do strategy’, MBT biostabilisation facility sized to meet LATS allowance, with 10% headroom, assuming that there is a market for the output.

9 MBT Biostabilisation output to landfill (Max diversion) - Based on ‘do strategy’, MBT biostabilisation facility sized to maximise BMW diversion, assuming that there is no market for the output so it has to be sent to landfill.

10 MBT Biostabilisation output to market (Meet LATS) - Based on ‘do strategy’, MBT biostabilisation facility sized to maximise BMW diversion, assuming that there is a market for the output.

An options appraisal workshop was carried out involving members of the project team including waste, finance, legal and engineering section input.

A list of initial qualitative evaluation criteria was developed. The evaluation was limited to non-financial, qualitative criteria only.

The options appraisal workshop identified the two MBT with AD producing and RDF solutions as the favoured options, with maximum diversion being favoured over the meet LATS option. The two options scored highly in all criteria, receiving good or excellent scores, the meet LATS option was considered to have a less planning risk than the maximum diversion option but scored lower for LATS performance, strategic fit and diversion of MSW from landfill.

The EfW options also score highly in the evaluation, with the option treating all of the residual waste ranking 3rd and the meet LATS option ranking 5th. If a market is available then the MBT Biostabilisation option scores slightly worse than the EfW options, however if the market for the stabilised output is not available then this technology is significantly worse than the MBT-AD RDF and EfW options. At present there is little indication of markets for the compost like output from the MBT biostabilisation process and the prudent approach to evaluating these options is to consider the scores for the options where the material is sent to landfill.

It is possible that both the MBT-AD RDF and the EfW option could utilise Combined Heat and Power (CHP) turbines to increase the thermal efficiencies of the combustion process, to increase their environmental benefits and means that the processes are capable of producing Renewable Obligation Certificates (ROCs). CHP operates by removing steam during the electricity generation process and using this to provide heat to local residential, commercial or industrial areas. The utilisation of MBT is subject to the suitability of the site and the accessibility of the markets for this output.

The outcome of the options appraisal was that the Wigan Council should look to an option that:

- Treats all of the residual waste generated by the council to maximise the diversion of BMW from landfill
- Has an element of thermal treatment to ensure all BMW is destroyed, either through direct incineration of the waste or through the use of RDF
- Allows for the utilisation of CHP
- Revisit and, where necessary, revise the options appraisal prior to commencing with a procurement of a technology to ensure that changes to the available technologies have not altered the preferred technology

8 Technical Appendix D - Glossary

ABPR	Animal By Product Regulations
AD	Anaerobic Digestion
ANPR	Automatic Number Plate Recognition
BMW	Biodegradable Municipal Waste
CCTV	Close Circuit Television
CFCs	Chloroflourocarbons
CHP	Combined Heat and Power
DCF	Designated Collection Facility
DEFRA	Department of the Environment, Food and Rural Affairs
EfW	Energy from Waste
ELV	End of Life Vehicles
EOI	Expression of Interest
EPA	Environmental Protection Act
EWC	European Waste Catalogue
HWD	Hazardous Waste Directive
HWRC	Household Waste Recycling Centre
LAA	Local Area Agreement
LATS	Landfill Allowance Trading Scheme
MBT	Mechanical Biological Treatment
MSW	Municipal Solid Waste
MSWMS	Municipal Solid Waste Management Strategy
NI	National Indicator
PFI	Private Finance Initiative
PRN	Packaging Recovery Note
RFD	Refuse Derived Fuel
ROC	Renewable Organic Certificate
RoHS	Restrictions of the use of certain Hazardous Substances in Electrical and Electronic Equipment

WCA	Waste Collection Authority
WDA	Waste Disposal Authority
WEEE	Waste Electronic and Electrical Equipment
WET Act	Waste Emissions Trading Act
WID	Waste Incineration Directive
WRAP	Waste and Resources Action Programme
WRG	Waste Recycling Group Ltd
WS 2000	Waste Strategy 2000
WSE 2007	Waste Strategy for England 2007

We can make this information available in other formats and languages on request. Contact:

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March 2009

Designed by Media & Communications - Graphics