Municipal Waste Management Strategy

Rotherham Metropolitan Borough Council
2005-2020

Prepared for Rotherham Metropolitan Borough Council by

ENVIROS

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PART 1: STRATEGY SUMMARY

Key changes are required to the way that waste is managed in Rotherham over the next 20 years. This is in response to a number of policy and regulatory changes at both a national and European level that require waste to be handled in a more sustainable manner. These changes require local authorities to play a wider role in the management of waste than just the collection and disposal of waste. The key drivers are:

- The introduction of statutory performance standards for the recycling and composting of household waste; and
- European and national legislation that require the amount of waste disposed to landfill to be significantly reduced and alternative treatment/disposal routes developed.

This document forms the Municipal Waste Management Strategy (Waste Strategy) for Rotherham Metropolitan Borough Council. The strategy covers the period from 2004 to 2020. This summary addresses the short term strategy (up to March 2006) and the options for the medium to long term strategy. The document aims to set out:

- the final Waste Strategy, under current DETR Guidance[1];
- the recommended strategy for achieving 2005/6 statutory performance standards for recycling; and
- potential options for achieving ongoing diversion of biodegradable waste from landfill, in line the EU Landfill Directive and the resultant Landfill Allowance Trading Scheme.

Headline Targets

Recycling and Recovery

The key recycling and recovery targets that must be achieved by Rotherham with respect to waste management in the short term are shown in Table 1. These include statutory performance standards for household waste recycling (BVPI targets) for 2005/6, Local Public Sector Agreement (Local PSA) targets for household waste recycling for 2005/6 and national aspirational targets for MSW recovery, for 2005/6, 2009/10 and 2015/16. These targets are based on percentages of waste recycled or recovered. The table also provides an estimated tonnage figure for each of these targets based on assumptions about how Rotherham's waste may grow in the future.

1 DETR (2001) Guidance on Municipal Waste Management Strategies

Table 1 Strategy targets

Targets	2005/6	2009/10	2015/16
MSW Arisings	134,800	140,400	150,800
Household Arisings	120,100	125,700	136,000
BVPI household recycling target (%)	**18%**	**18%**	**18%**
target (tonnes)	21,600	22,600	24,500
LPSA target (%)	**21%**	**21%**	**21%**
LPSA target (tonnes)	25,200	26,400	28,600
MSW recovery target (%)	**40%**	**45%**	**67%**
target (tonnes)	53,900	63,200	101,000

To meet these standards, Rotherham must implement new collection systems, improve the efficiency of existing collection systems and provide new infrastructure.

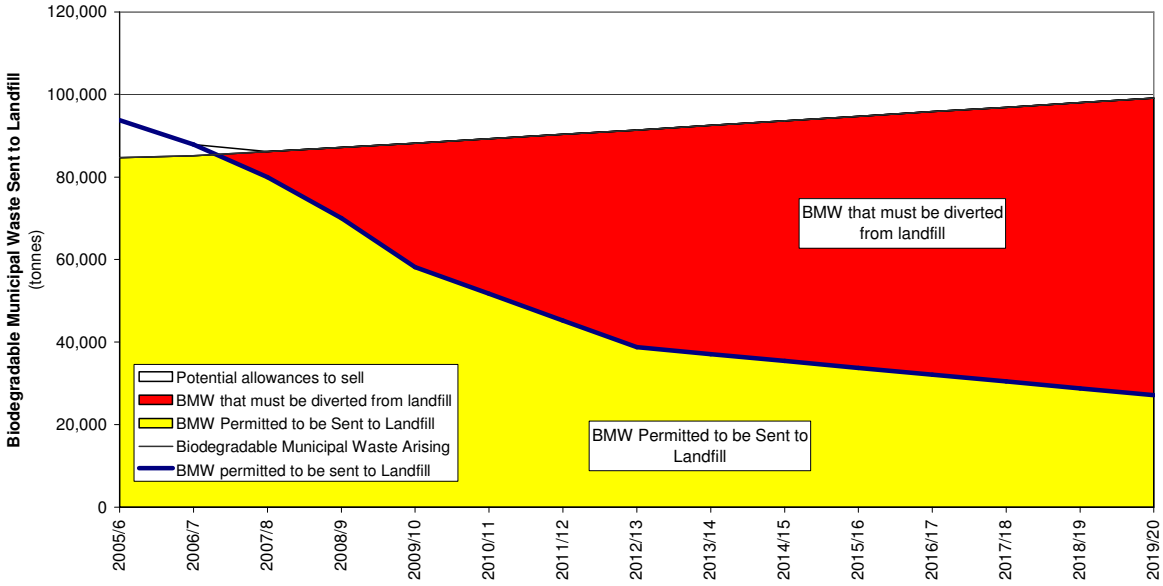
Diversion of Biodegradable Municipal Waste from Landfill

Rotherham must also achieve challenging targets for reduction of the amount of biodegradable municipal waste sent to landfill in line with the Landfill Directive. Article 5 (2) of the Landfill Directive, sets out targets aimed at reducing the amount of biodegradable municipal waste disposed to landfill, in the UK. The UK national targets are:

- By 2010 reduce the biodegradable municipal waste disposed to landfill to 75% of that produced in 1995;
- By 2013 reduce biodegradable municipal waste disposed to landfill to 50% of that produced in 1995;
- By 2020 reduce biodegradable municipal waste disposed to landfill to 35% of that produced in 1995.

The Government is to pass on these targets to each Waste Disposal Authority in England, including Rotherham, through a system of tradable landfill allowances. The amount of allowances allocated to Rotherham has recently been set, Figure 1 provides an graphical representation of these requirements, shown as the heavy blue line “BMW permitted to be sent to landfill”. The figure also shows that this means that a significant quantity of biodegradable municipal waste in Rotherham will need to be diverted from landfill (red area), particularly if waste grows within Rotherham.

Figure 1 Estimated Landfill Allowances



There are stringent penalties proposed for those local authorities that exceed their landfill allowances for biodegradable waste. These include significant fines that have yet to be set. However, the recent consultation response document from Defra indicates that the penalty will be £150/tonne, for exceeding allowances and in target years (2009/10, 2012/13, 2019/20), the fine could be a proportion of the total EU fine for England for exceeding permitted levels of landfill (in the region of £0.5 million per day).

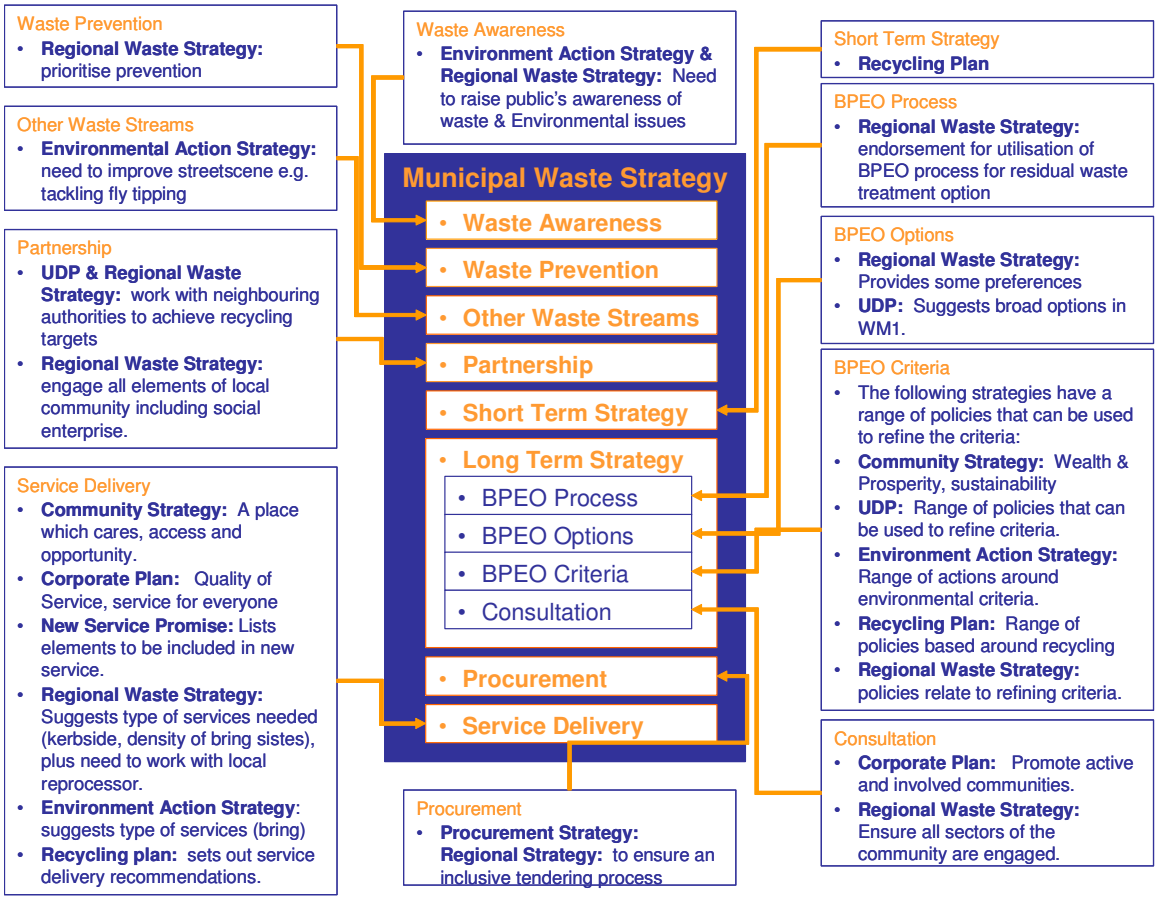
Other Requirements

There are a range of legislative requirements and national and local policy objectives relating to specific waste streams (household hazardous waste, clinical waste, fly tipping, end of life vehicles, packaging etc.). A strategy for managing these waste types has also been included within Section 7 of this document.

Local Policy Objectives (Short and Long Term)

The basis for the development of the new waste management services and infrastructure in Rotherham needs to be guided by local policies and priorities. The key linkages between other strategies and plans for Rotherham and the region are shown in Figure 2 .

Figure 2 Linkages between particular policies and proposals and the Municipal Waste Management Strategy

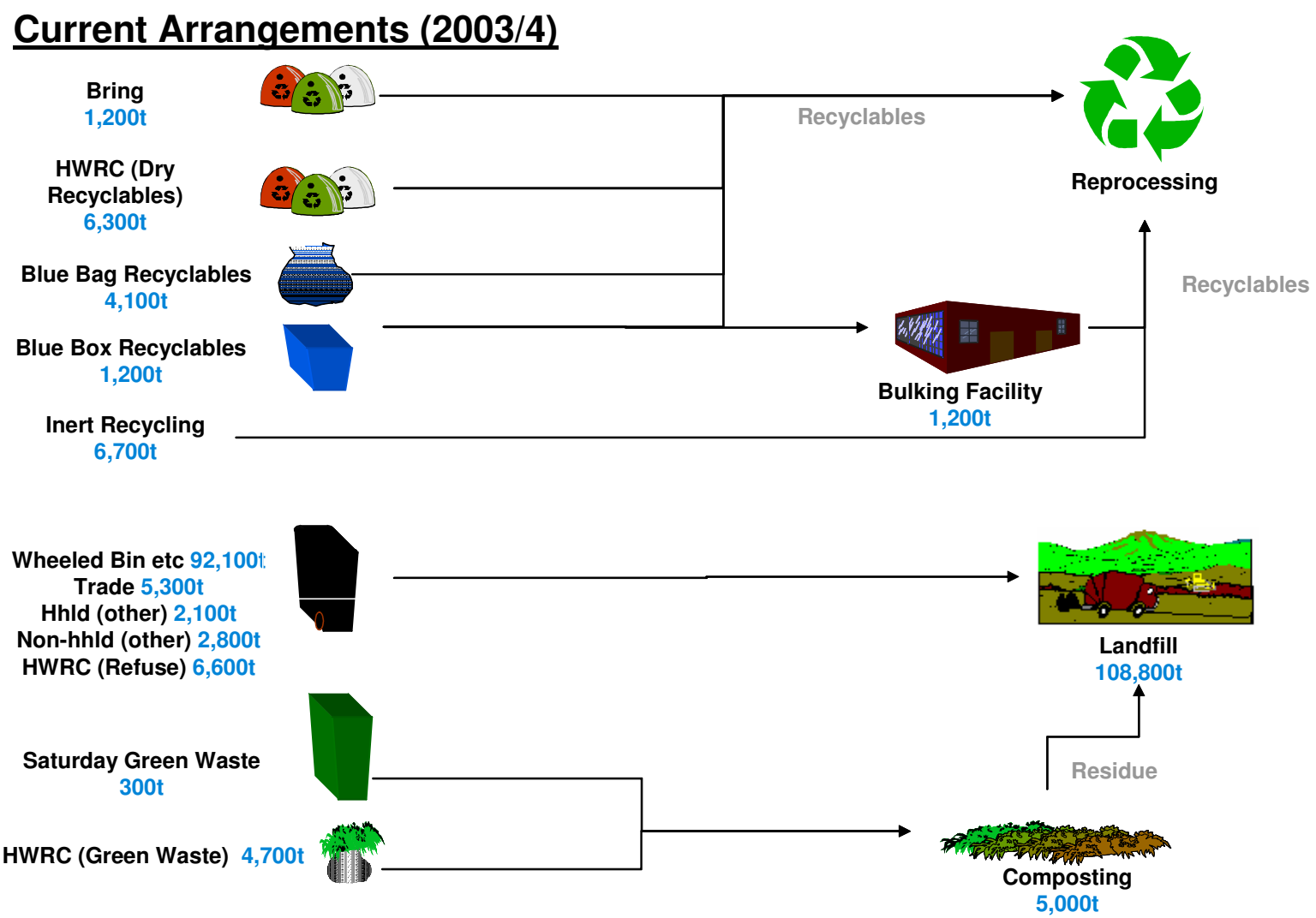


Current Arrangements

In 2003/4, Rotherham collected 118,600 tonnes of household waste, including 92,100 tonnes of waste collected from households, 6,600 tonnes of refuse generated at the Household Waste Recycling Centres (HWRCs, sometimes known as civic amenity sites), 17,800 tonnes of household waste for recycling (through door to door, local recycling site and HWRC collections) and 2,000 of other household wastes (including clinical waste and waste from community skips). In addition to this, the authority also collected a further 14,800 tonnes of non-household municipal waste from businesses and other sources, including fly tipping. In 2003/4, those materials that were not recycled were sent to landfill. This gives a total municipal waste arising of 133,300 tonnes

The waste management arrangements in 2003/4 (the last year of available data) are summarised in Figure 3

Figure 3 Municipal Waste Management Arrangements in 2003/4



In 2003/4, Rotherham achieved a step-change in household waste recycling, almost doubling the percentage of household waste recycled from 8% in 2002/3 to nearly 15% in 2003/4. This presents a major achievement, brought about through a dramatic increase in recycling performance at HWRCs, improved performance of the kerbside paper collection and introduction of a kerbside collection of glass metal and textiles (the "blue box" scheme) and Saturday green waste collection.

Waste prevention (Minimisation) and Awareness

Waste prevention is a key underlying principle of Rotherham's waste strategy both in the short and long term. Through waste reduction, the council:

- can achieve its targets for recycling and diversion of biodegradable waste from landfill more easily;
- can keep costs of managing wastes down; and
- can contribute towards preserving natural resources.

Waste reduction can be achieved through minimisation, which reduces the amount of waste by avoiding waste production in the first place, and also by reuse, which means a product is used more than once before it is discarded, thus reducing the total purchased.

It will be necessary to develop a waste prevention programme for Rotherham, in order to ensure measures are implemented effectively for the long term. The waste prevention plan will address action that can be taken at both an internal council level and to promote waste reduction activity amongst the residents of Rotherham.

Short Term Strategy (April 2004 – April 2006)

Achieving 2005/6 Targets for Recycling

To achieve 2005/6 LPSA targets (21% household waste recycling) and thereby to exceed 2005/6 BVPI targets, Rotherham plans to:

- Promote waste prevention through a borough-wide home composting scheme, (supported by the Waste and Resources Action Programme), through waste awareness, promotion of reuse and reduction of waste generated by the council itself;
- Extend the "blue box" to a further 50,000 households, bringing coverage to 94% of all households (there will also be a benefit of running this collection all year round);
- Extend the green waste collection in wheeled bins (trial in place to 12,000 households), to be extended to 12,000 households initially with additional expansion planned;
- Secure sufficient composting capacity to manage green waste collected through the green wheeled bin, Saturday green waste and HWRC collections (an estimated 5,000 tonnes by 2005/06); and

- Secure bulking capacity for recyclables collected through the blue box system (an estimated 5,000 tonnes by 2005/6).

In addition to these changes in infrastructure, Rotherham will also aim to improve the efficiency of existing blue box, blue bag and green wheeled bin collections through working with residents to improve participation in the scheme and to improve the quantity of recyclables provided by each participating resident. This will be achieved by:

- A comprehensive waste awareness programme to help improve participation and to provide specific information on the types of materials that can be accepted in the recycling collection (leaflets, door-knocking work, vehicle advertisements);
- Targeted communications initiatives in areas of poor performance as highlighted by microchips built into new blue boxes and green wheeled bins or as reported by a recent survey of streets setting out 10 bags or less for the blue bag collection;
- Trials of more 'user friendly' collection methods: new bags for the paper collection are currently being trialled;

Continued good recycling performance at HWRCs and local recycling (bring) sites is also a key element of the short term strategy.

In conjunction with these initiatives, Rotherham would also seek to work with local reprocessors and regional and national market development programmes (Recycling Action Yorkshire (RAY)[2] and the national Waste and Resources Action Programme (WRAP)) to find local markets for materials. Thereby helping to ensure that long term increases in recycling are sustainable, helping to reduce transport impacts and helping to safeguard local employment in this sector, in line with the Regional Waste Strategy. The council itself will aim to move towards 'green procurement', using its buying power to purchase recycled goods and thereby help generate a stable market for recyclables.

Long Term Strategy 2006 to 2020

Increased Recycling Performance

Though there are no statutory targets for increasing household recycling beyond 2006, Rotherham will aim to increase recycling after this year, consistent with Waste Strategy 2000 and Objective 2 of the Regional Waste Strategy and in the knowledge that this will benefit the authority's work in diverting biodegradable municipal waste from landfill. Following a public consultation exercise aspirational targets have been set to:

- Recycle (or compost) at least 23% of household waste by 2006/7;[3]
- Recycle (or compost) 33% of household waste by 2009/10 (in line with Waste Strategy 2000 targets for 2010);
- Recycle (or compost) 35% of household waste by 2012/13 (achieving Waste Strategy 2000 targets early - in 2013 rather than 2015);

2 It is understood that it is the intention of RAY to actively seek out participation of local authorities in phase 2 of their market development programme.

3 As set out on the Rotherham MBC Performance Indicator Monitoring Sheet 2003/4

- Recycle 45% of household waste by 2015/16 (exceeding Waste Strategy 2000 targets);

These changes will be achieved by improvements in participation in schemes and the capture of materials by ongoing communications work. Achievement of the 45% recycling target by 2015/16 will also require the introduction of a kerbside collection of kitchen waste.

Residual Waste Treatment

The key objective for this period is to meet the requirements for the diversion of biodegradable municipal waste from landfill. It will not be possible to achieve the 2012/13 and 2019/20 targets through increases in source-segregated recycling alone. Rotherham has therefore investigated a range of alternative treatment options for residual waste which have included;

- Mechanical biological treatment
- Anaerobic digestion
- Gasification and pyrolysis
- Incineration

Appendix 6 includes further details on the options appraisal process. The preferred option for Rotherham at this stage, based on the BPEO options appraisal and consultation process is to develop a Mechanical Biological Treatment plant for residual waste but not to rule out the development of other technologies.

All the options considered within the BPEO assessment assume the development of new treatment facilities to enable all treatment options to be assessed on a similar basis. However the availability of sufficient incineration (with energy recovery) capacity at an existing local facility could allow;

- the 2009/10 Landfill Directive targets to be achieved without the need for a new facility to be operational until 2012/13;
- additional time for the procurement process for a new facility, which would in turn allow additional time for MBT technologies to develop and become a more proven technology for municipal solid waste in the UK;
- a reduction in the scale of facility required in the future and thus potentially present cost savings.

Conclusion

Rotherham is facing a major challenge in terms of waste management: to reduce the amount of waste produced, to increase recycling from 15% in 2003/4 up to 21% by 2005/6 and then to shift the emphasis to diversion of biodegradable municipal waste from landfill in the medium and long term. These changes will require support from all quarters: members of the public, elected members, officers and the private sector.

A timetable for the implementation of the required changes to collection and treatment infrastructure is as follows;

Timetable for Implementation

	Key Actions	2005	2006	2007	2008	2009	2010	2011	2012
Strategy Document	Agree Strategy Document	®							
	Review & Monitor Progress Against Targets	**Ongoing**							
	Review Strategy Document			®					
Waste Minimisation	Implement Waste Minimisation Programme								
	Monitor Performance of Waste Minimisation Initiatives	**Ongoing**							
Collection	Increase participation & capture in kerbside schemes	**Ongoing**							
	Improve performance at HWRC	**Ongoing**							
	Expansion of the green bin collection scheme								
	Introduction of alternate weekly collection systems								
	Plan for introduction of kitchen waste collections								
Processing Capacity Recyclables/Compost	Plan for Increased bulking capacity								
	Plan for Increased windrow Composting Capacity								
	New Capacity Available		®			®			
Residual Treatment capacity	Plan for In-vessel treatment capacity								
	Explore possibility of existing incineration capacity								
	(A) Procurement process for new MBT capacity if no local capacity available								
	(B) Procurement process for MBT capacity if local treatment capacity is available								
	New Capacity Operational				**A®**				**B®**
® Indicates Key Milestones									

PART 2: POLICIES AND PLANS

1. Introduction

The Waste Management Strategy Document

This report forms the main Municipal Waste Management Strategy (Waste Strategy) for Rotherham Metropolitan Borough Council. It sets out the data and information required, under DETR Guidance[4], and presents the recommended strategy for achieving 2005/6 statutory performance standards for recycling and composting and the long term options for achieving the ongoing diversion of biodegradable waste from landfill required by the EU Landfill Directive and the resultant Landfill Allowance Trading Scheme.

Why do we need a waste management strategy?

Key changes are required to the way that waste is managed in Rotherham over the next 20 years. This is in response to a number of policy and regulatory changes at both a national and European level that require waste to be handled in a more sustainable manner. These changes require local authorities to play a wider role in the management of waste than just the collection and disposal of waste. The key drivers are:

- The introduction of statutory performance standards for the recycling and composting of household waste; and
- European and national legislation that require the amount of waste disposed to landfill to be significantly reduced and alternative disposal routes developed.

Responses to legislative change must be carried out in conjunction with steps to reduce the amount of waste that we produce. The development of a Municipal Waste Management Strategy for Rotherham provides a framework in which new collection and disposal infrastructure can be developed.

There is yet no statutory requirement to provide a municipal waste management strategy for single tier authorities[5], though there are statutory requirements to provide a Recycling Plan. This document provides such a plan.

Local plans and policies that have been considered in the development of the Waste Management Strategy include:

- Rotherham's Best Value Review;
- Rotherham's Best Value Performance Plan 2003-04;
- Rotherham's Environmental Action Strategy;
- Rotherham's Community Strategy 2002 – 2007;
- Rotherham's Unitary Development Plan;

4 DETR (2001) Guidance on Municipal Waste Management Strategies

5 The Waste and Emissions Trading Act 2003 introduced a statutory requirement for two tier authorities to produce a waste management strategy, with exemptions where councils achieve high performance

- Rotherham's Corporate Plan 2003 – 2006; and
- 'Give Waste Another Chance' A Recycling Plan for Rotherham 2003-2008.

Key issues addressed in the Strategy

This Strategy document sets out the key policy objectives and regulatory targets for waste collection, recycling and disposal in Rotherham and outlines the key stages for implementing these changes. Four main sections are included, consistent with the guidance issued by the former Department of Environment, Transport and the Regions (DETR)[6].

- Part 1 presents a summary of key policies, targets and achievements;
- Part 2 is the core of the Strategy and includes:
  - Details of the Strategy development process;
  - Current waste management arrangements;
  - National policies and targets;
  - Local policies and objectives;
  - Plans for achieving targets in the short term – including proposed changes to the waste collection and disposal infrastructure;
  - The medium and long term strategy for achieving the Landfill Directive requirements (informed by the BPEO and consultation process)
  - Plans for non-household municipal waste and priority waste stream management
  - A strategy implementation plan and details of monitoring arrangements
- Part 3 contains recycling information and incorporates the statutory requirements for a recycling plan; and
- Part 4 includes a strategic plan for meeting the Landfill Directive requirements.

Supporting information is provided in appendices, specific references to certain appendices are provided throughout the document. The results of the BPEO and consultation exercise are discussed in the main text and further details presented in Appendices.

Scope

The strategy addresses all the wastes collected by Rotherham MBC that come under the heading of 'municipal waste' which includes 'household' waste plus some other wastes collected by or on behalf of Rotherham (e.g. parks waste, fly-tipped materials). The Yorkshire and Humber Assembly[7] currently takes responsibility for the 'wider' wastes strategy for, for example, materials collected from industrial and commercial premises, though there may be opportunities for Rotherham to link into this work.

6 DETR (2001) Guidance on Municipal Waste Management Strategies
7 See Yorkshire and Humber Assembly (2003) Let's Take it from the Tip – Yorkshire and Humber Regional Waste Strategy

2. Developing a Strategy for Rotherham

How the Strategy has been developed so far

The development of this strategy has been undertaken in a number of stages:

- Establishing the remit for development of the strategy;
- Development of a Recycling Strategy 'Give Waste Another Chance' for 2003 – 2008;
- Establishment of baseline data;
- Development of the draft strategy;
- Development of final strategy

Each stage in the strategy is discussed further below.

Establishing a Remit for Development of the Strategy

A Best Value Review undertaken in 2001 judged the Waste Management Service to be fair but unlikely to improve[8].

The Review made a number of recommendations related to the Waste Management Services, including:

- Improving service to the public through increased recycling initiatives, better service delivery, a co-ordinated approach to drug litter, consultation on services and education on waste minimisation;
- Strategy Development to ensure medium and long term waste management strategies are developed to meet legislative targets for municipal waste and the transportation of clinical waste complies with the new European Directives;
- Improving Business Management through service planning, service development, tendering of services, consultation strategy development, the strengthening of relationships with contractors, developing service level agreements, setting waste targets for the Council and ensuring the development of local performance indicators.[9]

Since the review a number of improvements have been made to improve the service in light of these recommendations.

Recognising the recycling of household waste as a national and local priority, the council has set, with government, Local Public Service Agreements (LPSA) targets to dramatically increase the levels of household waste recycling to 21% by 31 March 2006, which is 3% above Rotherham's statutory performance standard.

8 Rotherham Metropolitan Borough Council (12 September 2001) Best Value Review Summary of the Waste Management Service

9 Rotherham Metropolitan Borough Council Best Value Performance Plan 2003-2004 'Aiming for Excellence – Staying on Target'

In line with recommendations from the Best Value Review a Recycling Action Plan[10] was developed. The plan sets out the current position on how waste is managed in the borough as well as how the council intends to achieve recycling rates and exceed its statutory targets in line with LPSA.

A further Best Value Review in October 2004 judged the service as 'a good service that has promising prospects for improvement'. A key issue for the waste management strategy included a desire for greater emphasis on waste reduction. This issue has been addressed in the strategy document.

Customer satisfaction surveys about the household waste recycling centres were conducted in 2004, the results of which were positive and also helped to identify the areas where actions are required to provide improvements in future.

Give Waste Another Chance

This document was compiled in June 2003 and revised annually by Rotherham Metropolitan Borough Council and sets out the recycling strategy for five years. The early part of this strategy mirrors the activities set out in the recycling plan, with some minor amendments.

Establishment of baseline data

Rotherham commissioned a number of waste composition studies in 2002 and 2003 to allow comparison with national compositional data and more accurately predict the performance of proposed recycling schemes/systems.

Development of the Draft strategy and Initial Options Appraisal

A draft waste strategy was developed by Enviros in conjunction with the waste management team at Rotherham. It built on Give Waste Another Chance, and set out short term plans for meeting statutory recycling targets in 2006 and presented a number of medium and long term options for the treatment of residual waste in order to ensure compliance with the Landfill Directive.

These initial options were drawn from current Government recommendations and built on work undertaken in the options assessment for Barnsley, Doncaster and Rotherham in 1999.

The six options initially considered are as follows;

- Option 1: High recycling & kitchen waste collection, to achieve 21% by 2005/6, 33% by 2009/10, 35% by 2012/13 and 45% by 2019/20. The 45% target corresponding to the aspirational target, for the UK for 2015, in Waste Not Want Not[11] ;
- Option 2: Proposed Strategy recycling levels (to achieve 21% recycling in 2005/6, 30% in 2009/10, 33% in 2012/13 and 35% in 2019/20), with residual waste being sent to a mechanical biological treatment plant;

10 Give Waste Another Chance' A Recycling Plan for Rotherham 2003-2008
11 Strategy Unit (2002) Waste Not Want Not - A strategy for tackling the waste problem in England

- Option 3: As above, with residual waste sent to anaerobic digestion;
- Option 4: As above, with residual waste sent to incineration;
- Option 5: As above, with residual waste sent to gasification and pyrolysis; and
- Option 6: Hybrid (i.e. a combination) of Options 1 and 5: high recycling with kitchen waste collection and residual waste sent to incineration. The incinerator is sized so that the option will just meet landfill directive targets by 2020.

Development of the Final Strategy

This final strategy document has been informed by the public consultation and BPEO assessment process undertaken during September to December 2004. This enabled options for further assessment to be defined and subjected to a BPEO options assessment.

Householders were asked if Rotherham should aim for more ambitious recycling rates, of the 11,500 respondents, 88% were in favour of higher recycling rates of 45%.

In the light of this response the options selected for further analysis in the BPEO assessment were based on achieving high recycling rates as set out in Option 6 above. The refined options that were taken forward to the BPEO assessment are summarised as follows;

- Option 1: High recycling & kitchen waste collection to achieve 21% by 2005/6, 33% by 2009/10, 35% by 2012/13 and 45% by 2019/20; with residual waste sent to mechanical biological treatment
- Option 2: As above, with residual waste sent to anaerobic digestion
- Option 3: As above, with residual waste sent to gasification and pyrolysis
- Option 4: As above, with residual waste sent to incineration; and
- Option 5: As above, with enough residual waste sent to incineration to meet Landfill Directive targets in 2020

Further details on the waste management scenarios and modelling assumptions are provided in the BPEO assessment (Appendix 6) and the preferred option is discussed in Section 6. The final waste strategy included in this document combines the results of the consultation process and the BPEO assessment in presenting a preferred waste option for Rotherham.

3. Evaluation of Current Arrangements

Summary

In the financial year 2003/4, the Metropolitan Borough of Rotherham generated a total of 133,000 tonnes of municipal waste. 89% of this waste can be classified as 'household', whilst the remaining 11% was generated from commercial premises ('trade' waste) and other activities such as street sweeping ('other non-household' waste). Table 2 shows how the quantities of municipal waste have changed over the past 5 years with Figure 4 showing the breakdown of municipal waste in 2003/4.

Table 2 Trends in Waste Generation

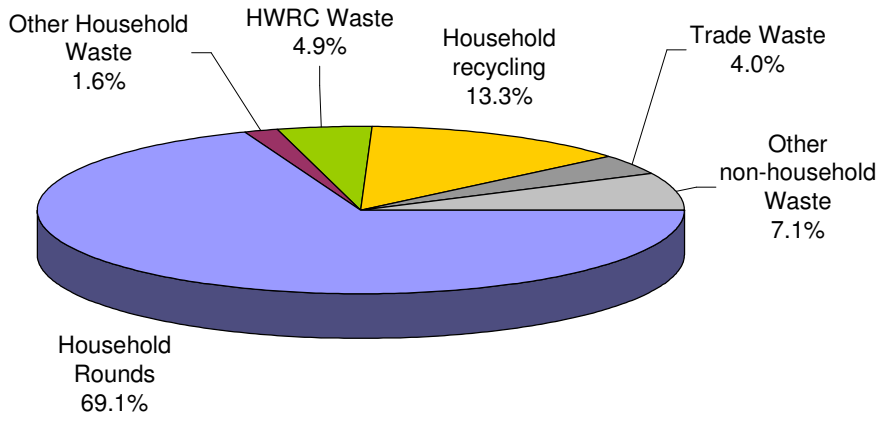
	Waste Type	1999/00	2000/1	2001/2	2002/3	2003/4
HOUSEHOLD WASTE	Household Rounds	85,700	87,600	89,700	93,300	92,100
	Street Sweeping	1,700	2,000	2,600	200	0
	Gully Cleansing	400	700	400	0	0
	Household Waste Recycling Centres (HWRC)	34,700	38,000	31,900	16,200	6,600
	Community Skips	900	1,100	300	1,000	1,900
	Special Waste	200	0	0	0	0
	Clinical Waste (hhld)	200	200	200	200	200
	HWRC Recycling	1,500	1,900	2,100	5,600	11,000
	Bring Recycling	800	1,000	1,300	1,500	1,200
	Paper Kerbside	2,600	2,800	2,500	2,600	4,100
	Green Waste Kerbside	0	0	0	0	300
	Blue Box	0	0	0	0	1,200
	TOTAL HOUSEHOLD	**128,600**	**135,200**	**131,100**	**120,700**	**118,600**
NON-HOUSEHOLD WASTE	Trade	5,200	5,400	5,200	5,100	5,300
	Commercial Clinical	100	100	100	100	100
	Inert Waste (collected at HWRC)	11,700	12,500	13,300	5,300	6,700
	Fly-Tipped Waste	0	0	0	600	700
	Gully Waste	0	0	0	400	400
	Mechanical Sweeping Waste	0	0	0	1,700	1,600
	TOTAL NON-HOUSEHOLD	**17,000**	**18,100**	**18,700**	**13,100**	**14,800**
TOTAL MSW		**145,600**	**153,300**	**149,700**	**133,800**	**133,300**
Households			106,442	106,846	107,901	108,602
Household waste per household			1.27	1.23	1.12	1.09

(1) Inert waste included in non-household throughout for consistency (though change in definition occurred after 2001)

(2) Figures rounded to the nearest 100 tonnes

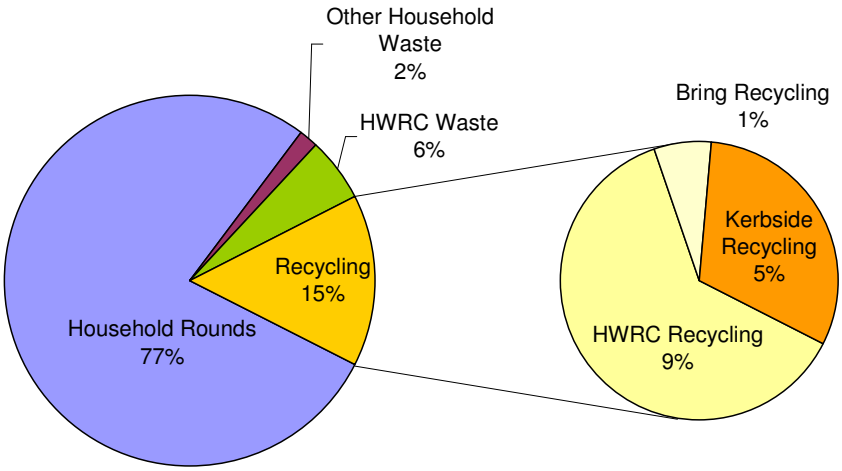
Estimates are made for the split of household/non-household refuse

Figure 4 Municipal Waste Arising in 2003/4



Of the household waste arising within Rotherham, some 15% was recycled in 2003/4, the remaining material being sent to landfill. Figure 5 shows a breakdown of the household waste generated in 2003/4,

Figure 5 Household Waste Management in 2003/4

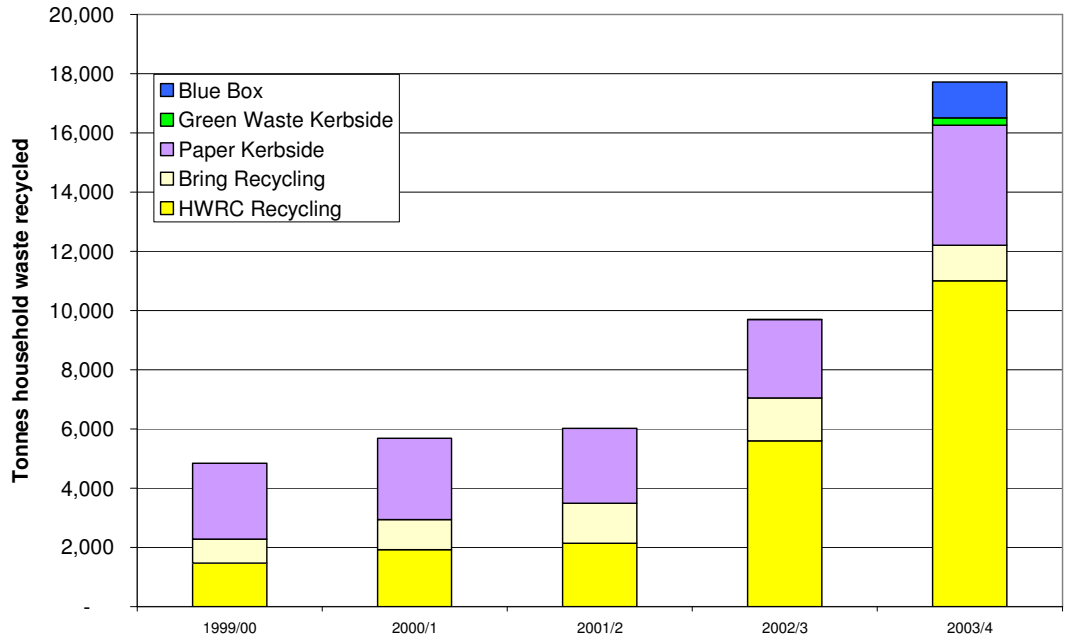


Detailed Evaluation of Current Arrangements

2003/4 Performance

In 2003/4, Rotherham achieved a step-change in household waste recycling, almost doubling the percentage of household waste recycled from 8% in the previous year to nearly 15% in 2003/4 (Figure 6 presents a breakdown). This presents a major achievement, brought about through a dramatic increase in recycling performance at HWRCs, improved performance of the kerbside paper collection and introduction of a blue box (dry recyclables)and Saturday green waste collection.

Figure 6 Breakdown of waste recycled in Rotherham



Refuse Collection

The weekly refuse collection from households is predominantly undertaken using a 240 litre wheeled bin in Rotherham. Some households such as flats have shared bin facilities, whilst a small number of rural properties retain collections via black sacks. Waste from smaller businesses is collected during the household waste collection rounds, an estimate is made of the proportion of household and trade waste in the collection and the estimated quantity of trade waste has been removed from the total collected waste figure, to give an estimate of collected household refuse.

Between 1999 and 2002, collected household refuse increased steadily by 2,000 – 3,000 tonnes per year, reflecting an increase in waste generated, an increase in households generating waste and also potentially reflecting the shift from a black sack collection to a wheeled bin collection. Last year, collected household refuse dropped by 1,100 tonnes, even though all collected household waste increased by 1,500 tonnes. This reflects a shift towards householders segregating more materials for recycling through the blue bag, blue box, green waste and bring collections (4,100 tonnes in 2002/3, compared with 6,700 tonnes in 2003/4).

The refuse collection is undertaken by Rotherham's Direct Service Organisation (DSO), who have a contract for this collection up to 2008.

Bulky Waste Collection

Rotherham provide a bulky waste collection (for furniture, household appliances etc.) on demand from the householders at a small charge[12].

12 £8 for three items (as at June 2004)

Collections for Recycling and Composting

Blue Bag Paper Collection

Rotherham operates an alternate week kerbside collection of paper to 96% of the authority's households. Materials collected in the bag include newspapers and magazines, catalogues, junk mail, office stationery and other types of white paper. The collection excludes dyed paper (e.g. yellow pages) and envelopes. Between 1999 and 2002, the collection consistently brought in approximately 2,500 tonnes of paper for recycling. In 2003/4 this figure increased significantly to 4,000 tonnes.

The blue bag collection is run by Abitibi Consolidated Paper on a rolling agreement basis, which is due for review in March 2005.

Blue Box (Dry Recyclables)

In September 2003, Rotherham started an alternate week 55 litre blue box collection (on the same day as the blue bag collection) for mixed recyclables (glass, cans, textiles). This served a total of 50,000 houses in 2003/04. Recyclables placed in blue boxes are segregated into the vehicles as these travel around the borough. In the seven months that the collection ran in 2003/4, a total of 1,200 tonnes of waste was collected. The collection is provided by the authority's DSO and the collection contract will expire in 2008.

The materials from the blue box collection are collected by the DSO, sorted at the kerbside and then taken to a bulking station, operated by Creation Recycling Ltd (a community enterprise) for further processing.

Green Waste

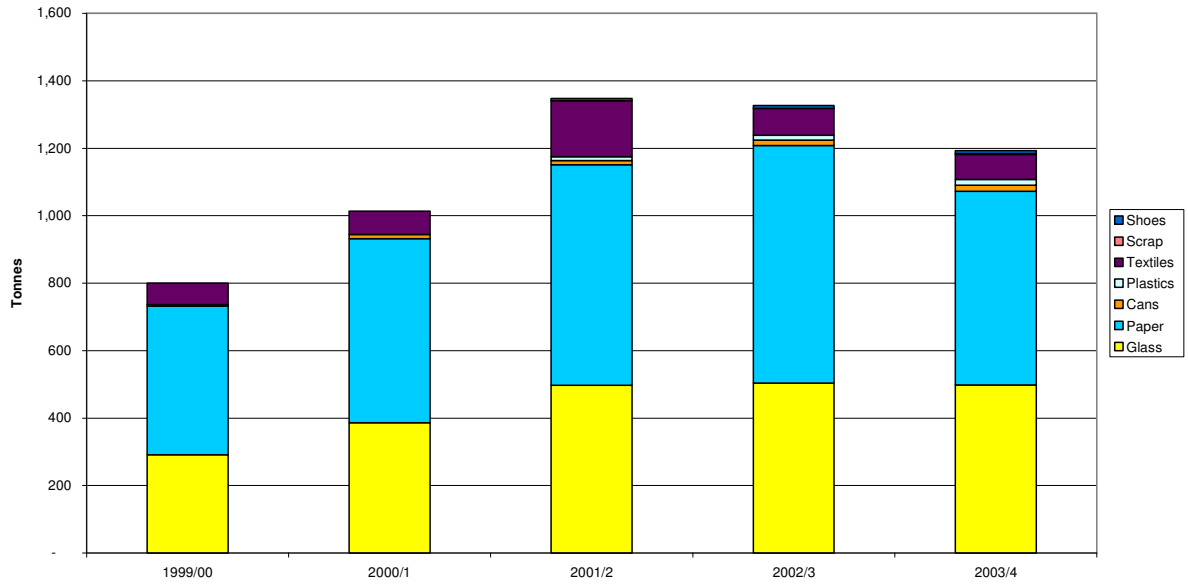
Rotherham operates a Saturday morning green waste collection, provided to 3,000 households, to collect garden waste for composting between April and the end of the growing season. In 2003/04, the collection received some 300 tonnes of material which was sent to an on-farm composting site for processing.

A trial green waste collection from 12,000 households was introduced in 2004, funded with the help of DEFRA and run in Partnership with the neighbouring boroughs of Doncaster and Barnsley. The collection trial uses locally produced green wheeled bins and accepts garden waste and thin cardboard. Figures to date for 2004/05 show a performance of 3006 tonnes.

Bring Banks (Local Community Sites)

Rotherham also provides a range of local community recycling sites (bring banks) for householders to deposit recyclables. In 2003/4, 1,200 tonnes of recyclables were collected in this way, including paper, glass, cans, plastics and textiles. Figure 7 shows how the bring site collection peaked at 2001/2 and has declined in 2002/3 and 2003/4, potentially as a result of increasing tonnages collected by the blue bag and latterly the blue box collection.

Figure 7 Bring site collection



Note: excludes fridges

Materials from these banks are picked up by a range of materials merchants and reprocessors:

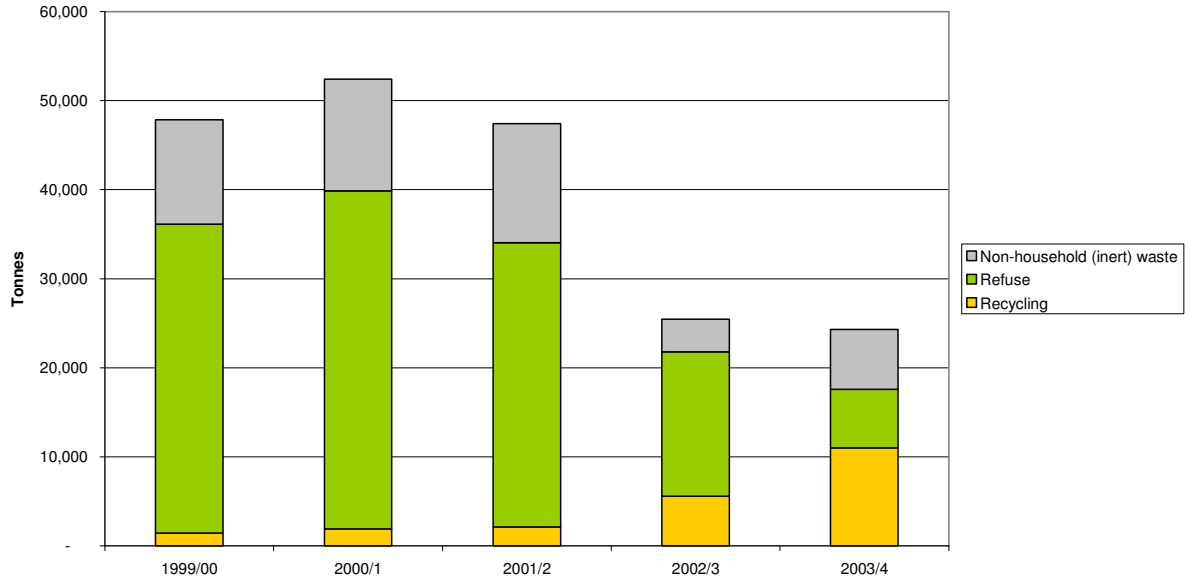
- Glass is collected by Glass Recycling UK;
- Cans are collected by Alcan;
- Paper is collected by Abitibi Consolidated Paper;
- Textiles are collected by CJ textiles of Wakefield, the Salvation Army and a number of other charities;
- Plastics are collected by Reclaim at Sheffield; and
- Shoes are collected by the European Shoe foundation.

Household Waste Recycling Centres (HWRCs)

Rotherham operates four HWRCs at Car Hill (Greasbrough), Lidget Lane (Bramley), Warren Vale (Rawmarsh) and Magilla/Common Lane (North Anston). These sites provide major recycling points and also provide facilities to dispose of bulky domestic waste.

Figure 8 shows how the total quantity of household waste collected at HWRCs decreased dramatically in 2002/3, following the introduction of barriers and a permit system at the sites in September 2001. The graph also shows how the balance between recyclables and refuse collected at the sites has changed significantly in recent years, to a point where household recycling (excluding rubble) constitutes 63% of total household input, compared with 25% in 2002/3. These changes reflect the improvements made to the infrastructure at all sites, including one way systems for cars at all sites, complete refurbishment of one site, improved recycling containers and variable message signage (funded by Defra).

Figure 8 Breakdown of all waste collected at HWRCs



The HWRCs are managed by South Herts Waste Management Ltd as part of a combined management contract with the sites in Barnsley and Doncaster. This contract, which runs to 2008, includes an incentive to segregate materials for recycling (to achieve above 45% recycling including rubble) and this has contributed to the performance at the HWRCs.

Facilities for recycling and composting

Bulking Station

Rotherham utilises Creation Recycling Ltd's bulking station to receive kerbside segregated recyclables from the blue box collection. The materials are bulked here and sent on to merchants and reprocessors. Creation Recycling is a not-for-profit company operated in partnership with the council and funded through Single Regeneration Budget (SRB) and Cred sources for a total of two years. After this period, the plan is for the operation to be self sustaining.

Composting Sites

Rotherham currently uses an on-farm composting operation to accept green waste from HWRCs and material from the Saturday green waste collection.

Other collections of household and non-household waste

Trade waste (non-household)

Trade waste collections for small businesses are provided, on the whole, as a part of the domestic refuse collection. Over the past five years the quantity of wastes collected from businesses has remained relatively static at around 5,000 tonnes.

Other collections

Other wastes collected by the authority include:

- Street sweepings, most of which are classified as household waste, but materials collected through mechanical sweepers and during gully cleansing is included in the non-household category;
- Fly tipped waste collections, where the council collects waste dumped within Rotherham, this material is considered to be non-household waste;
- Clinical waste, some of this waste is collected from household sources, and an estimate of the breakdown of household and non-household clinical waste is made by the authority; and
- Special waste, Rotherham collects a small quantity of hazardous waste from household sources.

Waste Disposal

All non-recycled household waste collected by Rotherham is sent to local landfill facilities. In 2003/04 some 109,000 tonnes of refuse was sent to landfill.

WRG holds the contract for waste disposal, with a contract end date of 2008.

4. National Policies and Targets

The development of this Strategy is influenced by a number of key national policies as well as local priorities and objectives. The key national policies shaping waste management in Rotherham are summarised below.

Waste Strategy 2000

Waste Strategy 2000 emphasises the need to manage waste in a more sustainable manner. It sets a number of targets and national goals for improvements in waste management within England and Wales, the key goals are:

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

These targets are aspirational.

Statutory recycling and composting standards

To ensure that local authorities contribute to achieving the national targets set out in *Waste Strategy 2000*, statutory performance standards were introduced through the Best Value framework. Performance standards were set for 2003/04 and 2005/06. The standards for Rotherham were to recycle/compost;

- 10% of household waste in 2003/04 (Rotherham achieved 15%), and
- 18% in 2005/06.

It is likely that the Government will set higher standards beyond 2005/06 in order to meet the national recycling target of 33% of household waste by 2015 and national recovery target of 67% of municipal waste.

Rotherham has also agreed 'stretch' LPSA targets to recycle 13% of household waste in 2003/4, 18% in 2004/5 and 21% by 2005/6.

Implications of Targets for Rotherham

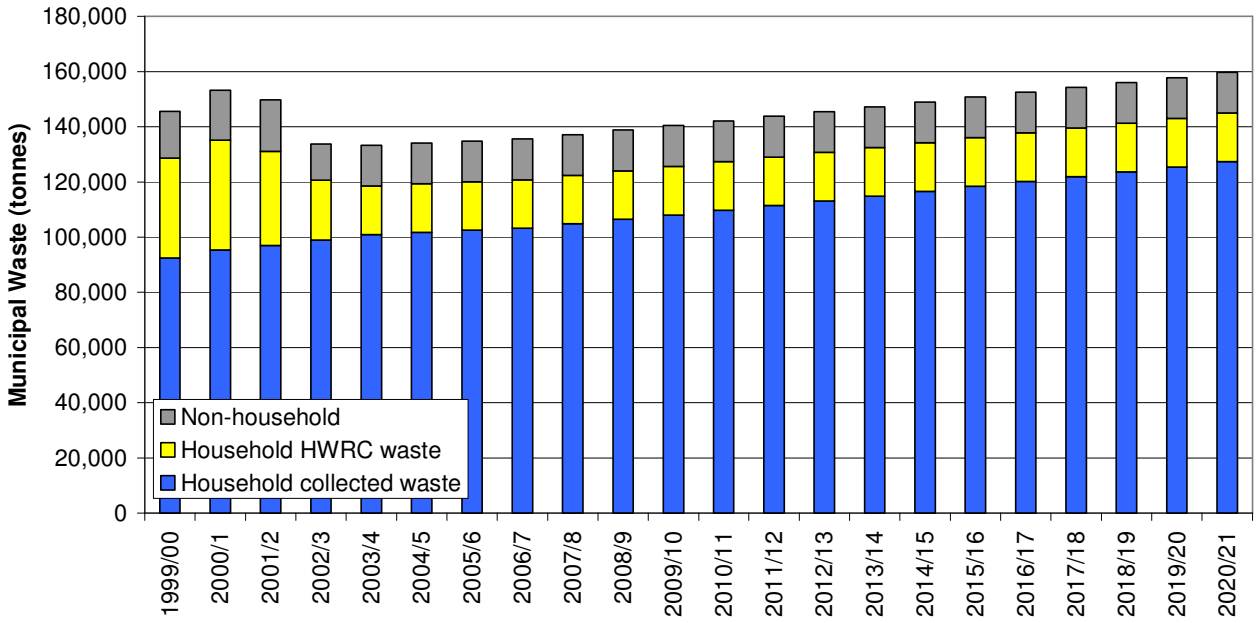
The implication of these targets for Rotherham in tonnage terms will depend on future changes in household waste arisings. Appendix 2 sets out the forecasting options considered for Rotherham's municipal waste. These forecasts include the current national rate of increase, the regional increase, a growth rate based on projections of future household numbers and growth rates based on changes in household numbers and a change in waste per household. The growth rate selected combines a number of these approaches and is based on:

- no change in waste received by HWRCs: trends for the last two years after barriers and permits were introduced show that total input (recycling plus refuse) is relatively static at an average of 25,800 tonnes;

- an increase in collected household waste (household waste excluding waste from the HWRCs) based on projections of total households in the borough, and a change in waste per household reflecting the past four years' data with the impact of HWRCs arisings stripped out (1.27%); and
- no change in non-household waste arisings (trade waste and other non-household arisings).

The waste growth rate used as the basis of the waste strategy development is shown graphically in Figure 9.

Figure 9 Forecasts of waste arisings used in the waste strategy



Using this waste forecast, the recycling and composting targets can be translated into tonnages, as shown in Table 3, and the implications understood for the purposes of developing a waste strategy.

Table 3 Strategy Targets

Targets	2005/6	2009/10	2015/16
MSW Arisings	134,800	140,400	150,800
Household Arisings	120,100	125,700	136,000
BVPI household recycling target (%)	**18%**	**18%**	**18%**
target (tonnes)	21,600	22,600	24,500
LPSA target (%)	**21%**	**21%**	**21%**
LPSA target (tonnes)	25,200	26,400	28,600
MSW recovery target (%)	**40%**	**45%**	**67%**
target (tonnes)	53,900	63,200	101,000

Waste Not, Want Not

"Waste not, Want not: A strategy for tackling the waste problem in England" published in 2002, highlights the need for more sustainable waste management with a focus on local authorities reducing waste growth and recycling more.

Waste not, Want not looks at barriers to more sustainable waste management and a suggested strategy for moving forward. The need for a reform in the economic & regulatory framework is recognised with greater focus on encouraging local authorities to look at waste management options higher up the waste management hierarchy such as waste minimisation, reuse and recycling. At the same time the report highlights the need for authorities to reduce quantities of waste sent to landfill and make the most of a wide range of alternative technologies for dealing with residual waste. It suggests a target of at least 45% recycling (or composting) of household waste by 2015.[13]

Landfill Directive Biodegradable Municipal Waste Targets

The EU Landfill Directive contains three targets aimed at reducing the amount of biodegradable municipal waste (BMW) disposed of to landfill. The Landfill Directive will significantly change the way in which biodegradable municipal waste is managed. The national targets are:

- By 2010 reduce the biodegradable municipal waste disposed to landfill to 75% of that produced in 1995;
- By 2013 reduce biodegradable municipal waste disposed to landfill to 50% of that produced in 1995;
- By 2020 reduce biodegradable municipal waste disposed to landfill to 35% of that produced in 1995.

The Government has set allowances through the Waste and Emissions Trading Act for each Waste Disposal Authority (WDA), including Rotherham, to ensure that the UK will meet the Landfill Directive Targets. The Landfill Allowance Trading Scheme (LATS) will come into effect from 1st April 2005 and the government has given English WDAs allowances for the period up to 2020, to allow for long term planning. The method for allocating these targets is based on:

- Total waste arisings and amounts sent for disposal, recycling, composting or recovery in the 2001/02 Municipal Waste Management Survey and will require a drop in the BMW landfilled from 2005/06;
- The initial years allowances will be based on a "back end loaded trajectory" i.e. diversion of 10%, 15%, 20%, 25% and then 30% up to the first landfill directive target year. This means that in 2006/07 the WDA's allocation is 10% of the difference between the 2005/06 target and the 2009/10 target. The 2007/08 allocation is then 15% of the difference and so on; and

13 "Waste not, Want not: A strategy for tackling the waste problem in England" Prime Minister's Strategy Unit 2002

- Authority's landfill rates will be calculated using a mass-balance approach and initial allocations made from the resulting calculation. The approach assumes that 68% of municipal solid waste is biodegradable.

The final allowance allocation provided by DEFRA in February 2005 is set out in Table 4.

Table 4 Provisional allocation of Landfill Allowances for Rotherham (quantity of biodegradable municipal waste permitted to be sent to landfill)

	BMW permitted to landfill
2005/6	93,990
2006/7	87,998
2007/8	80,008
2008/9	70,021
2009/10	58,036
2010/11	51,576
2011/12	45,116
2012/13	38,656
2013/14	36,998
2014/15	35,340
2015/16	33,682
2016/17	32,024
2017/18	30,365
2018/19	28,707
2019/20	27,049

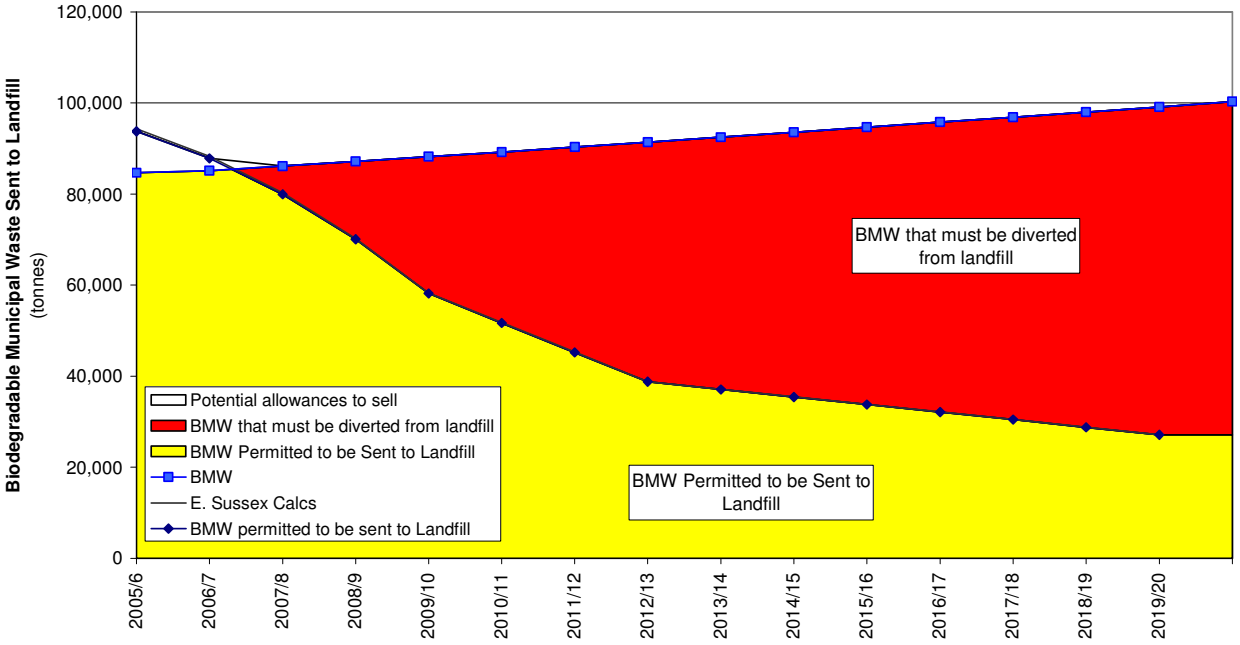
Based on the waste arisings projections in Figure 9 (and summarised in Appendix 1), an estimate of the waste diversion required in Rotherham to meet the Landfill Directive targets can be made. The impact is summarised in Table 5 and represented graphically in Figure 10.

Table 5 Estimate of the amount of Biodegradable Municipal Waste that must be diverted from landfill in Rotherham

	2005/06	2009/10	2012/13	2019/20
MSW Projected	134,800	140,400	145,500	157,800
BMW Estimated	84,700	88,200	91,400	99,100
Allowable	93,990	58,036	38,656	27,049
Diversion Required	(9,300)	30,200	52,700	72,100

In 2005/06 it is forecasted that Rotherham will not require additional diversion of BMW, however by 2019/20 it will be necessary to divert approximately 72,100 tonnes of BMW from landfill.

Figure 10 Graphical representation of the impacts of landfill allowances on the quantities of biodegradable municipal waste that can be sent to landfill and the diversion required



Tradable Allowances

The Landfill Allowance Trading Scheme (LATS) sets out a system whereby authorities that perform well by diverting more biodegradable waste from landfill than set out in their allowance, can trade allowances with authorities that miss their targets. WDAs will also be able to bank a limited amount of unused allowances to a future year with the exception of set target years, 2009/10, 2012/13, and 2019/20. This trading system is established by regulations made under the Waste and Emissions Trading Act and it up to the local authority whether to use a broker or not. It is likely that prices will be based on market forces and are not likely to be standard across the country.

LATS Penalties

Government intends to impose financial penalties on authorities who exceed their allowance (after trading). Penalties include:

- **per tonne** – government have indicated that local authorities who exceed their landfill allowances will be fined £150 for every tonne above their allowance level.
- **proportion of the total EU fine** for exceeding allowances in Landfill Directive target years (2009/10, 2012/13, and 2019/20). Government have reserved the right to pass on any European fine imposed on the UK, by the European Court of Justice for missing the Landfill Directive targets, to the local authorities who have exceeded allowable levels. This could amount to a share in a fine as high £0.5 million per day until the national target is met.[14]

14 Landfill Allowance Trading Scheme Consultation Outcome, Defra, April 2004

Cost of Landfill

Landfill Tax

The landfill tax came into effect on 1st October 1996. It is a specifically targeted levy on the disposal of waste to landfill, introduced by the government to prompt change in UK waste management. The main aims of the tax are:

- to ensure that the cost of landfill properly reflects its environmental impact; and
- to help ensure that UK national targets for more sustainable waste management are achieved.

There are two rates of landfill tax:

- a lower rate of £2/tonne for specified inactive or inert wastes. These are wastes which do not give off methane or other gases after disposal and that do not have the potential to pollute groundwater; and
- a standard rate of £15/tonne is currently applied to all other wastes. In the 2003 budget, the Chancellor announced that from 2005, landfill tax will rise by £3 per tonne per year up to a value of £35 per tonne.

This will have a major impact on Rotherham by significantly increasing the cost of landfill and making alternative disposal options comparatively more cost-effective.

Landfill Directive

In addition to the BMW diversion targets, the introduction of the Landfill Directive and the technical requirements within this Directive will mean that standards at landfills will need to be tightened. This is also likely to increase the cost of waste disposal to landfill in the near future if contracts for landfill are re-tendered and thereby gate fees for landfill have the potential to be altered.

Planning Policy Guidance Note 10: Planning and Waste Management (1999)

This guidance note [15] set out the Government's policies on planning with respect to waste management. It provides advice about how the land-use planning system should contribute to sustainable waste management through the provision of the required waste management facilities in England and how this provision is regulated under the statutory planning and waste management systems. PPG10 must be taken into account by local planning authorities as they prepare development plans and may be material to decisions on individual planning applications.

Amongst other requirements, PPG10 states that in making decisions on waste management facilities, Waste Planning Authorities will need information on projected waste arisings, recycling and recovery levels and extent of existing facilities. The information is expected to come from Environment Agency surveys, local authorities and the Regional Technical Advisory Body (RTAB). They will need to consider the environmental implications of all waste management proposals and be guided by the

15 DETR (1999) Planning Policy Guidance Note 10: Planning and Waste Management

national waste strategy and the need to maximise, so far as is practicable, regional self-sufficiency.

Other considerations Waste Planning Authorities must take into account are that:

- A lack of adequate waste management facilities in their area does not lead to waste being transported long distances to management facilities in other areas, contrary to the proximity principle or the desirability of regional self-sufficiency;
- A balance must be struck between other land-use policies and objectives with the need to provide an adequate network of waste processing and disposal facilities; and
- Adequate allowance is made for waste that may be brought into the WPA's area, in assessing the need for future requirements.

The long awaited replacement to PPG 10 (PPS10) was published in December 2004 in draft form by the Office of the Deputy Prime Minister and following a consultation process (due to end in June 2005) will replace the PPG Note 10. It reinforces the need for Regional Waste Strategies to be prepared and stresses the importance of regional planning bodies working closely with local waste authorities to achieve a consistent approach to policy development.

Guidance on Development of Municipal Waste Management Strategies

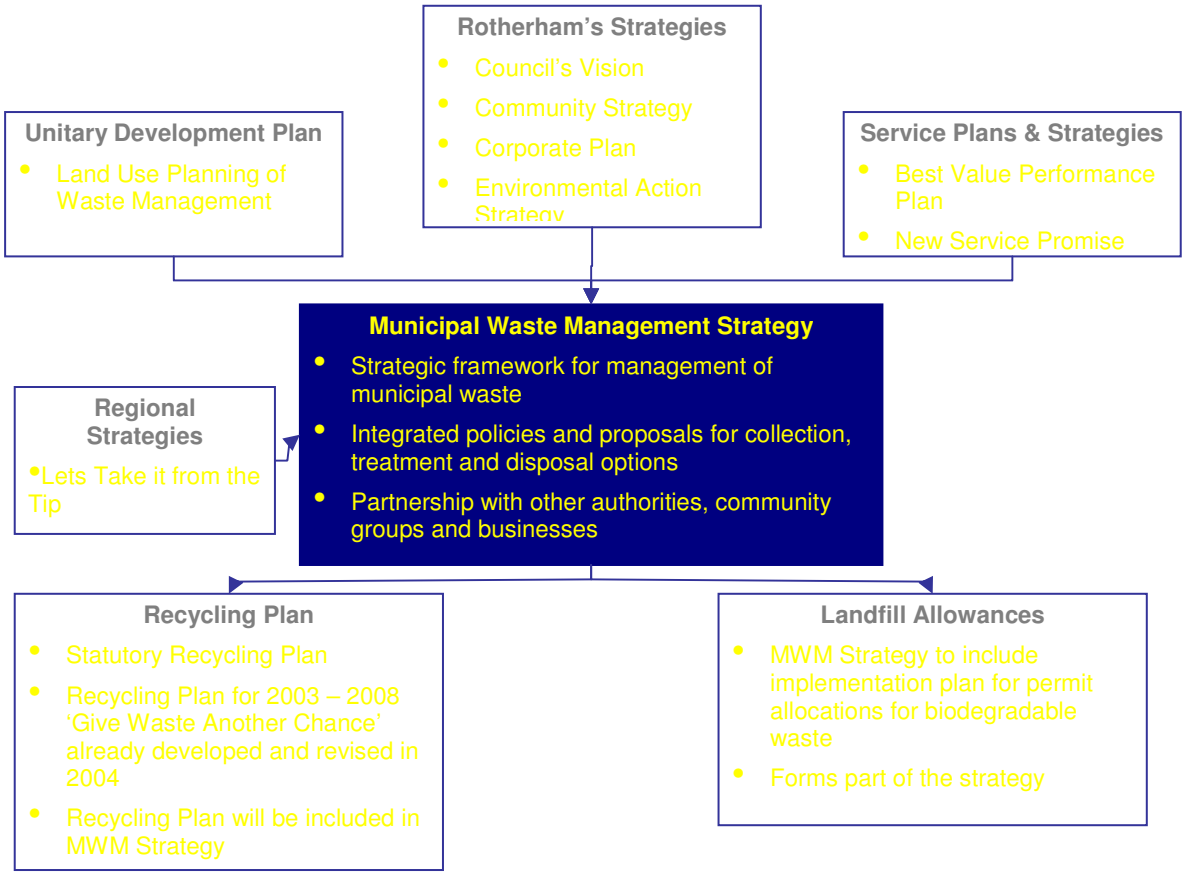
This guidance sets out how local authorities should develop Municipal Waste Management Strategies and elements that should be included within these documents. This document has been prepared according to the current guidance on Municipal Waste Management Strategies[16]. However, a consultation paper on draft guidance on municipal waste management strategies was published in December 2004. Future reviews of the waste strategy should take any new guidance documents into consideration.

16 Guidance on Municipal Waste Management Strategies, DETR 2001

5. Local Policies and Objectives

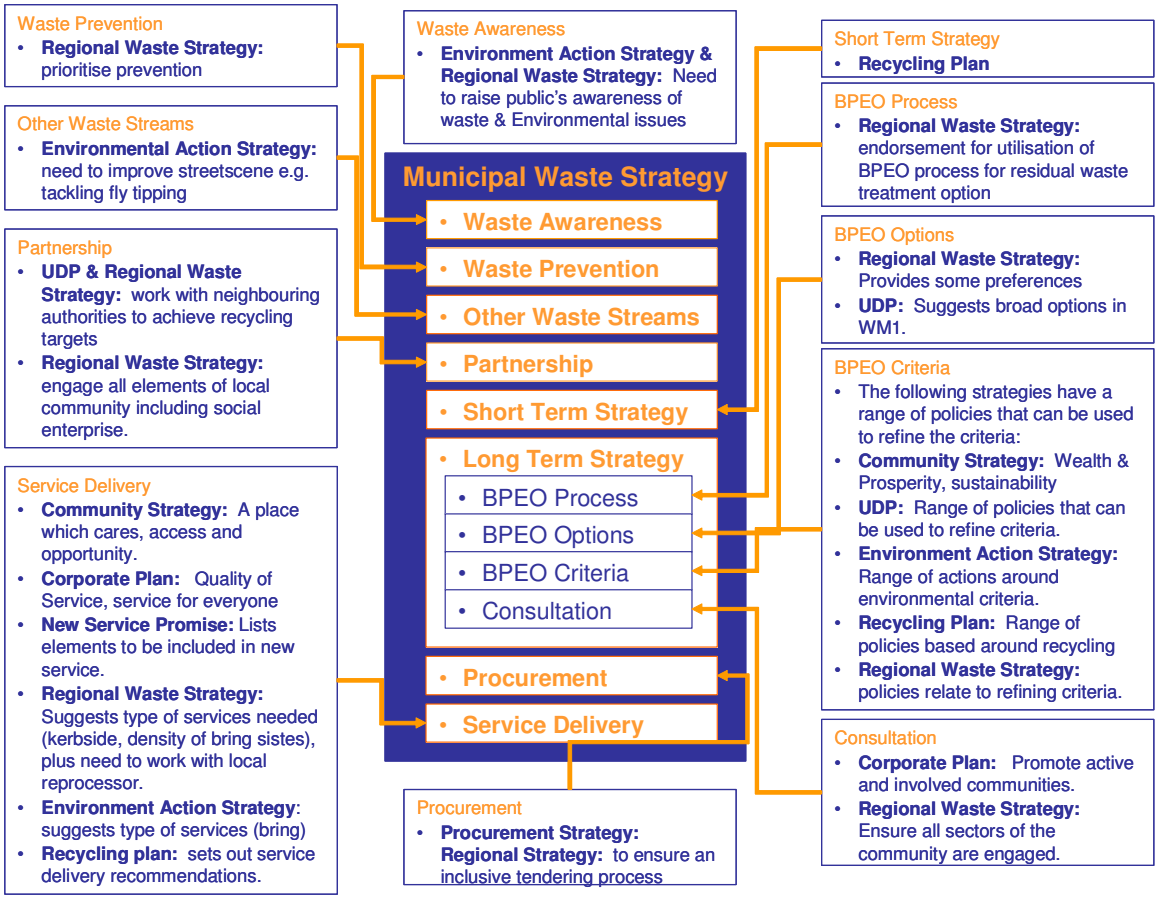
The Waste Strategy relates closely to Rotherham's other plans and strategies and to Regional plans and strategies. Figure 11 shows this diagrammatically.

Figure 11 Linkages between the strategy and other strategies and plans relevant to Rotherham (after DETR (2001))



Specific policies relating to the waste strategy are summarised in Appendix 4, policies relate to different parts of the strategy development and Figure 12 summarises these main linkages.

Figure 12 Linkages between particular policies and proposals and the Municipal Waste Management Strategy



Partnership as a means of achieving the targets

Rotherham plans to work in partnership as a means of achieving the targets and plans set out in Sections 3 and 4. Key partnerships are:

- Partnership between Rotherham and regional government;
- Partnership between Rotherham and the neighbouring boroughs of Barnsley, Doncaster and Sheffield – some current operations are shared between the boroughs;
- Partnership between the council and community groups, waste management companies, packaging compliance schemes, and reprocessors; and
- Partnership within the council between the waste management department and other departments such as the planning department.

6. Plans for Achieving the Targets (Proposed Solution)

The proposed strategy for Rotherham extends from 2004/5 to 2019/20, to accommodate the need to meet the last Landfill Directive target. The short term focus for the strategy will be to exceed recycling standards for 2005/6 (18% household waste recycling) to achieve 'stretch' LPSA targets of 21%. This strategy builds on the recycling plan for Rotherham 'Give Waste Another Chance' 2003-8.

The medium and long term challenge will be to divert sufficient biodegradable municipal waste from landfill to achieve Landfill Directive targets.

Waste prevention (minimisation) and awareness

Waste prevention is a key underlying principle of Rotherham's waste strategy. Through waste prevention, the council:

- can achieve its targets for recycling and diversion of biodegradable waste from landfill more easily;
- can keep costs of managing wastes down; and
- can contribute towards preserving natural resources.

While there has been an overall reduction in the volume of waste produced per household, household refuse collected in Rotherham has increased due to an increase in the number of households. The council aims to continue to decrease and slow the overall waste growth through waste reduction.

Waste reduction can be achieved through minimisation, which reduces the amount of waste by avoiding waste production in the first place, and also by reuse, which means a product is used more than once before it is discarded, thus reducing the total purchased.

It will be necessary to develop a waste prevention programme for Rotherham, in order to ensure measures are implemented effectively for the long term; and so that progress can be monitored and reviewed. The NRWF website (http://www.nrwf.org.uk/Wasteprevention.htm) contains a new toolkit for developing a waste prevention programme.

The development steps can be summarised as follows:

1. *Conduct an initial review*
   This is a baseline assessment of current waste produced and existing waste prevention programmes in place. The review also allows monitoring of the success of the programme once it has been implemented.

2. *Establish a core team and co-ordinator*
   The co-ordinator will act as a programme champion and should be given adequate time and resources to implement the programme. The core team may include other stakeholder groups who can provide advice and knowledge to the co-ordinator as required.

3. *Consider gaps and prioritise options*
   This identifies gaps in the existing programmes and opportunities for improvement. The activities to be implemented can then be prioritised. High priority may be a low cost activity or one which will have the greatest impact.

4. *Plan the waste prevention programme*
   The programme should then be planned in detail. This will involve considering target audience, space/time requirements, equipment, health and safety, regulatory issues, stakeholders, key indicators, roles and responsibilities, costs and funding.

5. *Implement the programme*
   The programme should be implemented according to the plan prepared. An implementation timetable/action plan will be essential in ensuring momentum is maintained.

6. *Review progress*
   It is important to review the progress of the programme to assess waste quantities against baseline figures, monitor progress against the implementation/action plan and rate the success of the programme.

A pivotal means of implementation of the waste minimisation programme is the marketing campaign. This is used to raise the profile of waste minimisation in the community and inform householders and businesses how they can contribute towards waste reduction. Marketing can be used to bring about behavioural change in the public and encourage waste aware shopping, reuse in the home and avoidance of unwanted mail. These campaigns require no service infrastructure, but necessitate educational campaigns to encourage change.

Rotherham aim to develop a waste prevention programme during 2005/06.

Waste Minimisation within the Council

The council should be seen to lead by example in implementing the programme within Rotherham. Within the council, there are a number of low/no cost measures which will be implemented easily in the short term. This could include:

- Setting printers and photocopiers to duplex as the default;
- Reducing the weight of photocopying paper, e.g. from 80gsm to 70gsm;
- Cancelling unnecessary junk mail;
- Discouraging single use cutlery/cups, and
- Using electronic documents wherever possible.

Some longer term measures which should be considered include changes to existing procurement policies to ensure suppliers/contractors of the council minimise waste; and investing in regular maintenance of equipment to extend their life expectancy.

These measures would be identified through the baseline review of the prevention programme. The baseline review will also inform the council what targets should be set internally for waste reduction, when data is available for existing waste arisings by the council. There are a number of established benchmarks, for example, paper usage in an office environment; and accepted standards by which this can be reduced through some of the measures detailed above.

Measures for Residents of Rotherham

As part of the waste minimisation programme, the council will develop the following as a minimum for residents in Rotherham:

- Rolling out of a borough-wide home composting scheme. The council has already been awarded funding through the Waste and Resources Action Programme (WRAP) to provide home composting bins to householders with gardens, and has been allocated 11,000 home composting bins, of which 3,000 have been requested by householders to date;
- Including waste prevention messages in the waste awareness initiative. Rotherham has already established a successful communications programme, providing messages to the public on the need to recycle and on the operation of new recycling systems. Between 2004 and 2006, the authority will provide further communications to the public and businesses, highlighting waste prevention messages;
- Engaging with the proposed Yorkshire and Humberside regional waste awareness campaign and any waste minimisation initiatives (such as promotion of use of recycled products in construction);
- Seeking funding for the establishment of a door-knocking programme to promote the need for waste minimisation and to tackle any issues with recycling systems;
- Building on successful communications tools used currently (including advertisements on vehicle sides and the exhibition vehicle) to promote the waste prevention message;
- Monitoring the impact of new schemes to collect green waste from households on the overall quantity of household waste generated;
- Promoting the development of Community Reuse schemes such as donation and exchange and refurbishment and reuse programmes;
- Promoting reuse by supporting the establishment of a community repaint scheme with community partners such as the Furniture Plus Group; and

Beyond this, Rotherham will evaluate the need for introduction of further waste prevention initiatives such as local nappy schemes, promoting ‘waste free’ days, library services and hire/lease services.

Short Term Strategy (April 2004- April 2006)

Achieving 2005/6 LPSA targets

The strategy for achieving the 2005/6 targets of recycling 21% of household waste will be to develop the infrastructure to provide enhanced recycling systems to all households by the end of 2004/5 (achieving at least 18% recycling in this year) and to improve the efficiency of existing recycling systems through an effective waste awareness campaign in starting in 2004/5 and continuing into 2005/6. Specific initiatives on each collection are described below.

Blue Box Collection

By April 2005, the blue box collection will have been delivered to a further 50,000 households. This change will bring the coverage of the scheme up to 96% of all Rotherham's households. Since August 2004, 12,000 of these additional households have received a slightly different collection, a weekly rather than an alternate week pick up of their box, using a personnel controlled vehicle (small cart) and operated by Creation Recycling Ltd. These improvements in infrastructure should provide an additional 3,000 tonnes of recyclables.

In 2005, the aim will be to maximise the amount of materials recovered from the blue box, this will be achieved through:

- Improving participation in the scheme to at least 60% of households served by the collection, building on the findings of the *Recycling Schemes Survey* report (2004), through the waste awareness campaign;
- Improving the quantity of materials that each participating household provides (capture), to at least 60% of the recyclable materials generated by the household, through targeted communications from the waste awareness campaign (e.g. promoting the fact that glass jars as well as bottles can be put into the box);
- Targeting improvements geographically, using data from microchips inbuilt into the new blue boxes, which will record information about boxes placed out; and
- Ongoing monitoring of participation in the scheme, with the potential to introduce a blue box 'lottery' scheme where a prize can be won for presenting the blue box for collection.

Blue Bag Collection

The short term strategy will be to maintain the high coverage of the blue bag collection and to increase the quantity of materials collected by this system through:

- Improving participation in the system to at least 60% of all the households provided with a blue bag collection, through the borough-wide waste awareness campaign;
- Targeting areas of poor participation in the scheme, as identified in a recent survey, undertaken by the collection contractor, of streets setting out 10 bags of paper or less;

- Targeting potential reasons underlying poor participation in the scheme: currently, Rotherham are trialing an alternative bag for the paper collection (to commence roll out in 2005/06), responding to comments from residents that the containers were too heavy when full; and
- Improving the quantity of paper each participating householder provides to the scheme to at least 60% of the paper available within the household, through targeted communications.

Green waste collection

The green waste trial will continue to be provided in 2005/06.

Extension of the kerbside collection scheme will commence in 2005, with initial expansion to cover a further 12,000 households and subsequent rollout to a total of 50,000 households (covering in excess of 50% of the households with gardens in Rotherham[17]) by the start of 2007.

Household Waste Recycling Centres

The short term strategy for HWRCs will be to maintain the good performance in terms of household waste recycling. Last year saw an increase from 25% of household waste entering HWRCs being recycled in 2002/3 to 62% in 2003/4, a level comparable with the best performing sites across the UK. With continued emphasis on good segregation, signage and support staff at the sites, this level of recycling can be maintained.

In the medium term, the inclusion of specific areas for certain materials will be considered, for example for waste electronic equipment.

Local recycling sites (bring sites)

Bring sites formed the mainstay of Rotherham's recycling initiative before kerbside collections became widespread. This strategy recognises the ongoing value of maintaining bring sites around the borough to:

- Provide services to the small number of households without kerbside collections;
- To provide collections for materials not included within the kerbside collection (e.g. plastics).

Indeed, Defra funding has been used to establish a further 30 bring sites around the borough in the last year, maintaining Rotherham's commitment set out in the Unitary Development Plan to provide a borough-wide network of facilities in accessible locations for the collection of recyclables (Policy WM1.5). In the next two years, the strategy will be to maintain these sites and to encourage those without kerbside systems to use them, and those with kerbside system to deposit materials not collected through the blue box/bag at the sites.

17 Based on 2001 census figures for total households, less households classified as flats, maisonettes and tenements.

Facility implications

Making these changes will require Rotherham to plan for further bulking capacity for dry recyclables from the blue box and further composting capacity for the green waste from the green waste collections and HWRC. It is estimated that by 2005/6 at least 5,000 tonnes of capacity will be required to bulk and handle the cans, textiles and glass collected by the blue box. In the short term, the borough will seek to ensure that ongoing, increased and secure capacity will be available at the Creation Recycling Ltd facility. It will also seek to work with the facility to find ways to increase the value received from the sale of the recyclables (by finding markets outlets that provide a greater return) and to utilise local markets for recyclables (including local glass manufacturing capacity) where possible.

Composting is currently undertaken at one farm facility within Rotherham, with an option to extend this to a second farm. In view of the extensions planned to the kerbside green waste collections Rotherham is currently working to secure larger scale composting capacity. This will ensure that the necessary capacity is available in time for further households to be added to the green waste collection during 2006. An estimated composting capacity of 7,500 tonnes will be required once the planned roll out is achieved in the short term.

Refuse collection

Changes to recycling behaviour to increase participation and capture will require a significant change in the way in which waste is managed within Rotherham. To facilitate this change the strategy will start to move to an alternate week collection of refuse by 2005/6, encouraging householders, therefore, to maximise the use of their recycling collections.

Options for Medium and Long Term Strategy (April 2006 – April 2020)

The longer term strategy must see Rotherham continue to minimise waste produced by households, recycle and compost higher quantities of waste and divert significant quantities of biodegradable municipal waste away from landfill. There are a range of options by which this could be achieved and an options appraisal has been carried out to determine which is the most suitable option(s) for Rotherham. The overall results of the consultation exercise and Best Practicable Environmental Option appraisal exercise are presented here, with full details provided in Appendix 6.

Plans for improvements in recycling from 2006

Though there are no statutory targets for increasing household recycling beyond 2006, Rotherham will aim to increase recycling after this year, consistent with Waste Strategy 2000 and Objective 2 of the Regional Waste Strategy and in the knowledge that this will benefit the authority's work in diverting biodegradable municipal waste from landfill.

In response to the public consultation exercise conducted in 2004, aspirational targets have been set to:

- Recycle (or compost) at least 23% of household waste by 2006/7;[18]
- Recycle (or compost) 33% of household waste by 2009/10
- Recycle (or compost) 35% of household waste by 2012/13 (exceeding Waste Strategy 2000 targets for this year);
- Recycle (or compost) 45% of household waste by 2015/16 (in line with Waste Not Want Not suggested target for 2015)

In line with the recommendations of the Regional Waste Strategy, the aim would be to achieve these enhanced targets with a minimum of new investment in infrastructure, but through increasing the efficiency of these collections. This is likely to require:

- An increase in participation[19] and capture of kerbside systems to levels of around 70% by 2009/10 and to 80% by 2012/13;
- An increase in the coverage of the kerbside recycling systems to 100% of households;
- Increasing the recovery of materials not included in kerbside systems by 2015 (e.g. plastics), and
- Maintenance and potential further improvement in HWRC recycling.

In conjunction with these initiatives, Rotherham would also seek to work with local reprocessors and regional and national market development programmes (Recycling

18 As set out on the Rotherham MBC Performance Indicator Monitoring Sheet 2003/4

19 Participation is defined as a householder taking part in the scheme once a month or at least two collection cycles

Action Yorkshire (RAY)[20] and the national Waste and Resources Action Programme (WRAP)) to find local markets for materials, thereby helping to ensure that long term increases in recycling are sustainable, to ensure that reducing transport impacts and helping to safeguard local employment in this sector, in line with the Regional Waste Strategy. The council itself will aim to move towards 'green procurement', using its buying power to purchase recycled goods and thereby help generate a stable market for recyclables.

If the increases in recycling cannot be achieved by increased efficiency alone then the introduction of a kerbside collection of kitchen waste would be required from 2009 in order to further target the biodegradable waste fraction and reach higher recycling targets.

Infrastructure Requirements for High Recycling and Composting

Assuming that waste grows at predicted rates and that high recycling and composting rates are achieved then there will be a requirement for some additional processing infrastructure to be developed:

- Two 17,000 tonne centralised composting facilities capable of accepting kitchen waste by 2019/20 (meaning that they must be of an in-vessel type, approved by the Government's Veterinary Service);
- By 2019/20, a market for 31,400 tonnes of compost from green waste and kitchen waste would be required, plus a market for 34,100 tonnes of dry recyclables.
- Bulking capacity will be required for the blue box recyclables of approximately 10,500 tonnes. Dry recyclables from CA and other bring sites have not been assumed to require bulking facilities.

Table 6 High Recycling and Composting Estimated Facility Requirements

Facilities	Facility Size	2009/10		2012/13		2019/20	
		Tonnes	No of facilities	Tonnes	No of facilities	Tonnes	No of facilities
Composting(1)	17,000	16,800	1	18,700	1/2	31,400	2
Bulking Capacity(2)	10,500	7,800	1	9,300	1	10,300	1
(1) Assumes facilities will be of an in-vessel type, as kitchen waste will be accepted.							
(2) Assuming bulking capacity required for blue box materials only (textiles, cans, glass)							

Residual Waste Treatment

The key objective for this period is to meet the requirements for the diversion of biodegradable municipal waste from landfill. It will not be possible to achieve the 2012/13 and 2019/20 targets through increases in source-segregated recycling alone. Rotherham has therefore investigated a range of alternative treatment options for residual waste which have included;

- Mechanical biological treatment
- Anaerobic digestion

20 It is understood that it is the intention of RAY to actively seek out participation of local authorities in phase 2 of their market development programme.

- Gasification and pyrolysis
- Incineration

Appendix 6 includes further details on the options appraisal process.

The preferred option for Rotherham at this stage, based on the options appraisal and consultation process is to develop a Mechanical Biological Treatment plant for residual waste but not to rule out the development of other technologies.

Mechanical biological treatment is a generic term for a combination of technologies that extract recyclables (such as metals) from the refuse stream and that biologically treat waste (through composting or drying) to reduce its biodegradability and sometimes to create a compost-type product and a fuel for industry.

The type of plant assumed in the options assessment was similar to an Ecodeco design, where refuse is put through a biological process (biodrying), then recyclables are removed and a compost and fuel product are produced. However a number of different technologies exist which could support the development of an MBT facility

The status of MBT as the BPEO is dependant on the beneficial use of the outputs from the process. The outputs from the process are also subject to a current consultation by the Environment Agency on the diversion of biodegradable municipal waste from landfill[21]. The consultation sets out three different tests for measuring the biodegradability of municipal waste from an MBT process, (each one having a low, medium and high biodegradability outcome). There are therefore some uncertainties regarding the considered biodegradability of the outputs from MBT which may impact on the ability of MBT facilities to meet the requirements of the Landfill Directive. The options assessment process adopted a medium level risk approach to this problem.

Facility requirements and timescales

All the options considered within the BPEO assessment assume the development of new treatment facilities to enable all treatment options to be assessed on a similar basis. However the availability of sufficient treatment capacity at an existing regional facility could allow;

- The 2009/10 Landfill Directive targets to be achieved without the need for a new facility to be operational until 2012/13
- the procurement process for a new facility to be delayed, which would in turn allow additional time for MBT technologies to develop and become a more proven technology for municipal solid waste in the UK.
- a reduction in the scale of facility required in the future and thus potentially present cost savings.

For example, it is understood that there is currently some spare capacity at a regional incineration (with energy recovery) facility that may be available for use by other

21 Assessing the diversion of biodegradable municipal waste from landfill by mechanical biological treatment and other options, A Consultation paper related to monitoring the utilisation of landfill allowances, Environment Agency November 2004.

authorities. Further investigation of this potential option will be carried out in order to inform the implementation phase of the waste strategy.

The BPEO options assessment assumes that a new MBT facility would be provided in Rotherham and would be operational in 2008. The subsequent facility requirements and market impacts of these assumptions are summarised below;

If waste growth and recycling/composting levels increase as predicted, markets would need to be found for a maximum of:

- 11,800 tonnes of metals and aggregates recycled from the MBT plant per year;
- 11,000 tonnes of mixed waste compost from the MBT plant (likely only to be suitable for applications such as soil restoration/landscaping) per year;
- 28,200 tonnes of refuse derived fuel for use in industry per year; and
- 1.0 million m^2 of landfill capacity between 2003/4 and 20019/20[22].

Table 7 Mechanical Biological Treatment - Facility Requirements

Facilities	Facility Size	2009/10		2012/13		2019/20	
		Tonnes	No of facilities	Tonnes	No of facilities	Tonnes	No of facilities
MBT(2)	60,000	80,000	2	79,500	1/2	73,600	2
Landfill(3)	n/a	24,300	n/a	24,300	n/a	24,700	n/a
Hazardous Landfill	n/a	0	n/a	0	n/a	0	n/a

(1) All figures rounded to nearest 100 tonnes

(2) Assumes an Ecodeco modular type facility of 60,000, however depending on the technology selected facility size could be 1 x 80,000 tonnes or 2 x 40,000 tonnes

(3) includes materials not sent to treatment plant (e.g. HWRC refuse)

However if the option of joint working with adjacent authorities to develop access to sufficient incineration capacity was explored this may enable medium term Landfill Directive targets to be achieved up to 2012 and delay the need for development of an MBT facility for residual waste treatment until 2012.

Furthermore, if some incineration capacity continued to be available for a proportion of residual waste in Rotherham up to 2020, then the size of any MBT facility required would be less than that outlined in Table 7.

22 Assuming a placed density of 0.83 t/m^2 (Environment Agency, 2000, Strategic Waste Management Assessments)

7. Strategy for Non-Household Municipal Waste

The Strategy for dealing with Non-Household waste in Rotherham is summarised in this section.

Trade waste

Trade waste is collected alongside household waste in Rotherham. In 2003/4 some 5,300 tonnes of trade waste was collected within the borough. The ongoing provision of the trade waste collection will impact on the achievement of targets for diversion of biodegradable waste from landfill, meaning that Rotherham may wish to consider providing recycling collections for some types of trade waste in the future. Options for recycling of trade waste are currently being explored.

Abandoned vehicles

Over 1,000 abandoned vehicles were reported from July – December 2003. The council offers a number of routes by which abandoned vehicles can be reported:

All public reports are initially received through the Rotherham Connect Service and are forwarded on immediately to Network Management in Streetpride.

Reports from Housing, Culture & Leisure and South Yorkshire Police are sent direct to Streetpride.

The Council also arranges for the removal and disposal of unwanted vehicles for Rotherham residents on production of the appropriate documentation. The council will continue to ensure that abandoned vehicles collected in Rotherham are sent for recycling and re-use where possible.

Illegal Waste Disposal and Fly-tipping

Rotherham had over 3,346 reported incidents of fly tipping in 2003/04 (an estimated 600 tonnes). The council has written procedures in place for dealing with any reported instances of fly tipping and is recognised by ENCAMS (the Keep Britain Tidy organisation) as an example of good practice in their Fly Tipping module support pack for use by all Local Authorities[23]. The Council has a strategy in place for tackling fly-tippers and Streetpride Enforcers have an enforcement policy to prosecute all people who are found to have been fly tipping. Rotherham will take account of Defra's fly tipping strategy, currently in consultation[24].

Clinical Waste

Clinical waste is defined in the Controlled Waste Regulations 1992.

Group E wastes that arise from households are not classified as clinical waste if the illness being treated has no specific risk. Most Group E wastes are therefore not

23 Street Pride Strategy for Tackling Fly Tippers

24 Defra (February 2004) Fly-Tipping Strategy Consultation Document

identified within the household waste stream and are collected along with the normal household refuse and disposed to landfill.

Wastes that are associated with illness fall into categories A to D (e.g. needles and certain dressings) are regarded as clinical. The council works in partnership with the Rotherham Primary Care Trust to collect clinical wastes from households that request such a collection. Domestic collections are provided on request to households at no charge. A collection service is also offered to commercial organisations, although a charge is payable. There are around 3,000 domestic premises and 200 commercial premises who receive clinical waste collection and the total quantity of clinical waste collected is in the region of 330 tonnes per year, of which approximately 70% is estimated to be household waste. Rotherham will continue to work with the Primary Care Trust to provide services for the disposal of clinical waste as required.

Hazardous Waste

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 or at HWRC sites. There are increasing legislative requirements for separate collection of specific hazardous household wastes.

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

The HWD defines hazardous waste as wastes featuring on a list (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. This list is subject to periodic review, the most recent of which was completed in 2002. The EWC 2002 has many entries for waste that may not have been previously classified as hazardous. Key waste streams which may contribute to MSW arisings include End of Life Vehicles and wastes containing cathode ray tubes – e.g. televisions and computers. These changes are currently subject to public consultation before incorporation into UK legislation. However, in terms of Rotherham's waste strategy, it is likely that this legislation will increase the tonnage of wastes currently collected that are defined as hazardous (20 tonnes in 2003/4).

Procedures for dealing with hazardous waste from the municipal waste stream, in particular provision of services at HWRC sites will be reviewed once the full impacts of the legislative changes are known.

Asbestos

Asbestos arising from the household waste stream is typically bonded asbestos. Although its use is now prohibited, some waste will arise from household renovation work. One of the HWRC sites within Rotherham accepts asbestos materials. This facility will continue to be provided.

Fridges and Freezers

The introduction of the Ozone Depleting Substances Regulations 2037/2000 introduced 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 local authorities have carried out for some time.

Rotherham's HWRCs provide a collection point for fridges and freezers. In 2003/4, the borough collected an estimated 450 tonnes of fridges and freezers.

Batteries

The European Commission issued a proposal for a new Batteries Directive in November 2003. Existing legislation currently covers an estimated 7% of consumer batteries, where as the new directive will apply to all batteries irrespective of type.

A key provision is the introduction of collection and recycling targets for all batteries to be established free of charge to the consumer. Rotherham's HWRCs currently provide collection points for the recovery of batteries, some 90 tonnes were collected in 2003/4. Facilities for the collection and recovery of batteries will continue to be provided and the council will review the services provided for the collection of batteries to meet the requirements of the new legislation as appropriate.

PCB containing Equipment

Polychlorinated Biphenyls (PCB's) have long been recognised as a threat to the environment because they are not easily broken down and tend to accumulate in animal and human tissue. Agreements for the phase out and destruction of PCBs have been in place for some years and the use of PCBs in equipment has been banned since 1986.

In accordance with the PCB regulations[25] the holders of equipment containing more than 5 dm^3 of polychlorinated biphenyls (PCB's) were required to dispose of them by 31 December 2001. However equipment containing volumes of less than 5 dm^3 are likely to remain within equipment still in use, e.g. in some old domestic appliances such as washing machines.

Where such items are identified as part of the municipal waste stream, (e.g. at HWRCs) arrangements will be made for the separate collection and disposal of items at suitable facilities.

Packaging

Targets for the recovery and recycling of packaging waste are set out in the Producer Responsibility Obligations (Packaging Waste) Regulations 1997 (as amended). Businesses with a turnover of more than £2M and who handle more than 50 tonnes per year of packaging must recover and recycle certain tonnages of packaging waste

25 The Environmental Protection (Disposal of PCBs and other Dangerous Substances) (England and Wales) Regulations 2000

each year. Companies can reduce their obligation by reducing the amount of packaging they handle.

The regulations are enforced by the Environment Agency and presently some 9,000 companies in England and Wales come under Producer Responsibility legislation. Last year 3.5 million tonnes of packaging waste was recycled in the UK as a result of the regulations.

A voluntary accreditation scheme is also operated by the Agency for reprocessors, who issue evidence of compliance with recovery and recycling obligations through notes call Packaging Recovery Notes (PRN's). These notes are used by obligated producers as evidence that packaging recovery has occurred.

Local authorities can play a part in achieving the targets in the packaging regulations by working with compliance schemes and reprocessors to collect a high quality of recycled materials.

The education and awareness campaign being developed by Rotherham will ensure that the public (i.e. end users of packaging) are informed about the role that they play in contributing to the reuse, recovery and recycling of packaging. The borough will also continue to provide facilities to collect these materials from householders and where appropriate consider opportunities for working with compliance schemes and obligated companies to increase the level of packaging material collected.

Waste Electrical and Electronic Equipment Directive

The EU Directive on Waste Electrical and Electronic Equipment (WEEE) became European law in February 2003 and should have been implemented in European Member states by August 2004. The DTI and DEFRA are currently undergoing a second consultation period relating to the transposition of this Directive into UK law.

The Directive applies to a range of electrical and electronic equipment and aims to reduce the quantity of waste equipment and to maximise the recycling and recovery of equipment that has reached the end of its useful life. Of particular importance to local authorities is the requirement to introduce separate collection systems for household electronic equipment, enabling a minimum of 4kgs per person each year to be collected by the end of 2006.

Research by ICER[26] suggests that recovery rates of 4kg per person are already being achieved through bulky household collections provided by waste collection authorities and collections at civic amenity sites. Therefore, it is not anticipated that Local Authorities will need to increase current collections to meet this target.

However, Local Authorities are anticipated to have a key role in the collection of WEEE across the UK and the Government are currently proposing that retailers (who have collection obligations under the Directive) pay into a fund to help Local Authorities provide improved WEEE collection facilities at HWRCs.

26 Industry Council for Electronic Equipment Recycling

8. Strategy Implementation and Monitoring Plan

The key stages required in order to implement the preferred strategy are discussed here along with proposed arrangements for ensuring the continuous monitoring of the waste management strategy in the future.

Implementation Plan

Implementing the policies in this Strategy and the solution outlined in Section 6 will require new waste management arrangements and infrastructure to be established. To ensure that progress is achieved Rotherham will need to complete a number of actions according to a specific timetable which will involve the development of new collection systems in conjunction with the procurement of new facilities.

Facilities must be established with sufficient time available for obtaining planning permission, obtaining a waste management license/PPC permit, for commissioning and for establishing markets for products (such as compost or RDF).

Collection Systems

Much of the increases in recycling for the short term will be gained through improvements in participation and capture of the blue box/bag scheme and continued increases in performance at HWRC and bring sites.

Expansion of the green bin collection scheme is planned for 2005/06 with plans to move to an alternate weekly collection of refuse and recyclables.

The introduction of kitchen waste collections is a longer term plan and will require ongoing monitoring of current performance to determine the most suitable timescale for implementation. Evaluation work will commence in 2005/06 to assess the timescales for introducing this collection scheme and the feasibility of forming links with the kitchen waste collection programme in Doncaster.

New Waste Treatment Infrastructure

Short Term

Short term increases in kerbside collections will require additional bulking and windrow composting capacity to be developed. Increased bulking capacity will be developed in conjunction with Creation Recycling and work is underway to secure additional on farm composting capacity for 2005.

Planning for the implementation of in-vessel treatment capacity should be considered in line with current progress against targets. If new capacity is required from 2009 then the process for the procurement of new facilities should commence in 2006.

Further bulking capacity will be required as progress towards the 45% recycling and composting targets is made.

Long Term

New treatment capacity is required in order to meet the landfill directive targets in 2012/13, however this may be sooner depending on the current performance of recycling and composting schemes and action to secure potential incineration capacity. Therefore new capacity may be necessary in 2010. This would mean that action to procure new facilities must be commenced in 2005/06 to ensure maximum time.

Waste Awareness and Education

If Rotherham are to achieve their recycling and composting targets whilst also reducing the amount of waste sent to landfill then any investment in new waste management systems must be supported by public education and effective partnerships with community organisations.

To meet the objectives of the strategy waste awareness campaigns will be used to support the need for new waste systems and the ongoing importance of public support. Achievement of high levels of recycling and composting must be reinforced by high participation rates. Householders need to understand why they should recycle and how they can best do so. The public consultation exercise stressed the requirement of the public to receive more information on recycling systems offered in the Borough.

Therefore action will be taken to ensure that a strong public awareness message is implemented, focusing primarily on household waste. Key messages in the campaign should focus around waste minimisation as set out in Section 6.

Table 8 Timetable for implementation

	Key Actions	2005	2006	2007	2008	2009	2010	2011	2012
Strategy Document	Agree Strategy Document	®							
	Review & Monitor Progress Against Targets	**Ongoing**							
	Review Strategy Document			®					
Waste Minimisation	Implement Waste Minimisation Programme								
	Monitor Performance of Waste Minimisation Initiatives	**Ongoing**							
Collection	Increase participation & capture in kerbside schemes	**Ongoing**							
	Improve performance at HWRC	**Ongoing**							
	Expansion of the green bin collection scheme								
	Introduction of alternate weekly collection systems								
	Plan for introduction of kitchen waste collections								
Processing Capacity Recyclables/Compost	Plan for Increased bulking capacity								
	Plan for Increased windrow Composting Capacity								
	New Capacity Available		®			®			
Residual Treatment capacity	Plan for In-vessel treatment capacity								
	Explore possibility of existing incineration capacity								
	(A) Procurement process for new MBT capacity if no local capacity available								
	(B) Procurement process for MBT capacity if local treatment capacity is available								
	New Capacity Operational				**A®**				**B®**
® Indicates Key Milestones									

Monitoring and Review

The strategy will be reviewed in 2007, to consider progress against current targets and waste growth rates, and assess the requirement for future processing capacity.

Strategy Review

The continued success and development of this strategy is dependent on it being adaptable to change. Therefore the strategy will be monitored to measure the general effectiveness in achieving its aims and any changes required in the light of new information or significant changes to policy. The following issues should be monitored:

- Changes in European and national legislation and policy;
- Changes in guidance provided by the regional assembly;
- Information about the amount of waste being produced;
- Changes in population and household projections;
- Technological improvements and impacts on waste management ;
- Waste management developments in neighbouring authorities;
- Performance against Targets and Objectives.

The strategy is for the period up to 2020, however it will be reviewed in April 2007 to ensure that it continues to be up to date, to incorporate any significant changes in the points above and to fit in with the structure of contracts. Subsequent strategy reviews will take place on a four yearly basis in 2011, 2015 and 2019.

Data Collection and Review

As well as reviewing the content of the strategy it will be necessary to review the underlying data contained within the strategy document. The strategy is based on the best available municipal waste data. However there may be a requirement to review the data collected for specific waste streams, for example commercial and industrial waste, construction and demolition waste and priority waste streams such as WEEE, packaging and tyres. A formal review of the baseline data will be carried out in conjunction with the first strategy review in 2007. However waste arising data will continue to be monitored on an annual basis to ensure consistency with current estimates of future waste growth and identify priority areas for strategy review.

Finalisation of the strategy

Following the assessment of the BPEO and wider public consultation, the strategy has been revised to take account of the comments obtained and the options identified for medium to long term waste management. The final strategy must also

- Obtain approval from the Government Office for Part 3 – to comply with EPA 1990
- Be sent to DEFRA

PART 3: RECYCLING INFORMATION

In order to meet the statutory recycling and composting targets Rotherham is planning to expand existing collection schemes and introduce new collections where possible. Under current legislation, waste collection authorities such as Rotherham are required to prepare a Recycling Plan (Section 49 of the Environmental Protection Act, 1990). This plan must include specified information, which is provided in the sections below.

Current Recycling and Composting Arrangements

The arrangements for recycling and composting household waste within Rotherham include kerbside collections (blue box and blue bag), local recycling sites (bring banks), and Household Waste Recycling Centres.

Table 9 illustrates how the borough currently collects materials and how it intends to make collection arrangements for this waste over the plan period.

Table 9 Types of waste that Rotherham expects to collect (EPA Section 49 (3)(a))

Waste Type	Current arrangements	Future arrangements
Household refuse	Wheeled bins, collected weekly by DSO. Bulk bins collected from multi-occupancy properties. Small number of sacks collected from rural and remote properties.	Similar arrangements, with service provided by DSO, potential to move to alternate week collection by 2005/6.
Bulky Waste	Bulky waste is collected on demand for a small charge. Contract is held by DSO.	No change in arrangements
Kerbside Blue Bag	Alternate week collection of paper in sacks available to 96% of the population. Collection provided by Abitibi Consolidated Paper Ltd.	Similar arrangement with increase in quantity of paper collected by contractor anticipated in order to meet targets. Contract arrangements to be reviewed in 2005.
Kerbside Blue Box	88,000 households served by blue box on an alternate week basis, collecting glass, cans and textiles. Collection provided by DSO. A further 12,000 households are served by a blue box on a weekly basis, collecting the same materials using a personnel controlled vehicle. The contract is held with Creation Recycling Ltd (to be introduced in August 2004)	Extension of the area covered by the collection to all households. Main contract provided by DSO.
Green Waste	Garden waste is collected during the growing season from 3,000 properties on Saturdays by DSO. Provision of a green waste collection in wheeled bins to 12,000 properties in 2004, to be extended to further households in 2005 (delivered in April 2004).	Extension of the wheeled bin green waste scheme to a further 12,000 households in 2005/6.

Waste Type	Current arrangements	Future arrangements
Bring Banks	A range of materials merchants collect materials from bring sites: Glass: Glass recycling UK Cans: Alcan Paper: Abitibi Consolidated Paper Ltd Textiles: CJ Textiles, Salvation Army Plastics: Reclaim Shoes: European Shoe Foundation	No change to current collection arrangements.
Clinical Waste	Municipal and non-municipal waste collected.	No change anticipated.
Hazardous waste	Hazardous waste is collected at the HWRCs run by South Herts Waste Management Ltd.	Increases in hazardous waste arisings anticipated, lease on one site due to expire shortly, no major changes in current arrangements planned.
Street sweepings/litter	Currently collected by DSO.	No changes anticipated
Total household waste	118,600 tonnes	
Policy on non-household municipal waste		
Co-mingled trade waste	Collected predominantly co-mingled with other refuse.	No change to current arrangements
Abandoned vehicles	Collected on demand/reporting by DSO.	No change to current arrangements
Fly tipped waste	Collected by DSO	No change to current arrangements
Total municipal waste	133,300 tonnes	

Plans for increasing recycling and composting (Information required by EPA Section 49 (3)(c))

A review of the existing recycling arrangements is currently being carried out. The aim is to produce a significant change in the recycling performance. The statutory targets for recycling in Rotherham are 18% in 2005/6, or 21% under the LPSA agreement. Details of changes to recycling performance are given in Section 6 and summarised below.

Table 10 Summary of changes to meet 2005/6 recycling performance standards

Collection	Changes
Kerbside Blue Bag	Improvement in participation and capture of the scheme through waste awareness campaign, introduction of improved blue bag and potential introduction of alternate week refuse collection.
Blue box	Extension from 7 months of collection to 12 months Coverage of scheme to 96% of all households Introduction of weekly collection to small sample of households (12,000) using Personnel Controlled Vehicle. Improvement in participation and capture of the scheme through waste awareness campaign, incentives (such as blue box 'lottery') and potential introduction of alternate week refuse collection.
Green Waste collection	Introduction of a green waste collection in wheeled bins to 12,000 households in 2004 (in addition to those provided with a Saturday collection). Extension of this scheme to 12,000 households in 2005.
HWRCs	Renewal of lease at one HWRC. Maintenance of good performance at the site through continued emphasis on segregation, staffing levels and goods signage. Consideration of specific areas for certain waste streams (e.g. waste electronic and

Collection	Changes
	electrical equipment, enlarged area for hazardous waste).
Bring Sites	Maintenance of good performance at sites. Review of bring site provision (location and materials provided) to be undertaken by 2005.
Composting Plants	Identification and securing of additional capacity for composting green waste from HWRCs and green waste collection (currently one on-farm facility used).
Bulking Facilities	Securing of capacity to bulk blue box recyclables.

The long term strategy for Rotherham will require additional investment in recycling and composting facilities in order to achieve a recycling rate of 33% by 2010, 35% by 2013 and 45% by 2016.

The change to the infrastructure described above involves a number of actions

- extending the kerbside collection to all households (blue box, blue bag) including all households with gardens
- maintain bring site and HWRC levels of participation and capture, including increasing the capture of plastics at bring sites.
- the introduction of kerbside collections of kitchen waste by 2009 serving 50% of households and increase this to 100% of households by 2014/15.
- Increase participation and capture on all kerbside collections to levels in excess of 70% respectively.

PART 4: LANDFILL DIRECTIVE STRATEGIC PLAN

The Landfill Directive requires a significant reduction in the quantity of biodegradable municipal waste (BMW) going to landfill over the next 20 years.

The Government has introduced legislation through the Waste and Emissions Trading Act (WET Act) for a tradable allowance system to control the landfilling of biodegradable waste and to ensure compliance with the Directive. Under the system Waste Disposal Authorities are allocated allowances, allowing them to landfill specified quantities of biodegradable waste. The Landfill (Scheme Year and Maximum Landfill Amount) Regulations 2004 came in to force on 22 July 2004.

This section of the Strategy sets out Rotherham's Strategic Plan for achieving the Landfill Directive diversion targets.

Diversion Requirements

The Landfill Directive sets the following targets on the UK:

- By 2010 reduce the biodegradable municipal waste disposed to landfill to 75% of that produced in 1995;
- By 2013 reduce biodegradable municipal waste disposed to landfill to 50% of that produced in 1995;
- By 2020 reduce biodegradable municipal waste disposed to landfill to 35% of that produced in 1995.

This is equivalent to the tonnages shown in Table 11:

Table 11 BMW that can be landfilled in UK in each target year

Country	2010 (tonnes)	2013 (tonnes)	2020 (tonnes)
England	11,200,000	7,460,000	5,220,000
Wales	710,000	470,000	330,000
Scotland	1,320,000	880,000	620,000
N. Ireland	470,000	320,000	220,000
Total	**13,700,000**	**9,130,000**	**6,390,000**
Source: DEFRA (2003) Landfill Allowance Trading Scheme Consultation Paper			

A maximum amount of biodegradable waste which may be landfilled in non-target years must also be set. The Landfill (Scheme Year and Maximum Landfill Amount) Regulations 2004 set the targets for the first four years of the scheme. DEFRA have sent letters to very local authority in England setting out their targets to 2020.

DEFRA has published the final allowances allocated to each English WDA.

Each authority is required to meet its allowance either by direct action, borrowing from future years targets (subject to strict constraints) using permits banked from previous years of trading with other WDAs who over perform and thus has allowances to sell through the Landfill Allowance Trading Scheme (LATS). It is likely that prices will be based on market forces and are not likely to be standard across the country. DEFRA published the allowances for each authority in England that will contribute to the overall targets for the UK described in Table 11.

First year allowances (2005/06)

The scheme is anticipated to start in April 2005 with initial allocations based on data from 2001/02. The first years allocation is equal to the amount of BMW landfilled in 2001/02. This is calculated by assuming that 68% of the total arisings are biodegradable and then subtracting the tonnage diverted from landfill from the total.

Target Year Allocations (2010, 2013, 2020)

The target year allocations (2009/10, 2012/13 and 2019/20 are based on the WDA's percentage contribution to England's 2001/02 waste arisings.

In 2001/2 Rotherham's Municipal Waste arisings were 149,780 tonnes, 0.51% of the UK's total municipal waste arisings of 28,823,000 tonnes.

Table 12 Target Year Allocations for Rotherham

	2010	2013	2020
England	11,200,000	7,460,000	5,220,000
Rotherham)	58,036	38,656	27,049

Interim Year Allocations

The Government intends to calculate interim year allocations by drawing a line between each WDA's first year allocation and each of the target year allocations. Targets are calculated using a back-end loaded trajectory between 2004 and 2010. The trajectory is 10%, 15%, 20%, 25% and 30%. This means that in 2006/07 the WDA's allocation is 10% of the difference between the 2005/06 target and the 2009/10 target. The 2007/08 allocation is then 15% of the difference and so on.

Diversion Required

For the purposes of this strategy, a growth rate of 1.27% in waste arisings based on the growth in the number of households was assumed. Given this, the quantity of biodegradable waste requiring diversion can be estimated. Table 13 summarises these estimates.

Table 13 Estimated Allowances for Rotherham

Year	MSW Arising	BMW Arising	BMW Permitted to Landfill (tonnes)	Diversion Required (tonnes)
2005/06	134,800	84,700	93,990	0
2006/07	135,600	85,100	87,998	0
2007/08	137,200	86,100	80,008	6,100
2008/09	138,800	87,200	70,021	17,100
2009/10	140,400	88,100	58,036	30,200
2010/11	142,100	89,200	51,576	37,700
2011/12	143,800	90,300	45,116	45,200
2012/13	145,500	91,400	38,656	52,700
2013/14	147,200	92,500	36,988	55,500
2014/15	149,000	93,600	35,340	58,200
2015/16	150,800	94,700	33,682	61,000
2016/17	152,600	95,900	32,024	63,800
2017/18	154,300	96,900	30,365	66,500
2018/19	156,000	98,000	28,707	71,300
2019/20	157,800	99,100	27,049	72,000

Strategic Plan for Achieving Targets

The Strategic Plan for achieving the diversion targets has three key elements:

- Achieving targets up to 2008/9 through increased composting and recycling, banking borrowing and trading;
- Achieving targets from 2009/10 to 2012/13 through continued recycling and composting and introduction of an MBT plant or for mixed wastes or developing access to local incineration capacity;
- Achieving 2020 target through continued operation of recycling and composting schemes, MBT plant and through waste minimisation.

2009/10 Target

In 2009/10, approximately 30,200 tonnes of biodegradable waste needs to be diverted from landfill. The recycling and composting systems developed to achieve the 2003/04 and 2005/06 performance standards and the additional increases in recycling to 2009/10 will deliver the majority of the required diversions (Chapter 6 provides details of this). The key sources of diversion are summarised below:

Table 14 Diversion of Biodegradable Waste in 2009/10 through recycling and composting systems

Material	Collection type	Tonnes
Green Waste	Separate Green Waste Collection	12,000
	HWRC	4,800
	Total	**16,800**
Paper	From Kerbside Collection	9,980
	Bring Sites	610
	HWRC	1,180
	Total	**11,770**
Textiles	Separate textiles collection	830 (50% of 1660)
	Bring Sites	45 (50% of 90)
	HWRC	40 (50% of 80)
	Total	**915**
Total	**Total biodegradable Waste Diverted**	**29,485**
	Diversion required	30,200
	Shortfall	715
(1) Totals may not sum due to rounding		

Continual monitoring of progress against targets will be linked to regular monitoring of waste growth rates as target predictions for biodegradable waste diversion will require adjustment in line with any changes in the amount of municipal waste produced in the Borough.

An additional 715 tonnes must be diverted to meet the 2010 target, which could potentially be targeted through the early establishment of residual waste treatment facilities or achieved through the trading/banking of landfill allowances.

2012/13 Target

Targeting biodegradable waste through recycling and composting initiatives will be insufficient to meet 2012/13 and subsequent targets. Rotherham proposes to develop a municipal waste MBT facility to manage residual wastes to reduce the biodegradable fraction and to divert this from landfill. The facility will have a capacity to manage 80,000 tonnes of Rotherham's waste and may be developed in partnership with neighbouring authorities. . This facility will need to be in place by mid-2009.

2019/2020 Target

By 2018, assuming that waste growth is maintained at the predicted rates, the current planned configuration of the MBT facility will provide sufficient diversion to meet the landfill diversion targets. This also assumes that the predicted levels of recycling and composting of 45% have been achieved. Any shortfall in this could be overcome by banking excess allowances from earlier years or through purchasing allowances, in 2019/2020 banking/purchasing will not be permitted. It may be necessary to construct

additional treatment infrastructure to help achieve this target. This option will be evaluated in the forthcoming strategy reviews. The requirement for additional treatment capacity will be based on:

- The performance of recycling and composting systems;
- An evaluation of the treatment facility; and
- The growth in waste arisings.

Key Actions and Targets

The key actions and timescales for achieving the Landfill Directive diversion targets are set out in Table 15.

Table 15 Landfill Directive Strategic Plan Actions

Date	Action	Comment
2005 to 2009	Extend recycling and composting systems to achieve performance standards, including introduction of kitchen waste collection scheme	Monitor development of tradable permit system
2005	Review implications of the tradable allowances system.	Evaluate if allowance allocations are consistent with Strategy assumptions. Assess the risk associated with the use of residues from the MBT process, as a result of any changes in policy and legislative requirements.
2005	Review performance of recycling and composting systems and their ability to achieve the 2010 target.	Plan the expansion of multi-material and organics collections.
2005	Explore option to utilise existing capacity at a regional incineration (with energy recovery) facility for residual waste and inform procurement process.	
2005	Start procurement process to allow development MBT facility by 2009 if necessary	Assess the risk associated with the biodegradabalility of outputs from the MBT process, as a result of any changes in policy and legislative requirements.
2009	Commission MBT facility to ensure plant is operational to meet the 2010 target.	
2013	Review performance of MBT facility to assess whether additional treatment capacity will be needed to achieve 2020 target.	Monitor waste arisings and success of waste minimisation initiatives. .

APPENDICES

1. Baseline Figures

2. Waste Forecasts

3. Composition

4. Local and Regional Strategies and Plans

5. Public Consultation Results

6. Options Appraisal and BPEO Assessment