

# TOWARDS ZERO WASTE 2020

## A Waste Strategy for Bath & North East Somerset 2005 – 2010 (February 2008 Update)



Our waste strategy was adopted in July 2005. This document is updated with current information for 2007/08, using current projections as a baseline for all charts, and an updated Action Plan.

We are one of the top recycling authorities within the country, recycling almost 40% of our household waste in 2006/07 – but we landfill all of our waste that is not recycled – over 59,500 tonnes per year of household and commercial waste.

This is enough waste to fill Bath Abbey 22 times.

We send 50,000 tonnes by train to a landfill site in Buckinghamshire. The rest is sent by road to landfill sites in Somerset and Wiltshire. We do not dispose of any waste within our own district. This is not sustainable.

Landfill space is running out and disposing of waste is becoming more expensive. New laws mean that we will face significant financial penalties if we continue to landfill so much. If we don't divert more of our waste from landfill then we could be fined in excess of £33 million over the next 15 years.

We must recycle more and find new ways of treating our waste in order to reduce the amount we landfill. We must develop local solutions for treating waste so that we maximise the value of resources that can be produced from it, and reduce our reliance on long distance haulage in developing cost effective solutions.

This strategy details the steps we need to take now and over the next 5 years to reduce the amount of waste that we produce, to recycle as much as possible and to develop new ways of treating the remaining waste to maximise its value and divert it from landfill.

This document about the Council's Waste Strategy can be made available in a range of languages, large print, Braille, on tape, electronic and accessible formats from Waste Services, Tel 01225 394204, Fax 01225 395162, Minicom/textphone 01225 477309

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## 1. What is the problem?

During 2006/07 we managed to reduce our household waste by about 7% from the previous year but still had to send over 58,500 tonnes of household waste to landfill.

In addition we collected over 12,000 tonnes of commercial waste and disposed of approx 11,000 tonnes of this to landfill.

We are reliant on landfill to dispose of our waste. We transport most of our waste many miles per day to landfill sites in other areas of the country.

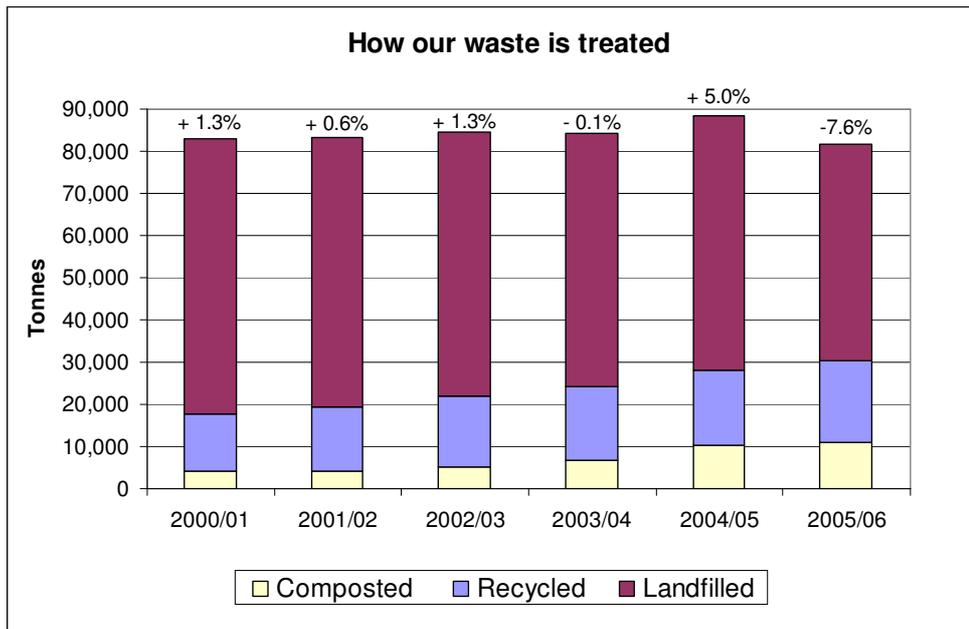


Chart 1. How all the waste we produce is treated

## 2. The Cost of Managing our waste.

When this strategy was originally written in 2004, every tonne of waste we disposed of cost £87.84, whilst every tonne of waste we recycled cost an average of £62.22

It is already cheaper, on average, to recycle waste than to dispose of it through the schemes that we have implemented, and the cost of waste disposal is forecast to rise substantially in future years.

- **Landfill Tax**

In 2006/07 we paid £21 per tonne in landfill tax for each tonne of waste sent to landfill. In 2007/08 this rose to £24 per tonne and every tonne of municipal waste that we landfill after April 2008 will cost us £32 in tax. This tax is due to rise by £8 per tonne per year until at least 2011.

This means that if we continue to landfill at current levels, by 2010 we will be paying £2.4 million in landfill tax.

- **New Legislation**

New laws are also making the cost of disposing of waste in landfill sites more expensive. Stricter environmental controls at the sites have increased the price we have to pay to the site operators. Legislation on the treatment of hazardous waste introduced in 2005 also increased waste management costs as this waste has to be treated in different ways.

- **EU Landfill Directive**

The European Landfill Directive requires the UK to reduce the quantity of biodegradable municipal waste that it sends to landfill to:

- 75% of that produced in 1995 by 2010
- 50% of that produced in 1995 by 2013
- 35% of that produced in 1995 by 2020

Biodegradable waste is waste that will rot down, such as paper, cardboard, textiles, wood, food and garden waste. This waste produces greenhouse gases and toxic liquids when rotting in landfill.

The Landfill Directive also requires certain types of wastes to be pre-treated before they can be landfilled and bans other types of waste from landfill sites altogether. This has increased the cost of managing these wastes.

- **Landfill Allowance Trading Scheme**

In order to meet its targets, the UK government implemented the Waste Emissions Trading Act 2003 which introduced a new scheme for local authorities called the Landfill Allowance Trading Scheme (LATS) which came into effect on 1<sup>st</sup> April 2005.

Under LATS, Councils are set allowances for the amount of biodegradable material they can send to landfill sites.

Individual councils have been allocated a fixed number of permits per year to allow this type of waste to be landfilled. The number of permits per year reduces in line with the Landfill Directive targets. Each permit equates to 1 tonne of biodegradable municipal waste.

**If we continue to landfill at current levels we could face fines in excess of £33 million over the next 15 years for exceeding our permit**

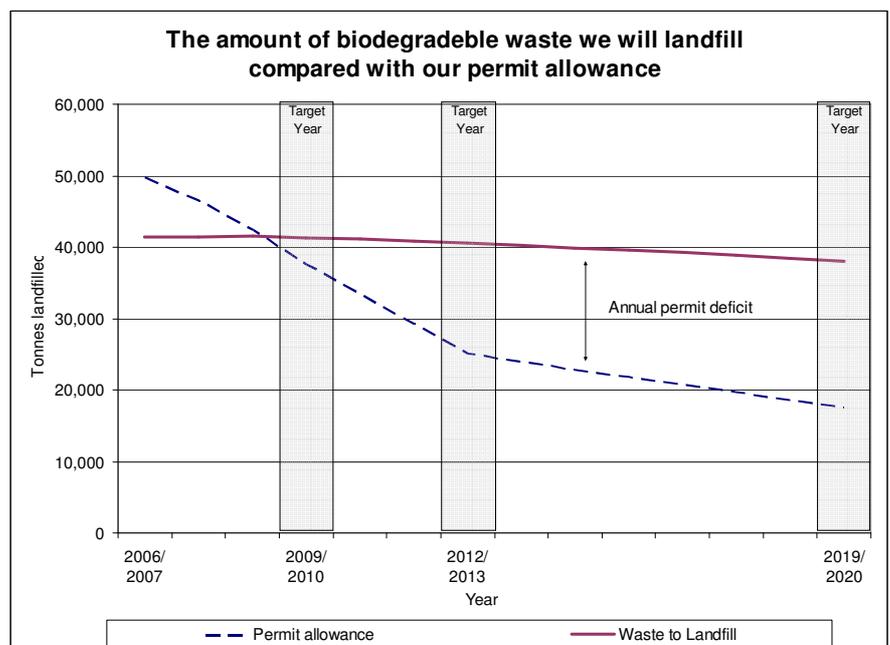


Chart 2. Shows the difference between our predicted biodegradable waste to landfill compared with our permit allowance

**allowance.**

These allowances are tradable in between the Landfill Directive target years. Local authorities who wish to landfill more biodegradable waste than they have allowances for

can either buy permits from authorities who have spare to sell (at the going market rate) – or alternatively face being fined £150 for each tonne landfilled above their allowance.



Chart 3. The projected annual cost of waste disposal if we do not increase the amounts we recycle, including fines.

Based on population and housing growth data and assessing current trends, we are currently forecasting that waste will grow by 1.23% for the following 3 years and by 0.7% thereafter.

**3. National Waste Strategy Targets**

In addition to the Landfill Allowance Trading Scheme, the national Waste Strategy 2007 has set more ambitious national and local authority specific targets to recycle and compost household waste, and recovery targets for municipal waste (all the waste that a local authority deals with) than the preceding Waste Strategy 2000.

**4. National Waste Strategy 2007 targets**

	2010	2015	2020
To recycle & compost household waste nationally	40%	45%	50%
To recover municipal waste	53%	67%	75%

The key objectives of the national Waste Strategy 2007 are: - to place more emphasis on reduction and prevention of waste; to ensure we meet and exceed the Landfill Directive targets; to increase the diversion of non-municipal waste from landfill (i.e. commercial and industrial waste); to increase the amount of recycling and recovery of energy and to secure investment in waste infrastructure.

## 5. What does this mean?

The waste management industry within the UK is undergoing a period of rapid change in order to meet the new legislative requirements and targets. New technologies are being developed to treat waste in different ways, by reducing its biodegradable content and producing valuable products such as fuels, electricity and soil conditioners.

As a local authority we cannot continue to rely solely on landfill to dispose of the majority of our waste. We need to develop new infrastructures to treat our waste in different ways to gain maximum value by viewing waste as a resource, and to reduce our reliance on landfill.

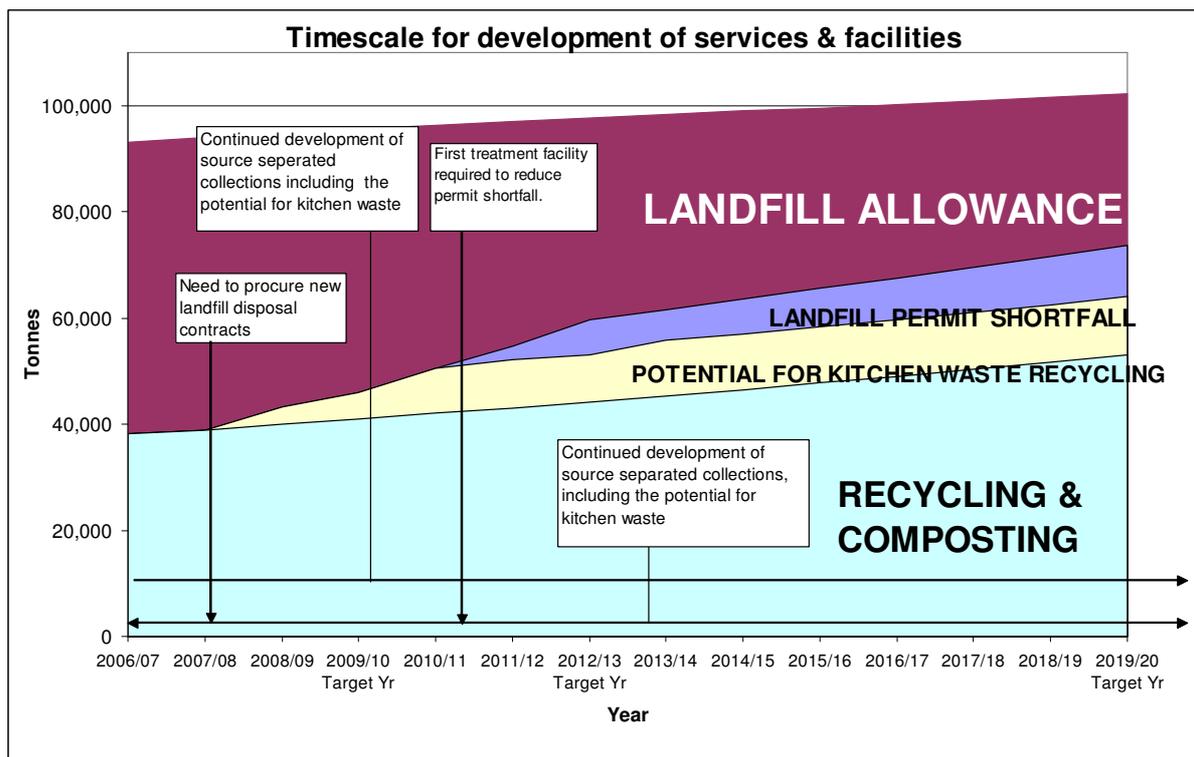


Chart 4. Proposed timescale for the development and implementation of new services and facilities, shown alongside the predicted tonnages of waste for treatment

We need to investigate new technologies that will increase the value that we can get from our waste and decide upon the most appropriate solutions for us to use.

It takes time to plan and build new facilities. We have begun this process now, and we are in the process of deciding what we need and how we are going to procure it.

We are doing this in partnership with our neighbours (Bristol City Council, South Gloucestershire Council and North Somerset Council) to ensure that we develop the most acceptable and cost effective solution for residents and businesses in the sub region.

## **6. Background information**

Bath & North East Somerset is a Unitary authority covering an area of 352 square kilometers (220 sq miles). The district has a population of 173,700 living in 74,833 households. Nearly half of the population lives in the city of Bath, making it 12 times more densely populated than the rural area of the district.

In summer months the population expands dramatically due to tourism, on average the district receives over 250,000 day visitors per month and over 72,000 of long stay visitors per month.

By 2016 it is forecast that the population will increase by 6% and the number of households will grow by 7%.

At the time of writing the draft Regional Spatial Strategy for the South West 2006 – 2026 predicts that a further 15,400 houses will be developed within Bath and North East Somerset by 2026. This will have an inevitable impact on waste growth within the district.

## **7. What we have done so far?**



The Council has decided to focus its energy and resources on 10 key improvement priorities within its Corporate Plan for the period 2003-2007. Reducing the amount of waste sent to landfill is one of these priorities. We are taking seriously the need to divert waste from landfill.

We are one of the top authorities in the country for recycling performance and were awarded Beacon Status in 2001 in recognition of our achievements. Other Councils are now beginning to achieve similarly high levels of recycling as a nationwide drive to increase recycling initiatives takes effect.

We have adopted a vision of “Zero Waste” to steer the development of our waste services. This means that we will strive to reduce, reuse and recycle as much waste as possible, and that we will work with businesses and the community to achieve this goal. We view waste as a resource and seek to gain maximum value from it, rather than viewing it as something simply to be disposed of. The vision of “Zero Waste” creates an innovative climate within which we develop our services.

We have worked hard with our community to develop new services and achieve good levels of recycling.

We have developed our Waste Awareness campaign to promote waste minimisation and recycling within our schools and our community.

In 2002 we expanded our green box service to collect plastic bottles throughout the district. We now collect 13 different items through the green box scheme.

In 2003 we introduced a new fortnightly collection service for garden waste and cardboard.

In 2004 we expanded the green box scheme to include batteries for collection. During 2004 we recycled 32% of our household waste through a combination of our weekly green box collection scheme, our fortnightly green waste and cardboard collection service for composting and through our Recycling Centres.



We have provided over ten thousand composting bins to enable people to reduce their waste by composting at home.

In 2005 we introduced a range of new measures at the Recycling Centres which significantly increased the amount of materials being sorted for recycling.

The new facilities and initiatives in place at our Recycling Centres have increased the amount of bulky waste that we recycle and improved the facilities for site users. We

have employed new staff to help and advise site users to recycle more and are continuing to increase the types of materials that we reuse and recycle from these sites.

In 2006 we installed cooking oil recycling banks at the Recycling Centres and started separating bric-a-brac for re-use through charity collections at the site.

We recycle as much waste as possible from our bulky waste collection service – items such as furniture and white goods.

We are continuing to work with our community sector partners to develop new schemes for minimising, reusing and recycling waste. For example:

- ✓ We work closely with ECT Limited, our recycling partner, in delivering our recycling services and developing new initiatives.
- ✓ We have developed new facilities at our Recycling Centres to recycle TV's, computers, tyres, bric-a-brac and electrical equipment.
- ✓ We work in partnership with the SOFA project and Genesis Trust, to enable items such as furniture and appliances from our Recycling Centres to be repaired, refurbished, and sold at low prices to those in need.
- ✓ We also work with a local charity, the Shaw Trust, to separate items at the Recycling Centres for re-use through their charity shops.
- ✓ We actively promote the use of Real Nappies to help reduce the amount of nappies disposed of to landfill.

- ✓ We continue to develop our waste awareness campaign including independent, local organisations who work in Bath & North East Somerset to encourage everyone to reduce the amount of rubbish that they produce.

We are proud of our achievements so far - but we cannot stop here, we must continue to invest in changes which will help us to reduce further the amount of waste that we landfill.

## **8. Existing Infrastructure**

We currently operate the following waste management infrastructure:

- 2 waste transfer stations where waste is compacted into bulk containers for haulage via road or rail to landfill
- 1 railhead where the compacted waste is loaded onto railway wagons
- 2 materials recycling facilities (MRFs) where materials collected via the green box scheme are sorted and bulked for onward transport to reprocessing facilities
- 3 Recycling Centres where the public can recycle and dispose of household bulky waste and hazardous wastes
- 2 refuse collection and cleansing depots where refuse collection and cleansing vehicles are stored and staff are based.

We have contracts with a number of companies throughout the country who reprocess and recycle our different waste streams.

## **9. Future Infrastructure**

There are regeneration proposals for the city of Bath which will require us to relocate our central waste management facilities which comprise of a transfer station, Materials Recycling Facility (MRF), a Recycling Centre and a refuse and cleansing depot.

As a Waste Planning Authority the Council has a statutory responsibility to allocate sites suitable for the treatment of municipal, commercial and industrial waste arisings within the district. The Bath & North East Somerset Local Plan including minerals and waste policies, Revised Deposit Draft 2003, sets out the Council's land-use policies for waste management. We are working closely with Planning Officers to ensure that our waste strategy will be deliverable through the planning system.

The Local Plan makes provision for the development of new sites at Keynsham. The Council has now purchased a suitable site in Keynsham with a view to relocate waste transfer and refuse collection infrastructure from central Bath.

An investigation into the provision of Recycling Centres in the district has found that ideally there is a need for two public Recycling Facilities in the Bath area to replace the one existing central facility. After an extensive site search only one site has been identified as a preferred option to take forward to the planning stage to replace the Midland Road facility.

We are continuing to carry out further investigations into sites to fully explore their feasibility, and are working with other local authorities to ensure that our approaches are

coordinated, sustainable and provide realistic and economical solutions.

If developed, these sites will be subject to full public consultation through the planning process.

### 10. Waste Facts & Figures

We closely monitor every tonne of our waste and have detailed information compiled on waste flows since the authority was formed in 1996.

We submit data to a national database called WASTEDATAFLOW which the government introduced in 2004.

We carry out detailed analysis and forecasting of waste tonnages to ensure that our recycling targets are met and that budgets and trends are closely monitored. This has enabled us to develop our services in the most cost effective way to achieve maximum benefits to date.

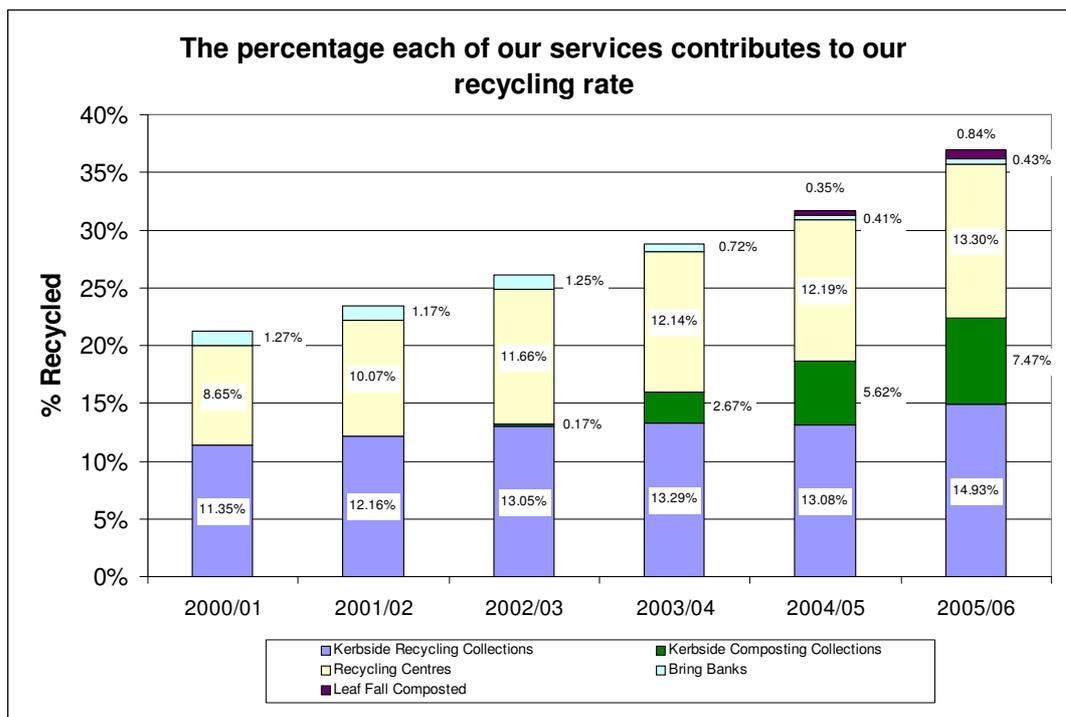


Chart 5. How each recycling service contributes to our overall recycling rate

Our recycling performance has improved steadily over the past 6 years as we have introduced new schemes and intensified our waste awareness programme to encourage participation in recycling schemes.

We are currently exceeding our statutory target and achieving a recycling rate of 38% - but we want to do more and are striving to achieve 45% recycling by the end of 2008/09.

We undertook a detailed seasonal compositional analysis of our own waste in Bath & North East Somerset in 2007; this enables us to calculate where our capture rates of materials could be improved.

Composition of total material arisings, in kg/hh/yr and as a percentage

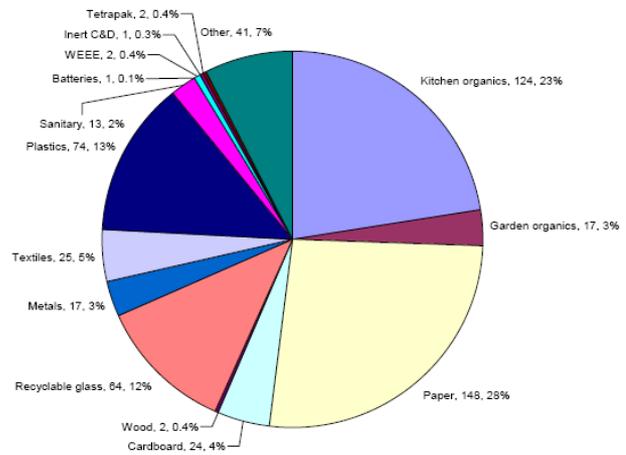


Chart 6. Composition of the average waste bin in Bath and North East Somerset, August 2006

This information also allows us to focus our attention on maximising the capture rates of specific materials that we collect throughout our existing schemes, and identifies areas for potential expansion.

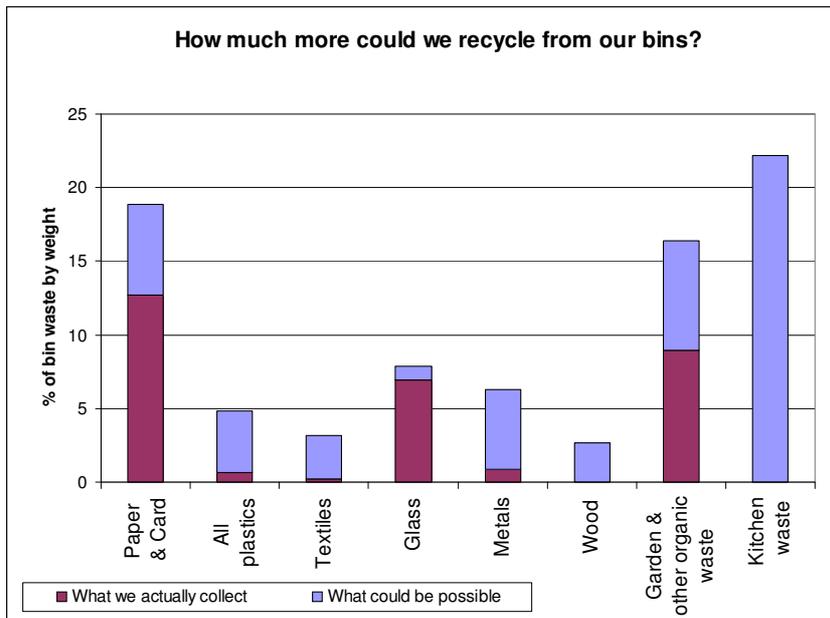


Chart 7. What we currently recycle shown against the amounts we could recycle from our bin waste

For example, kitchen waste can clearly be seen to be a high tonnage biodegradable material.

The development of a comprehensive recycling scheme for food waste has the potential to divert an estimated 10,000 tonnes of this material from landfill each year.

### 11. What do we need to do now?

We now need to build on our existing schemes to make sure that they are used and developed to their maximum potential. We must also develop new ways of diverting waste from landfill which will enable us to treat our waste cost effectively, to maximise the value that we can get from it, and ultimately to meet our landfill diversion targets.

## **A. Key development areas for the strategy over the next 5 years.**

We must:

- **1.1 Arrest Waste Growth**

We must tackle the growth in waste arisings through working with government, business, retail, commerce and local communities to identify areas where local action can be taken.

- **1.2. Develop new programmes to increase community engagement on waste issues**

In striving to achieve our vision of Zero Waste we must engage with all members of the community. We cannot do this alone and must work closely with our partners including the Community Sector, the business community, our Local Strategic Partnership, the waste industry and other local partners in order to be successful. In addition we must work with local business to identify ways in which we can encourage and enable the development of infrastructure for the recycling of commercial and industrial waste.

- **1.3. Invest further in education & campaigning on waste awareness issues**

Working with local and national media we must further develop our waste awareness campaign to raise awareness of waste issues within our schools and communities and to deliver increased participation in recycling schemes. We will develop and trial initiatives that reward and incentivise communities to participate in recycling schemes, and will encourage long term individual behavioural change in dealing with the waste that we each create.

- **1.4. Focus on the longer term**

It will take several years to design and build new facilities to enable waste to be treated in different ways. We must plan now for the longer term.

- **1.5. Develop appropriate local infrastructure**

We must examine our existing waste management infrastructure and the collection and disposal services that we currently provide to ensure that they are appropriate to deliver maximum diversion from landfill and Best Value to the authority and its residents. Our city centre waste management facilities will need to be relocated due to a planned redevelopment of the existing site.

This presents the opportunity to thoroughly review our methods of managing waste and to develop new infrastructure to increase the amount that we recycle and divert from landfill. The review will include the following:

- **(i) Review Collection and Recycling methodologies**

We must review our existing methods of collection to ensure that they are designed to maximise participation in recycling schemes.

We undertook a market test our Operational Services in 2006/07 in order to ensure Best Value was being achieved. Our landfill disposal contracts expire in 2008. This has presented the opportunity to specify new ways of working.

- **(ii) Pursue a 3 stream approach**

We must develop new schemes to divert biodegradable waste away from landfill, with a priority being to develop a business case to demonstrate the viability of implementing weekly kitchen waste recycling collections, and to secure appropriate infrastructure to treat this waste. Kitchen waste collections were specified within the market test of our recycling contracts and have enabled us to thoroughly assess the costs of undertaking this.

A 3 stream approach should enable us to achieve levels of 50% recycling and above through the:

- *Kerbside Collection of Dry Recyclables*
- *Kerbside Collection of Organic Waste (including kitchen waste)*
- *Pre-treatment of residual Waste*

- **(iii) Develop Recycling Centre infrastructure to increase levels of repair, reuse & recycling**

We are currently reviewing and developing service provision at our Recycling Centres with the aim of recycling 70% of the waste brought into these sites by the end of 2007/08. Currently the Recycling Centres are achieving an average rate of 68%. A programme for performance improvement is in place. Two new sites are currently being sought to replace the existing Midland Road site in the city of Bath, planned for 2011, these will be designed to maximise the recycling of waste.

- **(iv) Evaluate alternative treatment technologies**

We will review existing and emerging technologies to ensure their appropriateness as a solution for our waste and will consult with our local communities in determining appropriate solutions.

- **(v) Procure landfill capacity beyond 2008 for waste which cannot be treated in any other way**

Options for disposal outlets beyond 2008 in the medium and long term are currently being evaluated, including the means of transporting waste to these facilities.

Alternatives to landfill disposal are being explored within this process such as other ways of treating waste mechanically, biologically and thermally to gain additional value from it.

- **(vi) Work with others to achieve Economies of Scale and Best Value**

As a relatively small unitary authority the quantity of waste that we deal with is small in comparison to other waste disposal authorities. More practical, cost effective and deliverable solutions may be achieved by working in partnership with our neighbours who are facing similar issues.

We are actively working with authorities within the framework of the West of England Partnership (Bristol City, North Somerset and South Gloucestershire) to determine the potential for sub-regional solutions for our waste.

We are developing a West of England Residual Municipal Waste Management Strategy

and a joint waste core strategy (a land-use planning document). The planning documents will inform the allocation of sites for strategic waste management facilities, for all waste arising within the sub-region.

Throughout 2005 a government funded study was undertaken to identify the most appropriate technologies for the sub-region, and the appropriate scale and mix of these facilities that would be needed to implement the most cost effective and environmentally desirable solutions. The results of this study have been fully consulted with local communities within each of the authority areas and will be used to inform procurement processes and timescales for delivery of facilities.

## B. How will we do it?

### Our 5 year Action Plan

We have developed an outline action plan to manage the developments set out above. This action plan covers the period 2005-2010 and will be reviewed and updated at least annually. Set out below are the key actions for each year

#### 2005/06 – year 1 – Recycling target 36%

ACTION 2005-06	UPDATE
Recycling Target 36%	Actual achieved 37%
Review refuse & recycling collection methodologies making recommendations for improvements both short & long term	<ul style="list-style-type: none"> <li>• Refuse Collection methodology reviewed and “edge of property” collections implemented in June 2006.</li> <li>• WRAP funded study completed into recycling collection methodology</li> </ul>
<p>Agree specifications and the delivery mechanisms for our future waste and recycling services. Detail service options to be appraised through market test including the implementation of kitchen waste collections.</p> <p>Embark upon the market test and procurement of our waste and recycling services.</p>	<ul style="list-style-type: none"> <li>• Soft Market Test carried out to gain industry views.</li> <li>• Procurement through restricted procedure undertaken. Invitation to Tender issued to 11 companies. Specifications include new service options such as kitchen waste collections and the introduction of wheelie bins.</li> </ul>
<p>Assess existing infrastructure. Determine improvement potential and identify specific sites required due to relocation need. Develop and approve the detailed infrastructure project plan.</p> <p>Work closely with the Bath Western Riverside project team to ensure our plans synchronise with the Bath Western Riverside objectives.</p>	<ul style="list-style-type: none"> <li>• Project plan agreed</li> <li>• Improvement potential of existing infrastructure detailed.</li> <li>• Executive Decision taken to relocate from Midland Rd</li> <li>• Site purchased in Keynsham for replacement of some of the facilities currently sited at Midland Rd Bath.</li> </ul>

<p>Develop a West of England Municipal Waste Management Strategy for consultation jointly with constituent local authority planning and waste management teams.</p> <p>Assist in determining the options for a West of England Joint Waste Planning Strategy with constituent local authority planning and waste management teams, and contribute to the preparation of waste local development documents that determine sites and locations for strategic (and where appropriate, local) waste management facilities.</p>	<ul style="list-style-type: none"> <li>• West of England Project Board established 2005</li> <li>• Strategic Consultation Forum established 2006</li> <li>• Public Consultation on Issues and Options completed</li> <li>• Technical Options Appraisal throughout 05-07</li> <li>• Joint Residual Waste Municipal Waste Management Strategy developed</li> <li>• Council Executives and Council Decisions taken to prepare joint waste development plan document.</li> </ul>
<p>Develop, publish and implement a 3 year communication strategy and action plan for our Rethink Rubbish Waste Awareness Campaign, including the use of local recycling league tables to encourage communities to embrace our zero waste vision.</p> <p>Increase resources to enable further development of the Rethink Rubbish Waste Awareness Campaign, specifically working with secondary schools and local communities.</p>	<ul style="list-style-type: none"> <li>• Communications strategy published</li> <li>• League Tables in development</li> <li>• Successful application to become WRAP home composting partner</li> <li>• Successful funding bid to WRAP behavioural change fund 2006 to tackle recycling in “hard to reach” areas.</li> <li>• Rewards and incentive schemes carried out in targeted areas of the district.</li> </ul>
<p><b>ACTION 2006-07</b></p>	<p><b>UPDATE</b></p>
<p>Recycling Target 38%</p>	<p>Actual Achieved 39%</p>
<p>Award and implement the Waste Services contract/s.</p>	<ul style="list-style-type: none"> <li>• Completed</li> </ul>
<p>Pursue the procurement of capacity for kitchen waste composting.</p> <p>Pursue the resourcing and phased implementation of source separated kitchen waste collections from the household</p>	<ul style="list-style-type: none"> <li>• Review of best practise undertaken and options built into the market test specification.</li> <li>• It is intended this will now be implemented in spring 2009.</li> </ul>

Consult upon the West of England waste strategy	<ul style="list-style-type: none"> <li>• First draft of Joint Municipal Waste Strategy developed</li> <li>• First and second phases of the Public Consultation completed.</li> <li>• Technical Options Appraisal completed</li> </ul>
Resource and implement the infrastructure project plan (transfer stations, recycling centres, material recycling facilities, other treatment facilities and depots).	<ul style="list-style-type: none"> <li>• Project plan developed and implemented</li> </ul>
Develop and agree procurement options and detailed procurement timetable for infrastructure provision, both local and sub-regionally.	<ul style="list-style-type: none"> <li>• Project plans developed</li> </ul>
Develop specifications and commence the procurement of infrastructure and new treatment facilities.	<ul style="list-style-type: none"> <li>• Begin 2007</li> </ul>

#### **2007/08 – year 3 – Recycling target 40%**

- Implement the revised refuse and recycling collection methodologies as determined through the award of waste and recycling services contract/s. This will include the timetabled expansion of kitchen waste throughout the district.
- Procure disposal facilities to be available from 1st April 2008.
- Continue the procurement process for the infrastructure and new treatment facilities.

#### **2008/09 – year 4 – Recycling target 45%**

- Award the contract for the development of new facilities – Bath recycling centre, plus additional transfer facilities and treatment processes.
- Commence the construction of new facilities

#### **2009/10 – year 5 – Recycling target 50%**

- New facilities operational.
- Relocate from existing Bath facilities
- Review waste strategy. Approve 5 year action plan outline.

This document summarises key actions in order to help us meet our targets. For more detailed information please see our website at [www.bathnes.gov.uk/wasteservices](http://www.bathnes.gov.uk/wasteservices) or telephone 01225 394041 to request leaflets and information on any of our waste services.

Further information on the National Waste Strategy and central Government legislation can be found at [www.defra.gov.uk/environment/waste/strategy/cm4693/index.htm](http://www.defra.gov.uk/environment/waste/strategy/cm4693/index.htm)