# Joint Municipal Waste Strategy
## for Lincolnshire

**CONSULTATION DRAFT**

The Lincolnshire Waste Partnership

December 2007


Boston Borough Council

East Lindsey District Council

Environment Agency

City of Lincoln Council

Lincolnshire County Council

North Kesteven District Council

South Kesteven District Council

South Holland

West Lindsey

# Table of contents

# 1 Vision

This Joint Municipal Waste Management Strategy for Lincolnshire provides a method by which the eight local authorities and the Environment Agency can work in partnership to deliver sustainable waste management services to the community, as well as to commercial and industrial customers, and establish best value waste management practices.

The Lincolnshire Waste Partnership vision is:

- To commit to sustainable development and the waste hierarchy
- To encourage and promote waste prevention and reduction to minimise waste growth
- To promote sustainable resource use through increased re-use, recycling and composting of waste
- To maximise recovery and the use of waste as a resource
- To reduce the amount of biodegradable waste sent to landfill each year
- To minimise the impacts of final disposal

# 2 Introduction

This joint Municipal Waste Management Strategy provides a structure that will enable the nine partnering authorities of Lincolnshire: Boston Borough Council, City of Lincoln Council, East Lindsey District Council, Lincolnshire County Council, North Kesteven District Council, South Holland District Council, South Kesteven District Council, West Lindsey District Council, and the Environment Agency to effectively manage the municipal waste produced in the County. Collectively these partnering authorities are known as the Lincolnshire Waste Partnership (LWP).

Whilst waste management performance in the County is improving, this waste strategy has been developed to set a framework in which the Lincolnshire Waste Partnership can continually improve the waste management services offered, minimise costs and meet challenging recycling and landfill diversion targets.

The aim of the waste strategy is to provide information on the following:

- The current and future legal obligations that the Partnership will need to meet
- The waste management services that are currently provided
- How the Partnership plans to meet the targets by reducing the amount of waste that is produced, increasing the amount of waste which is recycled and recovered, and minimising the amount of residual waste that is landfilled
- How the Partnership plans to implement this strategy.

The Environmental Assessment of Plans and Programmes Regulations 2004 introduced a requirement for a Strategic Environmental Assessment (SEA) to be produced for a number of statutory documents including Municipal Waste Management Strategies (MWMS). As the Partnership is revising its Joint Waste Strategy there is a statutory requirement to undertake an SEA on this document. Consequently, in accordance with Government guidance, the SEA process, including the preparation of the Environmental Report, has been conducted at the same time as developing the Joint Municipal Waste Management Strategy (JMWMS). This ensures that implementation of the JMWMS, through long-term procurement of waste management infrastructure, will be supported by the SEA.

The role of the SEA is to complete a thorough environmental assessment of a number of scenarios, considering a number of waste treatment technologies, which can deliver the objectives set by the strategy. The initial consultation on the development of the new waste strategy has been conducted with a range of stakeholders as part of the scoping stage process for conducting the SEA on the draft waste strategy.

As part of the next stage of the SEA there will be a public consultation on the Environmental Report and this draft JMWMS. The outcome of the consultation exercises will be incorporated with the findings of the technical evaluation.

The resulting ranked list of scenarios will then be presented to the Partnership and the JMWMS will then be finalised.

It is important to note that while new legislation will require improvements from other sectors in the management of all waste streams, the Partnership is currently only responsible for managing municipal waste, the plans for any new recycling facilities and residual treatment facilities described in this strategy will only cover this waste stream.

## 2.1 Scope and Context

Lincolnshire's original Waste Strategy (April 2002) highlighted the challenges and drivers facing local authorities in the management of waste, and included reference to the following:

- The need for more waste to be recycled, composted or (in the longer term) used in energy recovery schemes as a result of various EU and Government initiatives, policies and targets
- The fact that municipal solid waste (MSW) arisings are growing steadily
- The fact that the costs of dealing with each tonne of waste are increasing

Most of these drivers were a result of the Government's Waste Strategy 2000[1], which sets a national framework for waste management and introduced statutory recycling and composting targets for local authorities.

More recently the Government published Waste Strategy 2007 which provided a greater emphasis on tackling waste growth, improving recycling/composting and diverting substantial quantities of biodegradable waste away from landfill. To enable the implementation of this national Waste Strategy, the Government introduced key policies and regulations primarily focussed around the use of the following economic instruments:

- **Landfill Tax** - Landfill tax is paid for each tonne of waste disposed of at landfill sites. . Landfill tax will increase by at least £8 per tonne each year until the tax reaches £48 per tonne by 2010/11. The landfill tax is currently £24 per tonne, rising to £32 per tonne in 2008/2009. This means the increase in landfill tax will cause a significant increase in overall waste disposal costs for as long as landfilling is used as a method of disposal. On the other hand it will simultaneously provide a considerable incentive to move to alternative and more sustainable means of waste disposal.
- **Landfill Allowance Trading Scheme (LATS)** - The government has implemented the requirements of the Landfill Directive through the Waste and Emissions Trading Act 2003. This sets annual allowances limiting how much Biodegradable Municipal Waste (BMW) can be disposed of in landfill sites in any particular year. These allowances came into effect in April 2005. The Government's guidance on Trading, Banking and Borrowing Landfill Allowances sets out the procedure for transferring landfill allowances. Authorities can buy more allowances if they expect to landfill more than their allocations and authorities with low landfill rates can sell their surplus allowances. It will also enable some authorities to save unused allowances (banking) or bring forward part of their future allocation (borrowing). Failure of an authority to deliver their obligations under LATS could result in the Government fining the authority £150 per tonne for every tonne in excess of their allowance.

The County currently landfills around 220,000 tonnes of waste which comes into its possession (2006/07 figures) and this is already a costly process which will become more costly even if current quantities remain static, notwithstanding any increase in quantities which may result from overall growth in waste arisings. The landfilling of waste also has a detrimental effect on the environment through the production of greenhouse gases. The partnership is therefore committed to managing waste in a more sustainable way and treating waste as a resource. When waste is reused, recycled, and composted, the materials produced obviate the need for virgin materials and therefore help to conserve natural resources. In addition, the pollution and negative impacts to the environment of extracting and transporting raw materials are avoided. This is also the case for energy recovery, where waste can be used to generate electricity in place of fossil fuels.

[1] Waste Strategy 2000 for England and Wales, DETR, April 2000

To bring further emphasis to the importance of waste prevention, reuse, recycling, composting and energy recovery a waste hierarchy (figure 1 below) was established through the Framework Directive on Waste[2]. The waste hierarchy provides a framework of how waste management can be made more sustainable. The aim for all stakeholders should be to move up the waste hierarchy and moving away from a reliance on disposal to increased recycling, composting, reuse, and recovery and ultimately to waste reduction/prevention. It confirms that reducing waste at source is the best environmental option wherever achievable this principle has been employed in the development of this strategy. When assessing waste management proposals, the waste hierarchy has been used as a guide rather than being applied rigidly as a certain amount of flexibility is needed to arrive at the most balanced environmental, social and economic solution.

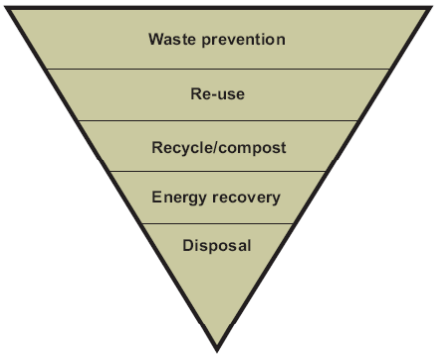



**Figure 1: The Waste Hierarchy**

## 2.2 What does the waste strategy cover?

This strategy details how the Lincolnshire Waste Partnership will seek to reduce waste at source and handle and treat the municipal waste, which comes into its possession and is comprised of:

- Kerbside collected residual waste
- Kerbside collected recyclables
- Kerbside collected garden waste
- Recycling bring banks
- Bulky household items
- Waste taken to household waste recycling centres (HWRC)
- Street sweeping and litter
- Commercial and industrial waste where collected
- Hazardous and clinical household waste
- Fly-tipped waste
- Waste from markets and educational establishments

The producers of industrial and commercial waste are responsible for making their own waste management arrangements and are not generally of primary consideration in this strategy. However, commercial and industrial organisations produce significant quantities of waste and the Lincolnshire Waste Partnership will consider the wider waste stream in future waste management options.

**The Lincolnshire Waste Local Plan 2006 sets** out detailed land-use policies and proposals for waste management and waste disposal in the County. The waste strategy has been considered in the preparation of the Waste Local Plan 2006, which sets a framework for sustainable waste management and identifies specific sites for waste

[2] The Framework Directive on Waste (75/442/EEC)

management use. As Lincolnshire moves away from reliance on landfill, this waste strategy helps determine the need for new types of facilities.

# 3 What are the key legislative drivers?

This chapter outlines the main legal requirements for waste management that the Partnership has either already to meet or will need to meet as new legislation and requirements are introduced. It then considers the legislation regarding planning for any new waste management facilities that will be required to enable the Partnership to meet its future targets.

## 3.1 European Waste Policy and Legislation

The European Union has become the major source of environmental legislation and guidance in relation to the management of waste. A number of European Directives which aim to increase levels of recycling and recovery, and thus reduce the amount of waste which is landfilled have been introduced:

- Framework Directive on Waste (75/442/EEC)
- Landfill Directive (1999/31/EC)
- Directive on Packaging and Packaging Waste (94/62/EEC)
- Waste Electrical and Electronic Equipment Directive (2002/96/EC)
- End of Life Vehicles Directive (2000/53/EC)
- Ozone Depleting Substances (Regulation 2037/2000)
- Directive on Batteries (2006/66/EC)
- Waste Incineration Directive (2000/76/EC)

The main area of European legislation that this waste strategy has to consider is the Landfill Directive. This aims to prevent, or minimise, the negative effects on both the environment and human health caused by landfilling of wastes. It has and will continue to have a significant impact on landfill practices in the UK as it bans certain materials from being landfilled, requires waste to be pre-treated before it is landfilled, and requires improvements to landfill management. The introduction of the Directive has resulted in a significant reduction in the number of landfill sites in the UK accepting hazardous wastes. The ban on the landfilling of certain wastes, such as tyres, from 2006 has meant that new arrangements for their collection and management have been introduced.

Landfilled biodegradable waste is a major source of methane, a greenhouse gas over 20 times more potent than carbon dioxide in terms of global warming. The Landfill Directive will require the amount of BMW sent to landfill in the UK to be reduced:

- to 75% of 1995 levels by 2010,
- to 50% of 1995 levels by 2013, and
- to 35% of 1995 levels by 2020.

The UK Government has implemented the requirements for reducing the landfilling of biodegradable waste through the Waste and Emissions Trading Act 2003. This sets Waste Disposal Authorities (such as Lincolnshire County Council) annual allowances limiting how much BMW can be landfilled in any particular year. The Government will fine authorities that do not achieve their annual targets. However they will allow authorities to achieve targets by buying allowances from other Waste Disposal Authorities if they expect to landfill more than their allocations, or to sell their surplus if they expect to landfill less.

The allowances for Lincolnshire County are:

- 194,120 tonnes of BMW to landfill in 2005/06
- 131,376 tonnes of BMW to landfill in 2009/10
- 61,231 tonnes of BMW to landfill in 2019/20

This waste strategy outlines how the Partnership intends to meet or exceed these targets, and thus avoid the need to either pay fines or purchase allowances. Information on the other relevant EU legislation that the JMWMS has to consider can be found in Appendix 1.

## 3.2 UK Waste Policy and Legislation

Although most waste legislation in the UK has been introduced to meet the requirements set by European Directives, the UK Government has also introduced additional legislation, some of which is specifically aimed at encouraging recycling:

- The Financial Act 1996 and Landfill Tax Regulations 1996
- Waste Minimisation Act 1998
- Local Government Act 1999 – Best Value Regime
- Animal By-Products Order and Regulations 2003
- The Waste and Emissions Trading Act 2003
- Household Waste Recycling Act 2004
- Clean Neighbourhoods and Environment Act 2005

The Waste and Emissions Trading Act 2003 has changed the relationship between waste collection and waste disposal authorities. It requires that two-tier authorities have a joint waste management strategy in place. The act also gives waste disposal authorities the power to direct waste collection authorities to deliver waste in a state of separation that would increase recycling.

## 3.3 Waste Strategy for England

The Government first published a National Waste Strategy in 2000. An updated Waste Strategy for England was published (following consultation during 2006) in May 2007.

The aim of the updated Waste Strategy, which sets the Government's vision for sustainable waste management, is to reduce waste by making products with fewer natural resources, and thus breaking the link between economic growth and waste growth. Products should be re-used, their materials recycled, energy recovered, and landfilling of residual waste should occur only where necessary. The key points are:

- Waste minimisation - A strong emphasis on waste prevention with householders reducing their waste, businesses helping consumers, for example, with less packaging - development of a service which will enable households to opt-out of receiving un-addressed as well as addressed direct mail - and a reduction in the use of free single-use plastic bags.
- Recovery of municipal waste – 53% by 2010, 67% by 2015 and 75% by 2020.
- Recycling – Targets to recycle or compost at least 40%of household waste by 2010, rising to 45% by 2015 and 50 per cent by 2020. This is a significant increase on the targets (30% by 2010 and 33% by 2015) in the previous Waste Strategy 2000.

- Treatment of residual waste - Increasing the amount of energy produced by a variety of energy from waste schemes, using waste that can't be reused or recycled. It is expected that from 2020 a quarter of municipal waste will produce energy, compared to 10 per cent today.

More information on the new national Waste Strategy for England can be found in Appendix 1. This draft municipal waste management strategy outlines how the partnership will meet or exceed the above national targets in the longer term.

## 3.4 Regional Policy

This strategy is influenced in various ways by other plans and strategies that have been considered during the development of the SEA. These include:

- Regional and local plans
- Waste management in neighbouring local authorities
- Waste legislation in the national and European context

and are listed in Appendix 1.

These documents cover various different timescales., However, the partnership needs to assess the impact they may have on its Waste Strategy over the longer term.

The East Midlands Regional Strategy sets out the principles and priorities for waste management for the Region:

- Working towards zero growth in waste at the regional level by 2016;
- Reducing the amount of waste sent to landfill in accordance with the EU Landfill Directive;
- Exceeding Government targets for recycling and composting, with the objective to bring all parts of the region up to the levels of current best practice; and
- Taking a flexible approach to other forms of waste recovery, on the basis that technology in this area is developing very quickly and is difficult to predict over a 20-year period.

It sets ten broad priority issues for the region including: planning waste management infrastructures; promotion and education to change behaviour; increasing resource efficiency; reducing commercial waste; procurement and market development; reducing fly tipping.

## 3.5 Planning Policy guidance

The County Council has a statutory duty to prepare a waste and minerals Local Development Framework, which sets out their policies and proposals for waste and mineral land use. This document in turn is used to assess waste and mineral planning applications. Planning decisions on waste treatment facilities made now and in the near future will influence whether or not the UK will be able to meet the landfill diversion targets set by the Landfill Directive.

Planning Policy Statements (PPS) set out the Government's national policies on different aspects of land use planning in England. The following planning policy documents will have an impact on planning for any future waste management facilities:

- Planning Policy Statement 10: Planning for Sustainable Waste Management
- Regional Spatial Strategy

- Local Development Framework.

The Lincolnshire Waste Local Plan was adopted in May 2006, and set out detailed land-use policies for waste management within Lincolnshire.

The Role of the Waste Local Plan is to:

- Set the policy framework for the most sustainable approach at the present time, and over the Plan period, for dealing with waste planning in Lincolnshire;
- Provide a land use and development control interpretation of the Municipal Waste Management Strategy for Lincolnshire and the Draft Regional Waste Strategy for the East Midlands;
- Provide the criteria and standards by which planning applications for waste management developments can be judged.

Through Section 38(6) of the Planning and Compulsory Purchase Act 2004 the Plan's policies will take precedence over other matters, although the Development Plan can be overridden if a particularly strong case is made on other planning grounds.

The Waste Local Plan identified suitable sites for a number of technologies.

Within the context of European, National, Regional and countywide strategies for dealing with the many waste streams, the Waste Local Plan's strategic approach is to:

- Promote waste minimisation and recycling and reuse through the land use planning system;
- With the exception of some hazardous wastes (which will require treatment and disposal outside of the County) to ensure the provision of an adequate range of waste management and disposal facilities to meet the identified needs;
- Minimise the transportation of waste from its source;
- Make the Plan as location specific as possible and in other instances define areas of search;
- Safeguard the existing network of waste management facilities from alternative development of a non-waste management nature;
- Identify areas where waste facility development would be inappropriate;
- Facilitate the development of integrated recovery and treatment facilities;
- Facilitate the development of recycling facilities in locations where direct linkages can be made to companies using recyclables in their processes;
- Show flexibility in responding to technical change in the provision of new facilities and processes;
- Ensure that adequate landfill capacity is maintained to meet the needs of the County for the disposal of waste that cannot be reused, recycled or treated;
- Ensure the sitting of waste management facilities does not result in an unacceptable risk to the environment, human health or the amenity of the area;

# 4 How has the strategy been developed?

The first Joint Municipal Waste Management Strategy for Lincolnshire was originally adopted in April 2002.

As part of the original strategy, stakeholders were consulted and subsequently an options assessment was carried out by SLR Consultants in March 2002 which evaluated the impacts of differing waste management activities in terms of cost, planning, sustainability and environmental objectives.

A review of the strategy was undertaken in 2005. A further review took place in 2006/07 which identified that a new joint waste strategy and a SEA were required.

This strategy has been compiled following Government guidance on waste management strategies and assessed in accordance with the ODPM guidance 'A Practical Guide to the Strategic Environmental Assessment Directive' (2005)[3].

The strategy development process has followed a series of stages that are aimed at maximising stakeholder involvement, these stages are as follows:

- Develop the Waste Strategy Objectives
- Develop a series of waste management options
- Develop a set of weighted socio-economic and environmental assessment criteria
- Test how well the waste management options perform
- Assess the compatibility of the assessment criteria
- Prepare the Environmental report and Draft Strategy
- Monitor the implementation of the Strategy

The Lincolnshire Waste Partnership has consulted with stakeholders and the public during the process of developing the waste strategy. Two key consultation stages are included in the strategy development process:

- Scoping Stage – Statutory stakeholders were asked to comment on the waste strategy objectives, options, assessment criteria and weightings
- Consultation on the Draft Strategy and Environmental Report – Statutory stakeholders and the public have been consulted using a variety of methods including workshops, questionnaires and roadshows to provide opinion and feedback regarding the relative importance of the assessment criteria used to evaluate the options

### Scoping Stage

At the scoping stage of the strategy development process, statutory stakeholders were asked to provide their feedback on a number of issues, these included:

- Is the proposed SEA methodology appropriate to cover the issues relevant to the partnership's waste strategy?
- Are there any local issues not covered (or inadequately covered) in the Waste Strategy which need to be further assessed in the SEA?
- Does the initial list of assessment criteria cover the complete range of issues that are required to be considered in an SEA for the partnership's waste strategy?

[3] The Department for Communities and Local Government (DCLG), http://www.communities.gov.uk

- Assuming an approach following the waste hierarchy, are there any other technologies which should be considered in the assessment of alternatives?
- Providing comments on the proposed weightings assigned to the evaluation criteria that will be used to assess the Waste Strategy options

The statutory bodies consulted and their responses to the consultation are provided in appendix 2. However in summary, the consultees provided a range of responses including:

- The need for the SEA to consider an in-vessel composting facility to allow separate collection of cooked and uncooked food waste in addition to green waste
- A number of comments on the criteria assessment and proposed weighting. These are listed in Appendix 2.
- Establishing the economic benefits of the new facility in terms of the jobs created that can be filled by the local workforce
- The strategy needs to have a clear waste minimisation focus
- The need to consider “birdstrike” as a human factor in relation to the RAF’s activity in the county
- The impact of population Growth Point Bids for Lincoln and Grantham
- The consideration of potential impacts of the strategy on the historic environment

# 5 Where are we today?

In order to develop a robust long-term strategy we have assessed the existing baseline data and information and have determined what impacts key drivers will have on waste management services in Lincolnshire. This section provides details of the waste services provided, the quantities of waste produced and the performance levels being achieved.

Within the East Midlands Region, Lincolnshire is the largest County covering 592,075 hectares, and the fourth largest in England covering 5% of England. Lincolnshire was one of the fastest growing populations in England between 1991 and 2001 at 10% compared to 3% nationwide. Since 2001 and up to 2005 Lincolnshire's population grew by a further 5%, with wide changes between the districts, North Kesteven grew by a further 8.2% compared to 2.9% in South Kesteven, and in general the rural areas are growing faster than Lincoln City. Looking at the population, Lincolnshire has an ageing population with more than 19% of its population being over 65 years of age, with the highest proportion residing in East Lindsey at 23%.

Lincolnshire was home to 678,700 people in 2005[4], living predominantly in rural areas (70%). The average household is made up of 1.05 persons compared to 2.36 for England as a whole.

## 5.1 Waste arisings

The overall arisings of all solid waste in England and Wales were estimated to be about 375 million tonnes in 2004. This includes nearly 100 million tonnes of waste from mining and quarrying, which is not subject to control under the EU Waste Framework Directive, and nearly 220 million tonnes of controlled wastes from households, commerce and industry (including construction and demolition wastes). Household wastes represent about 9% of controlled waste arisings. The total arisings of agricultural wastes, which includes manure and straw, are estimated to be 45 million tonnes. Other wastes, which include forestry wastes and fishing wastes, represent about 1% of total waste arisings.

Controlled waste is defined as waste from the following sources:

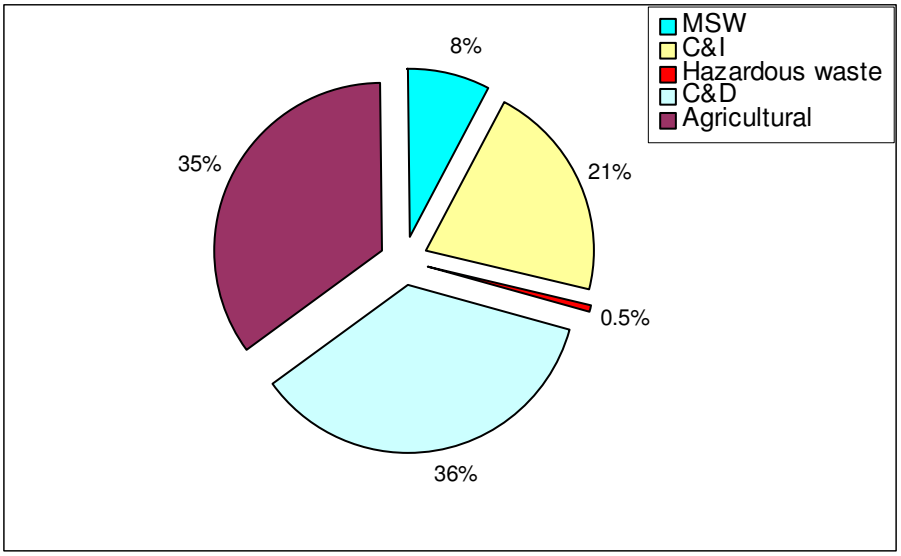
- Municipal Solid Waste (MSW);
- Waste arising from commercial premises (such as shops, offices and restaurants);
- Waste arising from industrial premises
- Waste arising from construction and demolition (C&D) activities; and
- Certain agricultural wastes (this only covers a small percentage of total agricultural waste arisings).

Lincolnshire accounted for 16% of the East Midlands waste arisings in 2003 at 4,184,539 tonnes of waste. As a predominantly rural county the most significant waste stream is that which comes from agricultural services, which represented 35% of the total waste stream in 2003. This should be compared with a municipal waste stream which represented 8% of the total arisings in 2003[5]. Figure 5-1 below sets out the relative levels of each type of waste produced in Lincolnshire, along with the tonnages.

[4] The Changing Demographics of Lincolnshire - An update on population trends in the county, November 2006. http://www.research-lincs.org.uk/

[5] Lincolnshire waste Local Plan, 2006

**Figure 5-1 Principal waste streams arising in Lincolnshire (2003)**




*Source: Regional Waste Strategy for the East Midlands, 2006*

It should be noted that the vast majority of agricultural wastes are not controlled under waste management legislation. The majority of agricultural wastes (*e.g.* slurry) are recycled to land and the provision of facilities for the management of these wastes is outside the scope of this strategy.

Municipal solid waste (MSW) is defined as household waste and any other waste collected by Waste Collection Authorities or its agents including waste from gardens and parks which comes into the possession of Waste Disposal Authorities and/or is trade waste and waste resulting from the clearance of flytipped materials. Household waste includes waste from kerbside collection rounds (residual, dry recyclables and garden waste), Household Waste Recycling Centres (HWRC), bring schemes, bulky waste collection, hazardous waste collection and street sweepings

Table 5.1 shows the breakdown of MSW across Lincolnshire with 365,537 tonnes arising in 2006/07 of which 96% is household waste.

**Table 5.1 Summary of Waste Arisings in Lincolnshire 2006/07**

| **Waste Stream** | **2006/07 (tonnes)** | **% of Total waste stream** |
|---|---|---|
| Municipal Waste | 365,537 | 100% |
| Household Waste | 349,663 | 96% |
| Waste Collected at HWRCs | 76,043 | 21% |
| Waste Collected by WCAs | 283,505 | 78% |
| Household waste recycled | 140,950 | 40% |

Table 5.2 presents a breakdown by district of current waste collected and recycled at the kerbside, and waste recycled at the county HWRCs.

| | Boston | East Lindsey | Lincoln | North Kesteven | South Holland | South Kesteven | West Lindsey | HWRCs |
|---|---|---|---|---|---|---|---|---|
| Total number of households | 26,710 | 62,786 | 39,446 | 44,453 | 37,004 | 56,476 | 37,348 | n/a |
| Number of households – dry recyclables | 26,710 | 62,786 | 39,446 | 44,453 | 36,250 | 56,476 | 37,348 | n/a |
| Number of households – green waste | 0 | 56,131 | 27,476 | 43,096 | 0 | 18,370 | 13,000 | n/a |
| Collected residual waste (t) | 17,060 | 31,664 | 21,405 | 20,350 | 23,587 | 34,471 | 23,095 | 26,180 |
| Collected dry recyclables (t) | 5,283 | 7,848 | 3,850 | 13,320 | 6,715 | 5,390 | 4,868 | 19,259 |
| Collected green waste (t) | 0 | 9,413 | 7,048 | 12,924 | 29 | 7,451 | 4,914 | 19,745 |
| Total waste arising (t) | 23,903 | 54,352 | 37,607 | 47,776 | 31,894 | 52,804 | 36,094 | 65,184 |
| **Recycling rate (%)** | **26.2** | **35.9** | **36.1** | **56.4** | **23.2** | **31.9** | **33.1** | **59.8** |

**Table 5.2: Kerbside Collection and Household Waste Recycling Centre Data 2006/07**


| | Boston | East Lindsey | Lincoln | North Kesteven | South Holland | South Kesteven | West Lindsey | HWRCs |
|---|---|---|---|---|---|---|---|---|
| Total number of households | 26,710 | 62,786 | 39,446 | 44,453 | 37,004 | 56,476 | 37,348 | n/a |
| Number of households – dry recyclables | 26,710 | 62,786 | 39,446 | 44,453 | 36,250 | 56,476 | 37,348 | n/a |
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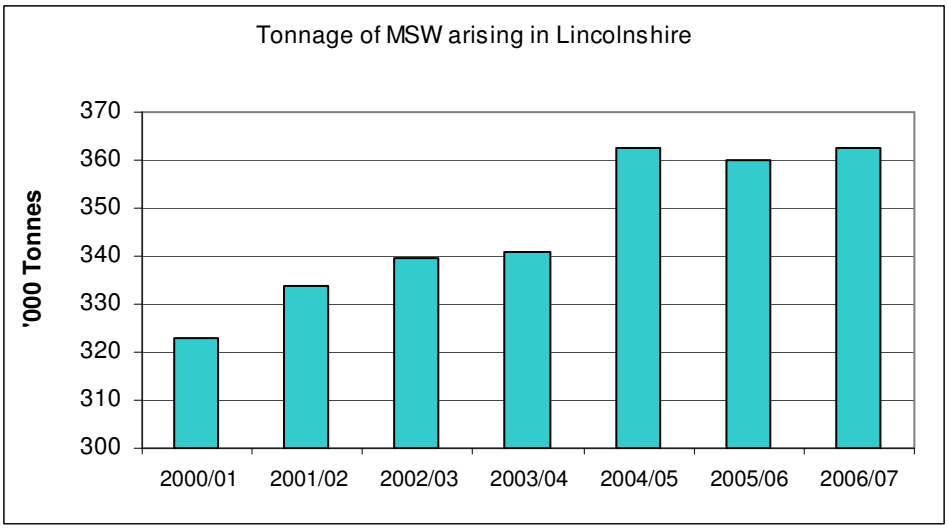
### 5.1.1 Waste growth

The total amount of municipal waste generated in Lincolnshire has increased over the last decade, although the average growth rate has reduced from 6% between 1996-2001 to 2.12% between 2000-2006. Table 5.3 below provides a summary of waste growth trend from 2000 to 2006.

**Table 5.3. Waste growth trends in Lincolnshire between 2000 and 2006**

| Year | Tonnage of MSW | % Change |
|---|---|---|
| 2000/01 | 322,715 | |
| 2001/02 | 333,927 | 3.47 |
| 2002/03 | 339,724 | 1.74 |
| 2003/04 | 340,982 | 0.37 |
| 2004/05 | 362,662 | 6.35 |
| 2005/06 | 359,990 | -0.74 |
| 2006/07 | 365,537 | 1.54 |
| **Average Rate of Change** | | **2.12** |

**Figure 5-2 Annual Tonnage of MSW Arising in Lincolnshire**




The growth rate from one year to the next has not been consistent. In particular, although there was an overall reduction in 2005/06 compared to previous year the waste arising was increasing again the following year.

However, the underlying overall trend is around 2% year on year growth. In order to make future waste growth projections to develop this strategy, it has been assumed that the waste growth rate between 2007 and 2026 continues at just less than 2%, using a medium growth scenario of 1.7% annual waste growth. When these trends are applied municipal waste generation is forecasted to reach 423,200 tonnes by 2015 and 460,000 in 2020.

## 5.2 Waste composition

It is important to understand the composition of the waste collected from within the county, as it will determine the available proportions of materials that can be extracted and recovered from the waste. It is also key to assessing the types of facilities required and collection systems needed to extract each component of the waste. In Lincolnshire, Lincoln City (2000), East Lindsey and South Kesteven (2004) have conducted research into the composition of mixed residual waste collected from householders. Lincoln City's research was conducted in October 2000, sampling nearly 25,000 tonnes and analysing it for composition. Table 5.4 presents a comparison of the outcomes of the waste composition studies completed, however this should be used carefully as each study used a different methodology.

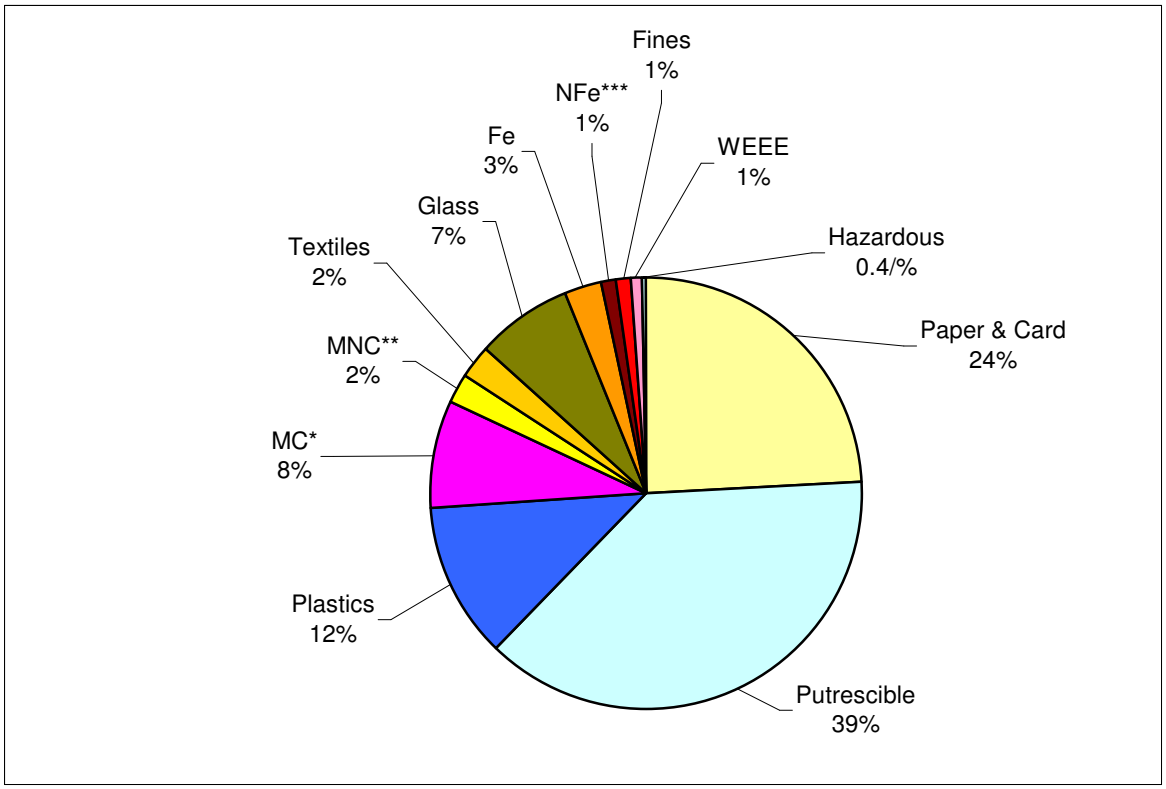
**Table 5.4. Waste composition comparison**

| | East Lindsey (2004) | Lincoln City (2000) | South Kesteven (2004) |
|---|---|---|---|
| **Category** | **% of the total weight** | **% of the total weight** | **% of the total weight** |
| Recyclable paper | 26.7% | 12.7% | 13.8% |
| Recyclable card | 4.9% | 5.4% | |
| Non-recyclable paper/card | 3.1% | 1.2% | 4.2% |
| Garden waste | 2.6% | 5.4% | 45.5% |
| Kitchen waste | 27.7% | 31.5% | |
| Animal waste | 1.9% | 5.2% | 0.0% |
| Plastic film | 5.6% | 6.0% | 6.8% |
| Dense plastic | 5.1% | 6.4% | 5.4% |
| Textiles | 1.3% | 3.0% | 3.0% |
| Miscellaneous combustible | 1.6% | 7.3% | 7.4% |
| Miscellaneous non-combustible | 4.0% | 0.1% | 2.9% |
| Glass | 7.0% | 7.7% | 5.7% |
| Non-recyclable glass | 0.5% | 0.9% | |
| Ferrous metals | 2.3% | 3.5% | 2.7% |
| Non-ferrous metals | 0.8% | 0.9% | 0.7% |
| Other metals | 0.3% | 0.4% | 0.0% |
| Fines | 1.9% | 0.5% | 0.9% |
| Wood | 1.5% | 0.5% | 0.0% |
| WEEE | 0.6% | 0.7% | 0.9% |
| Hazardous | 0.6% | 0.2% | 0.0% |
| Clinical | 0.2% | 0.1% | 0.0% |
| Other | | 0.5% | |
| **Total** | **100%** | **100%** | **100%** |

The assumed average composition for the county based on this combined research is presented in Figure 5-3.

It is important to note that MSW has a high proportion of biodegradable wastes (paper and organics). These wastes break down under biological action in landfills to produce greenhouse gases, and thus are the primary target of new waste legislation designed to reduce emissions of greenhouse gases.

**Figure 5-3 Average waste composition for Lincolnshire**




* MC: Miscellaneous Combustibles, **MNC: Miscellaneous Non Combustibles, *** NFe Non Ferrous Metal

## 5.3 Current Waste Management

The current waste management infrastructure needs to be reviewed to provide a baseline on which to develop the Waste Strategy. This review focuses on:

- Waste collection services
- Recycling and composting
- Treatment and disposal of residual waste
- Existing contracts
- Current waste management cost
- Best Value Performance Indicators

### 5.3.1 Waste Collection

Within Lincolnshire it is the district councils (WCAs) that have the responsibility to collect the waste, and the County Council (WDA) that has the responsibility to dispose of it. This results in a variety of different collection services and service providers (either in-house or contractor).

Table 5.5 below provides a summary of the current collection services offered by district councils.

**Table 5.5 Collection Services offered by the Waste Collection Authorities (WCAs)**

| Local Authority | Residual Waste | Dry Recyclables | Green Waste |
|---|---|---|---|
| Boston | Alternate weekly collection majority in 240 litre bins | Alternate weekly in 240 litre bins<br>Mixed paper, card, plastic bottles, tins and cans | Not currently collected |
| East Lindsey | Alternate weekly collection majority in 180 litre bins | Alternate weekly in 240 litre bins<br>Mixed paper, card, plastic bottles, tins and cans | Alternate weekly in 240 litre bin |
| City of Lincoln | Alternate weekly collection in 240 litre bins or weekly collection in 140 litre bins (inner city areas) | Alternate weekly in 240 or 140 litre bins<br>Mixed paper, card, plastic bottles, tins and cans | Alternate weekly in 240 litre wheeled bin |
| North Kesteven | Alternate weekly collection majority in 240 litre bins | Alternate weekly in 240 litre bins<br>Mixed paper, card, plastic bottles, glass containers, textiles, tins and cans | Alternate weekly in 240 litre bin |
| South Holland | Weekly black sack collection | Weekly sack collection<br>Mixed paper, card, plastic bottles, plastic film, textiles, tins, cans and glass | Not currently collected |
| South Kesteven | Alternate weekly collection majority in 240 litre bins | Alternate weekly in 240 litre bins<br>Mixed paper, card, plastic bottles, textiles, tins, cans and glass | Opt in system with a bin charge. Alternate weekly 240 litre bins |
| West Lindsey | Weekly collection majority in 180 litre bins | Alternate weekly in 240 litre bins<br>Plastic bottles, glass card, tins and cans<br>Separate paper collection. | Opt in system with a bin charge.<br>Alternate weekly 240 litre bin |

In addition to the above services, the County operates 12 HWRCs across the county to enable residents to recycle, compost and dispose of waste materials. Table 5.6 below summarises the facilities provided at each HWRC.

**Table 5.6 Materials accepted at Household Waste Recycling Centres**

| Site Name | Landfill Waste | Plastic Bottles | Plastic Bags | Hard Plastics | Wood | Books and CD | Used Engine Oil | LPG Cylinders | Fluorescent Tubes | Fridges & Freezers | TVs and Monitors | Used Car Batteries | Household Batteries | Printer Cartridges | Household Chemicals | Paper | Cardboard | Scrap Metals | Tins and Cans | Textiles | Green Garden Waste | Soil and Rubble | Glass Bottles |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Great Northern Terrace | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| Spalding | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| Skegness | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| Grantham | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| Louth | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✘ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| Sleaford | ✔ | ✘ | ✘ | ✘ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| Bourne | ✔ | ✘ | ✘ | ✘ | ✘ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| Gainsborough | ✔ | ✔ | ✔ | ✘ | ✔ | ✘ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| Boston | ✔ | ✔ | ✔ | ✘ | ✔ | ✘ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| Kirkby on Bain | ✔ | ✔ | ✔ | ✘ | ✔ | ✘ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| Leadenham | ✔ | ✘ | ✘ | ✘ | ✔ | ✘ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✘ | ✘ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| Whisby | ✔ | ✘ | ✘ | ✘ | ✔ | ✘ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✘ | ✘ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |

**Residual waste collection and disposal**

Residual waste facilities in the county are currently based on the use of ten landfill sites. During 2006/07 Lincolnshire County Council disposed of a total of 219,361 tonnes of waste at these sites. This strategy forms a key document in addressing the long-term infrastructure requirements for the treatment of residual waste.

In order to implement a successful new waste strategy in Lincolnshire it is important to consider the current landfill contracts and future requirements. Table 5.7 summarises for each landfill site the type of contract, length of contract and minimum tonnages contracted.

**Table 5.7 Landfill Contracts 2007**

| | Operator | Current minimum contract obligation (tonnes) | End of contract |
|---|---|---|---|
| Immingham | WRG | 0 | 2012 |
| Middlemarsh | WRG | 5,000 | Life of site |
| Kirkby on Bain | WRG | 5,000 | Life of site |
| Leadenham | WRG | 20,000 | Life of site |
| Colsterworth | WRG | 20,000 | Life of site |
| Boston | WRG | 20,000 | Life of site |
| Gainsborough | WRG | 5,000 | Life of site |
| Kenwick | WRG | Closed | Expired |
| Whisby | WRG | Closed | Life of site |
| North Hykeham | WRG | 0 | 2012 |

A number of waste transfer stations are currently used for the bulking up of residual waste and dry recyclables prior to onward transportation to treatment and disposal sites. The current arrangements are as follows:

***Bolingbroke Road, Louth***

- Used by East Lindsey for approximately 20,000 tonnes of residual waste destined for Kirkby on Bain Landfill.
- Used by East Lindsey for approximately 13,000 tonnes of recyclables destined for Greenstar MRF at Addlethorpe, near Skegness. From April 2008 all of East Lindsey's recyclables will be delivered to the transfer station, and will be sent out to an out of county MRF pending completion of the new Lincoln MRF
- Used by West Lindsey for approximately 2,000 tonnes of residual waste destined for Kirkby on Bain Landfill.

***Fen Road Depot, Boston***

- Used by Boston Borough Council for all of their dry recyclables destined for out of county MRF.

***Stamp End Depot, Waterside South, Lincoln***

- Used by City of Lincoln Council for all of their dry recyclables destined for out of county MRF (pending completion of new Lincoln MRF).

***Mid UK Transfer Station, Market Deeping***

- Used by South Holland District Council for all of their dry recyclables destined for Mid UK MRF at Caythorpe
- Used by South Kesteven District Council for half of their dry recyclables destined for Mid UK MRF at Caythorpe

As indicated above the County Council has entered into a contract to construct and operate a centralised MRF in Lincoln that will be available for the waste collection authorities to use in the near future (estimated completion date 2009).

**Side waste policy**

All authorities that are using wheelie bins for their residual waste collection have a "no side waste policy" in place. This means that residents are not allowed to place other wastes, e.g. sacks alongside their wheelie bins. South Holland operates a sack collection system and will collect side waste.

**Collection of trade waste**

Currently each district has its own policy on trade waste collection. The partnership is working towards having a common policy on this area of service provision.

**Bulky household waste collection**

Bulky waste falls outside the scope of the regular collection service as these items are generally too bulky or too difficult to be handled by the normal means. The districts across the partnership offer bulky waste collection on demand for item such as cookers, mattresses and other large household appliances. Each district has its own policy on the fee it charges (or not) for bulky collections.

**Street cleansing**

The waste collection authorities provide a regular service across their districts. Busy areas, such as shopping precincts and high streets usually have permanent cleaning staff or daily cleansing regimes. Street cleansing waste accounts for around 3% of municipal waste landfilled in the county. The partnership is currently trialling the recycling of street sweeping waste in one district.

**Clinical waste**

Clinical waste is defined in the Controlled Waste Regulations 1992 and is the term applied to any waste which consists wholly or partly of:

- Human or animal tissue
- Blood or bodily fluids
- Excretions
- Drugs or other pharmaceutical products
- Swabs or dressings
- Syringes, needles

which unless made safe, may prove hazardous to any person coming into contact with it.

From January 2008 the County Council has introduced a new clinical waste collection and disposal service for householders producing this type of waste.

### Abandoned and end of Life Vehicles

Abandoned vehicles that are on public land are removed in accordance with the relevant legislation and are dealt by each district within their areas.

### Fly Tipped waste

Flytipping is a serious national problem as well as being unsightly it can lead to serious pollution of the environment and harm to human health, and is costly to remove and dispose of correctly. Across Lincolnshire 1,223 tonnes of waste was flytipped in 2006/07. The districts are responsible for clearing fly tipping in their area, and are now assisted by the County Council's Flytipping Team.

### Recycling collection

Table 5.8 summarises the number of households in each districts that are currently provided with kerbside recycling and green waste collections.

**Table 5.8 Households provided with recycling/green waste kerbside collection**

| | Boston | East Lindsey | Lincoln | North Kesteven | South Holland | South Kesteven | West Lindsey | Total |
|---|---|---|---|---|---|---|---|---|
| Total number of households | 26,710 | 62,786 | 39,446 | 44,453 | 37,004 | 56,476 | 37,348 | 304,223 |
| Number of households - dry recyclables | 27,000 | 62,786 | 39,446 | 44,453 | 36,250 | 56,476 | 37,348 | 276,786 |
| Number of households - green waste | 0 | 56,131 | 27,476 | 43,096 | 0 | 18,370 | 13,000 | 158,073 |

### Green waste collection:

A green waste collection is standard service provision in East Lindsey, Lincoln City and North Kesteven. In West Lindsey and South Kesteven, residents may opt-in to having a green waste collection service on payment of a fee. Boston and South Holland do not currently operate a green waste collection service. South Holland's policy for green waste is to encourage householders to compost at home which is being actively promoted.

Green waste from kerbside collections and HWRCs is sent to a network of composting facilities across the county under contracts operated by the County Council. In 2006/07 59,589 tonnes of green waste was sent to these facilities which are summarised in Table 5.9.

**Table 5.9: Composting facilities**

| Composting site | Location |
|---|---|
| Shaw Trust | Gainsborough |
| MEC | Lincoln |
| Organic Recycling Ltd | Crowland |
| Cranberry Composting | Boston |
| Mid UK Recycling Ltd | Caythorpe |
| Land Network (Sturgate) | Gainsborough |
| Land Network (South Elkington) | Louth |
| Land Network (Waddingham) | Waddingham |

**Dry recycling collection**

All the districts operate a kerbside recycling collection and mixed paper, card, plastic bottles, tins and cans. Additional materials such as glass are collected by some, and the partnership is moving towards a more standardised recyclable stream where possible.

Five of the Waste Collection Authorities have contractual arrangements with differing private sector operators to process their dry recyclables. There are currently 5 MRFs used to process recyclable materials, two of which are located out of the county. In addition to these facilities the County Council has let a contract to construct and operate a centralised MRF that will be available for the waste collection authorities to use in the near future (estimated date 2009). Between them the waste collection authorities also have 197 bring sites enabling the public to recycle cans, paper, glass, textiles and books. Each district is responsible for waste collection arrangements and these are presented in Table 5.10 below. Table 5.11 summarises where dry recyclables are sent for re-processing.

**Table 5.10 Current collection contract arrangements**

| | |
|---|---|
| Boston | Service provided in-house and due to run for another 4 years |
| East Lindsey | Service provided in-house |
| City of Lincoln | New contract with Cory Environmental in 2006 |
| North Kesteven | Service provided in-house |
| South Holland | Service provided in-house |
| South Kesteven | Service provided in-house |
| West Lindsey | Service provided in-house |

**Table 5.11 Current dry recycling arrangements**

| | Current Material Description | Current Destination |
|---|---|---|
| East Lindsey | Mixed paper, card, plastic bottles, tins and cans collected fortnightly in wheeled bins | Greenstar Ltd, Addlethorpe, Skegness (County contract) |
| West Lindsey | Card, plastic bottles, glass containers, tins and cans collected fortnightly in wheeled bins<br>Separate paper collection | Fox (Owmby) Ltd, Caenby Corner<br>(District contract) |
| City of Lincoln | Mixed paper, card, plastic bottles, tins and cans collected fortnightly in wheeled bins | HW Martin Ltd (Handler) transporting to Grosvenor Ltd, Peterborough MRF, Peterborough or Transcycle Ltd, Derby<br>(County contract) |
| North Kesteven | Mixed paper, card, plastic bottles, plastic containers, glass containers, textiles, coat hangers, tins and cans collected fortnightly in wheeled bins | Mid UK Recycling Ltd, Caythorpe<br>(District contract) |
| South Kesteven | Mixed paper, card, plastic bottles, plastic containers, glass containers, textiles, tins and cans collected fortnightly in wheeled bins | Mid UK Recycling Ltd, Caythorpe<br>(District contract) |
| Boston | Mixed paper, card, plastic bottles, tins and cans collected fortnightly in wheeled bins | HW Martin Ltd (Handler) transporting to Grosvenor Ltd, Peterborough MRF, Peterborough or Transcycle Ltd, Derby,<br>(District contract) |
| South Holland | Mixed paper, card, plastic bottles, plastic containers, plastic film, textiles, coat hangers, glass, tins and cans collected weekly in boxes | Mid UK Recycling Ltd, Caythorpe<br>(District contract) |

### 5.3.2 Recycling and composting rates

Recycling and composting performance has changed significantly since 2002 when the original JMWMS was produced, primarily through the expansion and introduction of new collection services and the improvement of recycling rates at household waste recycling centres. Table 5.11 below provides details of the household waste recycling rates between 2001 and 2007 for each district and for the County overall. For 2006/07 district recycling rates ranged from 56% (North Kesteven) to 23% (South Holland), with the overall county recycling rate reaching 40%.

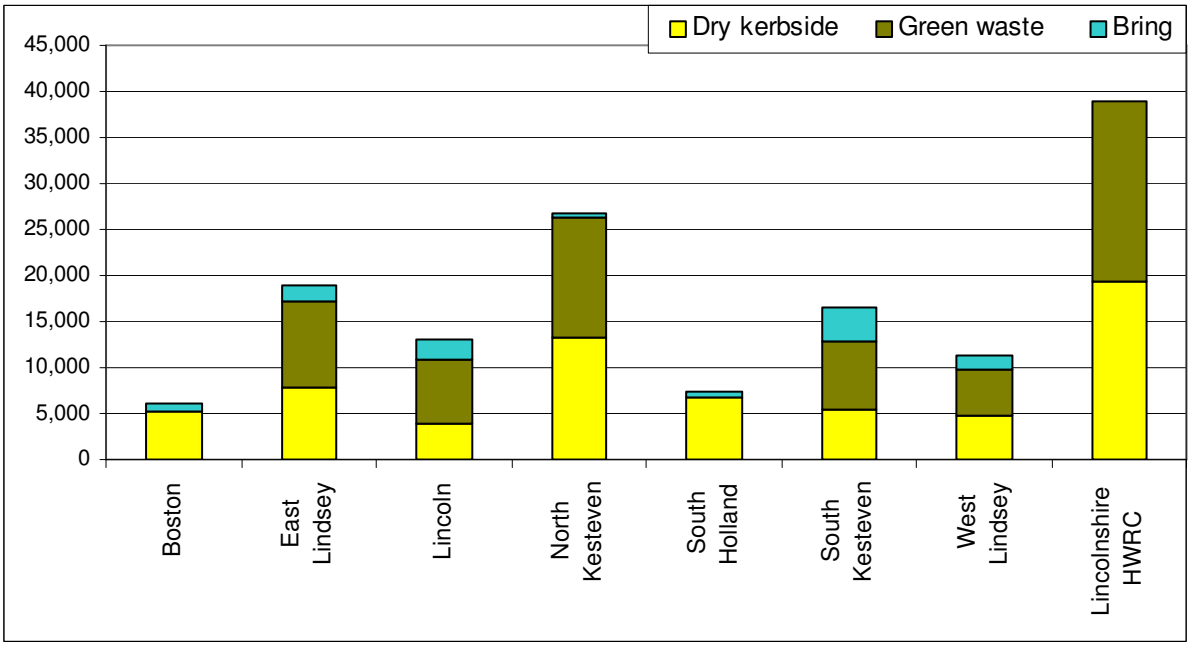
**Table 5.12 Recycling/composting rates between 2001 and 2007**

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|
| Boston | 7% | 7% | 7% | 20% | 28% | 22% | 26% |
| East Lindsey | 8% | 7% | 9% | 17% | 20% | 21% | 36% |
| City of Lincoln | 10% | 10% | 11% | 16% | 24% | 29% | 36% |
| North Kesteven | 5% | 5% | 16% | 10% | 39% | *52%* | 56% |
| South Holland | 9% | 9% | 15% | 15% | 16% | 21% | 23% |
| South Kesteven | 7% | 7% | 7% | 14% | 15% | 26% | 30% |
| West Lindsey | 7% | 7% | 9% | 15% | 24% | 32% | 33% |
| Lincolnshire | 8.7% | 8.4% | 12.0% | 18.1% | 27.6% | 33.9% | 39.9% |

Collectively, the partnership successfully exceeded the 2006/7 statutory targets for recycling and composting. Collectively, the partnership successfully exceeded the 2006/7 statutory targets for recycling and composting.

Figure 5-4 below shows the proportions of recyclables and green waste collected by each district, and waste brought by residents to the twelve Household Waste Recycling Centres.

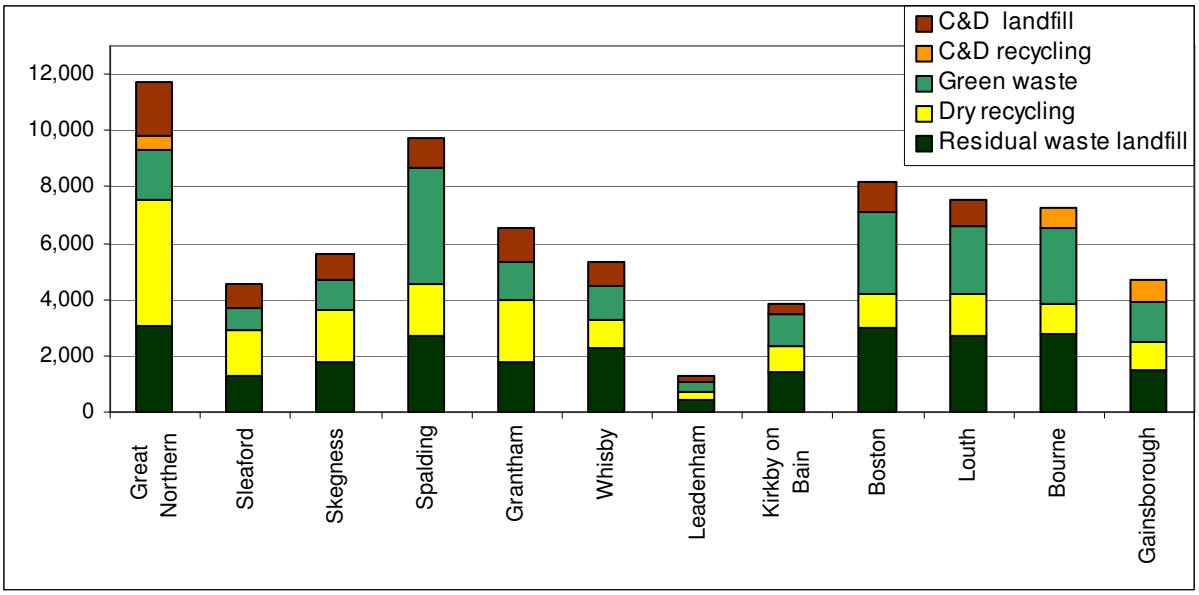
**Figure 5-4 Breakdown tonnages of recyclables (tonnes) 2006/7**



### Household Waste Recycling Centres

The County Council operates twelve HWRCs which accept waste from householders. County Council policy is to not accept trade waste at any of its HWRCs. Figure 5-5 presents the tonnage breakdown for each Household Waste Recycling Centre.

**Figure 5-5 Tonnage breakdown by HWRC**




*C&D: Construction and Demolition waste*

Table 5.13 shows the County Council's current contractual and operational arrangements for each Household Waste Recycling Centre.

**Table 5.13: HWRC Contractual and Operational Arrangements**

| Site Name | Management responsibility |
|---|---|
| Great Northern Terrace | County Council |
| Sleaford | County Council |
| Skegness | County Council |
| Spalding | County Council |
| Grantham | County Council |
| Whisby | WRG |
| Leadenham | WRG |
| Kirkby on Bain | WRG |
| Boston | WRG |
| Louth | County Council |
| Bourne | Bullimores |
| Gainsborough | Greencycle |

## 5.4 Current waste management costs

The anticipated costs of waste management in 2006/07 are outlined in Table 5.14 and Table 5.15. These are still subject to changes, as the data for the last quarter has not been fully validated yet. There are some noticeable variations between the districts: Boston has the lowest cost per household at £33.96 compared to £61.08 for West Lindsey. It should be noted that West Lindsey has the lowest population density at 0.69 persons per hectare in the county.

**Table 5.14 Cost of waste collection and cost of waste disposal for 2006/07**

| **Collection of household waste** | **£/ HH*** | **Number of HH** | **Overall cost for collection** |
|---|---|---|---|
| Boston | 33.54 | 27,000 | £905,580 |
| East Lindsey | 59.42 | 63,436 | £3,769,367 |
| Lincoln | 52.63 | 39,970 | £2,103,621 |
| North Kesteven | 48.91 | 45,207 | £2,211,074 |
| South Holland | 48.17 | 37,554 | £1,808,976 |
| South Kesteven | 46.34 | 57,106 | £2,646,292 |
| West Lindsey | 59.98 | 37,900 | £2,273,242 |

**Table 5.15 Cost of Waste Disposal 2006/07**

| **Final Disposal of household waste** *(including landfill tax)* | £/ tonne | Overall amount landfilled | Overall cost of disposal |
|---|---|---|---|
| Lincolnshire County | £47.25 | 365,537 | £17,270,000 |

# 6 What are we aiming for?

Although the Partnership continues to increase the amount of waste it recycles, it needs to agree a way forward for managing the overall municipal waste stream with clear objectives and a robust plan of action.

This chapter identifies the challenges faced by the partnership and the proposed approach to meeting these challenges.

## 6.1 Strategy Objectives

The Partnership has developed and agreed a set of high-level objectives, which are key drivers for the partnership to deliver this strategy. It is necessary that the objectives are constantly reviewed and updated as progress is made towards them. The ten objectives are as follows:

**Objective 1**. To prevent the growth in municipal waste by promoting waste reduction and reuse initiatives

**Objective 2** To promote waste awareness through co-ordinated public education and awareness campaigns, and effective community engagement

**Objective 3.** Across Lincolnshire, to achieve 44% recycling and composting by 2010 and 50% by 2015

**Objective 4.** Across Lincolnshire to achieve a uniform dry recyclables waste stream

**Objective 5**. To progressively increase the recovery and diversion of biodegradable waste from landfill to meet and exceed the Landfill Directive diversion targets

**Objective 6.** To ensure that residual waste treatment supports practices higher up the waste hierarchy

**Objective 7.** To deliver better value for money services addressed on a countywide basis

**Objective 8.** To consider approaches to managing waste from commercial and industrial sources

**Objective 9.** To lobby and work with others on waste management issues

**Objective 10**. As Local Authorities to set an example by preventing, reusing, recycling and composting own waste and using our buying power to positively encourage sustainable resource use.

## 6.2 The challenge we face

The Partnership's main challenge will be to meet the requirements set by the Landfill Directive on reducing the amount of biodegradable waste that is landfilled. The European Commission will be able to fine Member States who do not meet their landfill diversion targets. The current estimated level of this fine is set at 500,000 Euros (about £350,000) per day. Meeting the longer-term challenge set by the Landfill Directive will be made more difficult if the amount of waste that we are producing continues to increase.

The Partnership will also need to meet the requirements of the UK Government's new performance framework[6]. These comprise of 198 measures which represent what the Government believes should be the national priorities for local government, working alone or in partnership, over the next three years. These will replace all other sets of indicators, including Best Value Performance Indicators and Performance Assessment Framework indicators, from April 2008. The new measures on environmental sustainability included three which are discussed in this waste strategy:

- NI 191 Residual household waste per head
- NI 192 Household waste recycled and composted
- NI 193 Municipal waste landfilled.

Other measures on environmental sustainability which are relevant to the waste strategy are:

- NI 185 Carbon dioxide reduction from Local Authority operations
- NI 195 Improved street and environmental cleanliness (levels of graffiti, litter, detritus and flyposting)
- NI 196 Improved street and environmental cleanliness – fly tipping.

Each district within the Partnership will maintain its high level of street cleaning, and will continue to take enforcement action against fly tippers if the source of the waste can be identified.

### 6.2.1 Growth in waste arisings

Meeting the longer-term challenge set by the Landfill Directive will be made more difficult if the amount of waste that we are producing increases.

Historically, waste arisings have been shown to grow in line with, or even above, the level of economic growth. Consequently, if this trend continues, a 3% p.a. growth in waste would result in a doubling of waste arisings in 20 years. However, the continuation of this trend is now considered to be unsustainable, and thus the European Commission's Sixth Environment Action Programme set an objective to achieve a decoupling of resource use from economic growth through significantly improved resource efficiency, dematerialisation of the economy, and waste prevention.

About 96% of the total MSW which is collected across the partnership is household waste, Thus in order to predict future MSW arisings, we have to focus our efforts on forecasting growth rates for household waste alone.

[6] The New Performance Framework for Local Authorities & Local Authority Partnerships: Single Set of National Indicators. Department for Communities and Local Government, October 2007.

**Household waste growth**

Growth in household waste is due to two key factors:

- An increase in the number of households
- Growth in waste produced per household due to increased consumption

Waste minimisation and re-use initiatives aim to tackle the growth in waste produced by a household. However, even if these initiatives were to reduce the growth in waste per household to zero, then arisings of household waste would still increase as a result of an increase in the number of households. Consequently, unless waste minimisation activities reduce waste arisings per household at a faster rate than the growth in the number of households, overall waste arisings will continue to increase.

A number of models for predicting future waste arisings are available (these predict average growth rates of between 1% and 2% per year), and Waste Strategy for England 2007 developed four growth scenarios for MSW in order to assess a range of possible future outcomes to 2020:

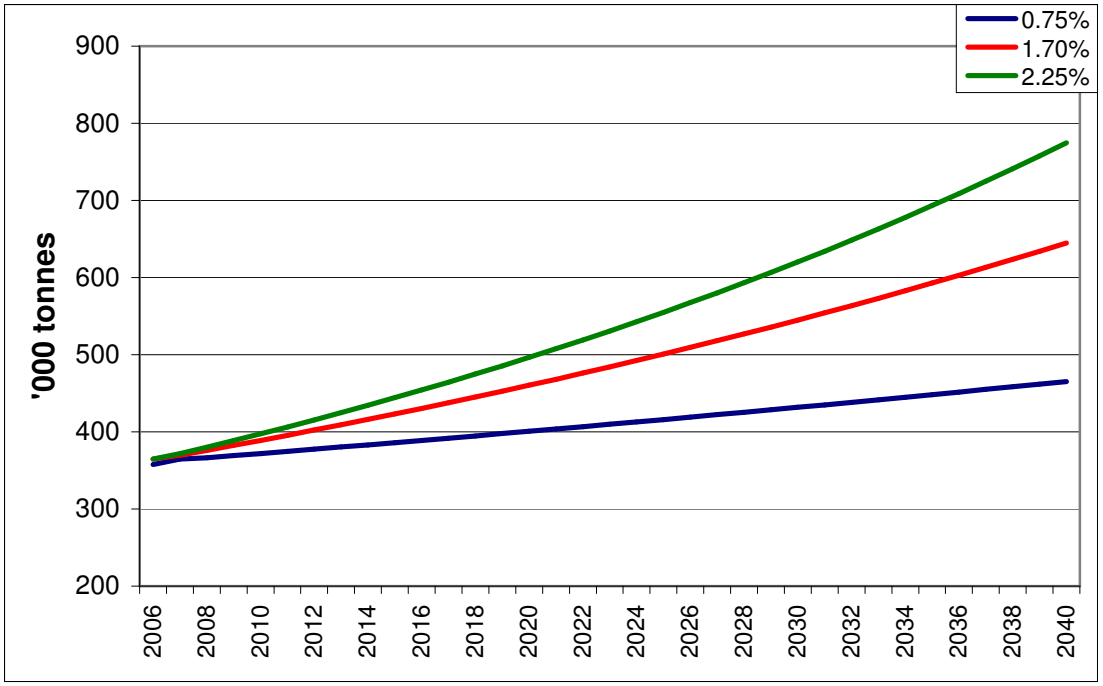
1. 2.25% per annum reflecting recent trends in growth in consumer spending
2. 1.5% per annum in line with national waste growth in the five years to 2004/05
3. 0.75% per annum, in line with current projections of household growth and reflecting more closely national waste growth in the five years to 2005/06
4. 0% growth, representing the possibility that waste growth will be decoupled from household and economic growth.

The East Midlands Regional Plan housing forecast set a predicted growth for households for each district across the Partnership to 2020. These vary across the Partnership. For the purpose of developing this strategy we have annualised the number of additional dwellings to be built from 2007 to 2020, and added the growth rate for waste per household. This resulted in an overall growth in waste generation of 1.7%. In order to achieve this overall waste growth, it will be essential that the waste minimisation and public education/ awareness activities identified in this strategy are implemented. Figure 6.1 illustrates the impact different waste growth would have on the amount of MSW arising annually.

**Table 6.1 Projected waste growth rate for Lincolnshire**

| | Number of households | Household growth (%) | Waste growth rate/HH (%) | Overall waste growth rate (%) |
|---|---|---|---|---|
| **2006** | 304,223 | | | 0.7% |
| **2007** | 308,173 | 1.30% | 0.40% | 1.7% |
| **2008** | 312,123 | 1.28% | 0.42% | 1.7% |
| **2009** | 316,073 | 1.27% | 0.43% | 1.7% |
| **2010** | 320,023 | 1.25% | 0.45% | 1.7% |
| **2011** | 323,973 | 1.23% | 0.47% | 1.7% |
| **2012** | 327,923 | 1.22% | 0.48% | 1.7% |
| **2013** | 331,873 | 1.20% | 0.50% | 1.7% |
| **2014** | 335,823 | 1.19% | 0.51% | 1.7% |
| **2015** | 339,773 | 1.18% | 0.52% | 1.7% |
| **2016** | 343,723 | 1.16% | 0.54% | 1.7% |
| **2017** | 347,673 | 1.15% | 0.55% | 1.7% |
| **2018** | 351,623 | 1.14% | 0.56% | 1.7% |
| **2019** | 355,573 | 1.12% | 0.58% | 1.7% |
| **2020** | 363,473 | 1.10% | 0.60% | 1.7% |

**Figure 6-1 Effect of different waste growth forecast in Lincolnshire**




### 6.2.2 Waste Emissions Trading Legislation

The UK Government has implemented the Landfill Directive through the Waste Emissions Trading Act 2003. This spreads the responsibility for meeting the Landfill Directive target among all authorities and each disposal authority has been set targets for the amount of waste that it can landfill each year to 2020. It is important that every authority within the UK meets its target, so as to ensure that the UK's government will not have to pay any fines to the European Commission.

The targets, or allowances as they are referred to, are based on the presumption that MSW contains 68% of biodegradable material by weight. The initial allowance for biodegradable municipal waste (BMW) disposal for Lincolnshire County Council was set at:

- 194,120 tonnes of BMW to landfill in 2005/06
- 131,376 tonnes of BMW to landfill in 2009/10
- 61,231 tonnes of BMW to landfill in 2020

The Waste Emissions Trading legislation enables the UK Government to fine authorities that do not meet their yearly targets. For English local authorities, the level of this fine is £150 for each tonne of waste landfilled above the specified limit. These started in 2005/06, but the Government has recognised that while some authorities are already easily meeting their allowances because they have installed a suitable treatment plant, other authorities, which include the partnership, will not be able to meet their longer-term targets until they have both increased the level of recycling and installed a suitable treatment facility to treat the remaining (residual) waste. Consequently, the legislation enables allowances to be traded between authorities. The aim of the trading of allowances is to enable authorities to meet their obligations through purchasing allowances at a lower cost than the cost of paying a fine to the Government, though the cost of the allowances could approach the level of the fine if demand is high.

If the amount of waste continues to increase to an average of 1.7% per year between now and 2020, the total amount of municipal waste in Lincolnshire will increase from its current level of about 365,000 tonnes per year to about 460,000 tonnes by year 2020.

If Lincolnshire achieves its overall recycling and composting targets of 50% by 2015 it means that in 2020 we will recycle about 230,000 tonnes of waste (recycling and composting), and there will remain a further 230,000 tonnes of residual waste to deal with . This will equate to about 157,000 tonnes of BMW, whereas the maximum Lincolnshire allowance for 2020 will be 61,231 tonnes. Thus Lincolnshire would exceed its allowance and would be fined as estimated £23.46 million. This would be equivalent to a fine of £65 per household in the year 2020 in addition to the basic costs of waste management.

In addition to establishing a clear direction for recycling and composting it is crucial, this strategy addresses how the residual waste is going to be treated and dispose of to avoid such costs.

# 7 How will we get there?

In order to deliver the aims and objectives that the Partnership aspires to, each element of the waste hierarchy needs careful consideration.

This strategy reinforces the initial commitment from past strategies and identifies new opportunities that will move the Lincolnshire Waste Partnership towards achieving its objectives. Lincolnshire currently disposes of 60% of its waste to landfill, which is at the bottom of the waste hierarchy. Therefore we must curb waste generation and invest in treatment technologies to move up the waste hierarchy to ensure a more sustainable approach and to use waste as a valuable resource rather than landfilling it.

## 7.1 Waste Minimisation and Re-use

Waste reduction is at the top of the waste hierarchy and is pivotal to the development of sustainable waste management practices, although it is arguably the most difficult objective to achieve and measure.

Waste reduction refers to the minimisation of waste at source, which means not producing waste in the first place. In some countries, householders are charged to dispose of the actual amount of waste that they present for collection, and this has been shown to have an effect on the amount of waste produced and material recycled. However, so-called 'pay-as-you-throw' schemes are likely to be unpopular with a large section of the public. The partnership may nevertheless wish to consider this approach in the long term.

The new National Waste Strategy (2007) places a strong emphasis on the prevention and minimisation of waste, and includes the following initiatives:

- Government will work with the Direct Marketing Association to develop a service so that people will be able to opt-out of receiving un-addressed as well as addressed direct mail. The Government is also considering moving towards an approach where people would only get direct mail if they opted in by placing their name on the direct mail register.
- Government will work with retailers to reduce the use of free single use bags. This could involve retailers only selling long-life bags, or retailers charging for disposable bags and using the proceeds to sell long-life bags at a discount.

There are a number of other initiatives for reducing waste arisings. These include:

- Re-using plastic bottles, containers and carrier bags.
- Avoiding buying products that have excessive packaging.
- Purchasing longer lasting products, e.g. rechargeable batteries.

However, one of the greatest problems associated with this tier of the waste management hierarchy is quantifying how effective such programmes actually are. Although waste minimisation within industrial and commercial sectors appears to be more prominent in the public eye, due to the benefit of such schemes to participating businesses, the prevention of household waste has always been difficult to implement. In addition the Government approach to monitoring the diversion of biodegradable waste from landfill is in conflict with schemes such as discouraging the use of plastic bags in favour of biodegradable ones. However the Government are considering steps that will address this imbalance.

Lincolnshire's original waste strategy (2002) provided some discussion addressing the short, medium and long term actions required to deliver the then preferred options. This strategy is building on the existing programme and expanding it

Lincolnshire has seen the average rate of waste growth slow down over the last decade (6% - 2%), although with the introduction of wheeled bin schemes and garden waste collections waste generation has fluctuated considerably. However with a sustained approach to promoting waste prevention and minimisation activities the partnership aims to reduce the growth in waste.

Taking the above into consideration, the waste growth that has been agreed and applied to the scenarios modelled in the SEA, was set at 1.7% from 2007 onward. This rate takes into consideration the growth in housing forecast for the county, although the actual waste growth per household is currently less than 1%.

The Partnership is working closely to develop and implement joint activities to drive waste reduction. Those already in operation or planned include:

- Joint public information and awareness campaigns – including a food waste awareness campaign
- Partners in WRAP home composting initiative (since January 2007)
- Lincolnshire Real Nappy campaign
- Prevention of junk mail
- Supporting community group and social enterprise activities
- Furniture re-use scheme
- Reduce packaging waste – by raising resident awareness and working with Trading Standards
- Mobile phone re-use and recycling campaign
- Wood reuse banks

These initiatives will help the partnership to work towards the zero waste growth target in the East Midlands Regional Waste Strategy.

### 7.1.1 Home Composting

For a number of years the County and District Councils have promoted the use of home composters by providing subsidised composters to residents. Since 2005 over 12,000 compost bins have been supplied to help householders deal with their garden waste at home. The partnership is committed to encourage more home composting to minimise the quantity of waste requiring disposal.

### 7.1.2 Real Nappies

In Lincolnshire around 9,500 tonnes of disposable nappies are thrown away every year and end up in landfill. The partnership launched the Real Nappy Campaign in 2005 and offers a £30 cash back incentive to parents using real nappies. Since its launch 600 residents have used the scheme.

### 7.1.3 Re-use

The partnership is fully supportive of waste reuse schemes and many of the district authorities encourage reuse through supporting furniture re-use projects that collect unwanted furniture that can be re-used. These re-use projects are usually run by charities or not-for-profit organisations. The Partnership will continue to actively support these programmes and consider additional schemes that could improve the reuse of materials within the county and subsequently divert more material from landfill. Options being considered include mobile phones and wood reuse schemes.

## 7.2 Recycling and Composting

The Partnership has increased its recycling and composting rate significantly since the original waste strategy was adopted (April 2002). This is the result of a dramatic change in waste collection services across the county. All of the districts provide a kerbside collection for recyclable materials, and five out of seven districts also provide green waste collections. The success of these schemes is reliant on the support and co-operation of householders.

The partnership has set itself the following recycling targets:

- **44% overall recycling by 2010**
- **50% overall recycling by 2015**

These exceed the Government's current target as set in Waste Strategy for England 2007[7], and reflect the Regional target for 2015.

To achieve these targets the partnership is keen to achieve a greater commonality of services and continue delivering improvements in performance. In order to deliver higher performance the partnership recognises the need to increase the recycling performance of HWRCs, and to complete the Household Waste Recycling Centre network by providing sites at Stamford, Market Rasen, Long Sutton and Mablethorpe. Progress is being made to standardise the types of material accepted at all HWRCs subject to site constraints.

The number of bring facilities will be reviewed and the expansion of existing recycling and composting services to remote locations and problematic types of dwelling will be considered wherever feasible.

The partnership has an open mind towards the introduction of new services and the separate collection of differing materials such as food waste and the wide range of potential recyclables. As legislation is becoming more focused on individual materials within the waste stream, there may be an increasing requirement to extract and recover value from these materials.

In response to the introduction of new waste collection services, the County Council has procured a contract for a centralised materials recycling facility (MRF) to sort and bulk up recyclable materials collected by the district authorities, which is estimated to be on stream by 2009.

The Districts are all achieving different recycling and composting rates reflecting their individual circumstances. Taking these into consideration the following targets for each district, and the HWRCs have been set to collectively achieve the 44% and 50% overall recycling targets mentioned above.

[7] Waste strategy targets: 40% recycling by 2010, 45% in 2015 and 50% in 2020

**Table 7.1 Recycling targets for 2010 and 2015**

| | Boston | East Lindsey | Lincoln | North Kesteven | South Holland | South Kesteven | West Lindsey | HWRC |
|---|---|---|---|---|---|---|---|---|
| **2010** | | | | | | | | |
| Dry recycling | 30% | 24% | 24% | 30% | 27% | 25% | 26% | 30% |
| Composting | 0% | 20% | 20% | 28% | 0% | 20% | 18% | 30% |
| Overall recycling | 30% | 44% | 44% | 58% | 27% | 45% | 44% | 60% |
| **2015** | | | | | | | | |
| Dry recycling | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 32% |
| Composting | 1% | 27% | 20% | 30% | 0% | 25% | 20% | 32% |
| Overall recycling | 30% | 57% | 50% | 60% | 30% | 55% | 50% | 64% |

## 7.3 Addressing the Residual Waste Issue

Within Lincolnshire in 2005/06 a significant proportion (60%) of the residual waste (the waste that was not recycled, re-used or composted) was disposed of at landfills within or on the borders of the county.

Whilst landfill is currently a flexible and cost effective method to dispose of residual waste in Lincolnshire, increases in landfill tax and the Government landfill diversion targets will make it increasingly and significantly more expensive. In addition to the cost implications, landfilling of residual waste is an environmentally damaging and non-sustainable practice.

The partnership are committed to continue the diversion of biodegradable waste through recycling and composting and are on course to achieve the 2010 biodegradable waste diversion target. However, despite high recycling rates relying solely on recycling and composting will not be sufficient to meet the medium (2013) and long term (2020) Landfill Directive diversion targets. Therefore, in addition to recycling and composting, a significant proportion of the residual waste will need to be treated in some way other than landfilling to ensure the partnership meets its LATS targets. This will require investment in new waste treatment infrastructure to treat approximately 150,000 tonnes per annum of residual waste.

Lincolnshire's original waste strategy identified that an Energy from Waste treatment process formed the basis of the preferred option. However, as part of this new waste strategy, a Strategic Environmental Assessment has been completed both to re-evaluate this option and to assess other waste treatment technologies before confirming the preferred option.

The selection of the scenarios was based around a number of objectives as set by the strategy:

- To manage our waste sustainably and to move up the waste hierarchy
- To minimise the amount of waste generated across the county
- To maximise the amount and range of materials recycled and composted to meet and exceed the National and Regional targets
- To limit the amount of waste landfilled and ensure landfill diversion targets are met
- To maximise recovery and use of waste as a resource

The treatment of residual waste has been modelled for a number of different technologies. The assumptions for each scenario are as follows:

- Baseline year is 2006/07 with MSW arising of 364,612 tonnes
- Average waste growth across the County of 1.7% (includes growth in the number of households)
- Increased recycling and composting rates to achieve 50% recycling in 2015 (20% composting, 30% recycling)
- Biodegradable content of MSW set at 68% as per the Landfill Allowance Trading Schemes Regulation 2004
- New residual waste treatment facility with a 150,000 tonnes per annum capacity to meet the LATS targets.
- Limited landfilling may continue but only within permitted allowance

The residual waste treatment options that have been assessed in the SEA are presented in Table 7.2.

**Table 7.2: Residual Waste Treatment Scenarios**

| **Scenario** | | |
|---|---|---|
| **Scenario 1** | Baseline | 100% of residual waste to landfill |
| **Scenario 2** | Mechanical Biological Treatment with aerobic stabilisation phase | MBT with an aerobic stabilisation phase, the output is landfilled |
| **Scenario 3** | Mechanical Biological Treatment with Refuse Derived Fuel combusted on site | MBT with the output used as a refuse derived fuel (RDF) on site in a small scale energy to waste plant |
| **Scenario 4** | Mechanical Biological Treatment with Refuse Derived Fuel to a 3rd party | MBT with the RDF being sold to 3rd party such as cement kiln |
| **Scenario 5** | Mechanical Biological Treatment with anaerobic digestion and aerobic stabilisation phase | MBT with anaerobic digestion and aerobic stabilisation phases. The outputs are a compost product (which might be used in landfill engineering) and a biogas |
| **Scenario 6** | Mechanical Biological Treatment with anaerobic digestion and Refuse Derived Fuel combusted on site | MBT with anaerobic digestion and aerobic stabilisation phases. There are two outputs, a stabilised output which is landfilled and a RDF which is used on site |
| **Scenario 7** | Energy from Waste + Electricity | Energy from waste with electricity generation |
| **Scenario 8** | Energy from Waste + Combined Heat and Power | Energy from waste with electricity and heat generation |
| **Scenario 9** | Gasification | Advanced thermal treatment (ATT) |

These scenarios and technologies are fully explained and developed in the accompanying Environmental Report.

A list of assessment criteria has been agreed through the early consultation on the scoping stage of the SEA. These have been applied to each scenario in turn, and the primary results are presented in Table 7.3 The assessment evaluates a number of criteria that are categorised as follows:

- Environmental objectives
- Economic objectives
- Social objectives
- Deliverability of scenarios
- Waste hierarchy and policy

Table 7.3 below presents the total assessment score and the ranking of each scenario. The assessment score is the sum of each category score for each scenario. The results presented here are un-weighted. This means that all criteria have been given the same importance.

**Table 7.3: SEA results (un-weighted)**

| Scenario | Total assessment score | Ranking (without weightings) |
|---|---|---|
| **Sc 1- Base Case** | 11.5 | **6** |
| **Sc 2- MBT-Aerobic** | 9.44 | **8** |
| **Sc 3- MBT-RDF on-site** | 8.71 | **9** |
| **Sc 4- MBT-RDF to 3rd party** | 12.2 | **4** |
| **Sc 5- MBT-AD+Aerobic** | 12.08 | **5** |
| **Sc 6- AD+Aerobic (RDF onsite)** | 9.88 | **7** |
| **Sc 7- EfW + electricity** | 13.25 | **2** |
| **SC8 – EfW + CHP** | 15.36 | **1** |
| **Sc 9- Gasification** | 12.31 | **3** |

Overall, the results show that the scenarios using thermal treatment are scoring the highest (scenarios 7, 8 and 9). The thermal treatment scenarios all perform well overall due to a solid environmental performance, being less expensive than other options and because they offer the highest recovery and BMW diversion levels.

Scenario 8 (EfW with CHP) ranks the highest, primarily due the benefits the CHP can provide in the environmental performance. Scenario 8 and scenario 7 also have a more favourable score deliverability when compared to scenario 9. However, the ATT technology scores lower in deliverability due to its lack of proven implementation within the UK which makes this scenario more financially risky.

Overall the MBT scenarios score lower that the thermal treatment technology scenarios. The best scoring MBT scenarios is scenario 4 mainly due to the energy recovered when the RDF output is combusted by a third party. However, in practical terms this is dependant on a suitable long-term market for the RDF product being identified. The lack of a market would mean that the RDF product would need to be landfilled resulting in it receiving lower scores for a number of criteria (and the additional landfill costs could result in the scenarios having a higher total cost than other scenarios).

Scenario 3 (MBT with RDF onsite) achieved the lowest score due to performing poorly in terms of environmental objectives, recycling and recovery, and cost.

Interestingly, the base case scenario compares more favourably than some of the MBT scenarios (2, 3, 5 & 6) in a number of the criteria, particularly the environmental ones. Indeed, most of the MBT scenarios still rely on landfill, in addition to the operation of the MBT facility.

The total scores in Table 7.3 have been calculated on the basis that all criteria have equal importance, and thus an equal weighting. However, this does not take into account the fact that the public and stakeholders may consider that some of the assessment criteria are more important than others. The issue of criteria importance was investigated at the Scoping Stage but will also be part of the consultation on the draft Environmental Report. Consultees will be asked to weight the criteria in terms of importance. These weightings will then be used to re-calculate the total scores once the weightings have been applied.

These results are further explained in the SEA report. The results of the SEA will be finalised and updated in this strategy once the public consultation has been completed.

## 7.4 Approach to non-municipal Waste

The majority of the waste produced within the county consists of industrial and commercial waste and most is managed by private waste management businesses. Many of these wastes are subject to differing legislation and therefore require specialist collection and treatment processes. The partnership authorities have a duty to arrange for the collection of trade waste on request from businesses, however it is subject to a charge. Where trade waste is collected, it forms part of the municipal waste arisings and is subject to the biodegradable waste diversion targets. As private sector operators are not subject to the diversion targets, it currently gives them a competitive advantage over the partnership authorities. Although the partnership does not currently offer recycling services for commercial waste producers, they actively promote organisations that provide these services. The Partnership will be considering the short, medium and long-term options for dealing with commercial/trade waste collected by the waste collection authorities, in particular the potential for commercial waste recycling services.

## 7.5 Education and Communication

A key partnership objective, which will improve waste prevention and increase recycling and composting rates, is to raise awareness of waste issues and educate the public on sustainable waste management. The partnership authorities are committed to delivering a joint information and education campaign that will deliver common messages and provide information on how the public can help implement the strategy. In addition the Partnership has developed a partnership website which provides a central point for the partnership authorities and other organisations to promote sustainable waste management and also act as an educational/ consultation resource.

The Partnership views the educational sector as offering major opportunities for the promotion of sustainable waste management. Lincolnshire County Council actively promotes the Schools Waste Action Club (SWAC). This provides an established education programme that offers schools the opportunity to incorporate waste education into the curriculum and cut waste by up to 80%. Trained staff support teachers and help deliver a series of activities to introduce the ideas of reducing, reusing and recycling. The Partnership will continue to support the SWAC programme in Lincolnshire.

# 8 The next steps monitoring and implementing the strategy?

To help identify the best option for managing our waste in the future, we have:

- Assessed options for residual waste treatment.
- Commissioned a SEA to identify the most environmentally sustainable options for managing Lincolnshire's waste.

However there are further considerations required to ensure the strategy can be implemented successfully.

## 8.1 Funding and Support

As mentioned previously, the costs of waste management are increasing year on year, and combined with the need to adopt more sustainable waste management practices further pressure is placed on service budgets. Whilst the partnership authorities continue to fund service improvements, the consideration of funding to deliver future infrastructure development is of key importance. As part of the procurement process for a new facility a business case is being developed by the County Council and is reviewing the potential funding options available. To ensure an adequate balance of risk is achieved, the funding may involve private sector sources in combination with other financial support from Government that is specific to delivering improvements in recycling/composting performance and landfill diversion.

## 8.2 Partnership Working

To ensure the authorities of Lincolnshire continue to improve services and develop efficiencies it is essential that they work together to deliver the strategy. The partnership has already made significant progress through improving the interface between the waste collection and disposal authorities. Working together enables the collection and disposal requirements to be coordinated to ensure that future collection service provision is provided with adequate treatment and disposal infrastructure.

### 8.2.1 The Lincolnshire Waste Partnership

The partnership has been established between the public bodies within Lincolnshire responsible for collection and disposal of waste. The purpose of the partnership is to:

- Continuously improve the quality of service provided to the community
- Establish best value waste management for the public across Lincolnshire
- Meet landfill diversion targets

The Waste Partnership operates within a framework of joint working, agreement and partnership. Each Local Authority represented on the Waste Partnership is represented by an officer and member with executive authority to take decisions on behalf of his/her Local Authority in relation to matters to be considered by the Waste Partnership.

## 8.3 Implementing the Strategy

The Lincolnshire Waste Partnership has made a commitment to implement this strategy and has recognised that significant changes are required over the next 10 years. To deliver these changes an action plan will be prepared which breaks down the actions and tasks required to meet Lincolnshire's targets and objectives. The delivery of tasks within the action plan will be monitored and reviewed annually. Where significant changes occur, the action plan will be updated accordingly. The action plan will be set once the public consultation has been completed and the core strategy been agreed.

# Appendices

**APPENDIX 1. Legislation review**

**APPENDIX 2: SEA Scoping report consultation replies summary**

**APPENDIX 3: Glossary of terms**