

# Joint Waste Strategy

(Subject to adoption)

## Joint Residual Municipal Waste Management Strategy Summary Version



**RUBBISH**  
or Resource?

West Of England Waste Management  
& Planning Partnership



# Foreword

Managing waste in the most sustainable way possible is one of the key responsibilities facing us all in the West of England. The need for councils and residents to work together on managing household and other waste has never been more important than it is now. With a planned programme for housing growth and development in the West of England, it is paramount that we have the right infrastructure in place to serve our community for years to come.

This strategy provides a recommendation for how waste is to be handled over the next 20 to 30 years. It is based upon a rigorous assessment of the range of technical options available and offers flexibility to allow for changes in future population, waste levels, technologies and priorities.

This Joint Waste Strategy looks carefully at the balance between three main issues: environmental impact, the proven effectiveness of the available technologies, and affordability for council tax payers.

## Introduction

This Joint Waste Strategy has been developed by the partner authorities of Bath & North East Somerset, Bristol, North Somerset, and South Gloucestershire. Together they have formed the West of England Waste Management and Planning Partnership to define a way to manage the residual waste generated in this area for the next 20 years and more.

- Residual waste is what is left after we have reduced, reused, recycled or composted as much as we can.



Buying loose fruit and vegetables saves packaging and reduces waste

Bath & North East  
Somerset Council



# The Joint Waste Strategy

## Why make changes?

The way we manage our residual waste is an important factor in dealing with the issue of climate change. By reducing the waste we send to landfill we can reduce the amount of landfill gas produced by that waste. Landfill gas is largely composed of methane, one of a number of greenhouse gases that cause climate change. Methane is 24 times more potent than carbon dioxide. European and UK legislation requires local authorities to reduce the amount of biodegradable\* waste they send to landfill on a yearly basis to 2020.

\*Biodegradable waste is the organic part of the waste that rots down to produce landfill gas.

Councils, as Waste Disposal Authorities, have a legal duty to dispose of waste. But the scarcity of landfill capacity means that this is an increasingly expensive option. Add this fact to the steady rise in landfill taxes and it is clear that continuing to use landfill becomes very costly indeed, if we fail to divert sufficient waste.

Fines will be levied by the UK and EU Governments and will have to be met from the councils' existing financial resources. So, if alternatives to landfill are not found, then the councils in West of England will face a number of severe financial penalties.

## Our Vision

The four local authorities in the West of England area are working together to develop, in consultation with local residents and other stakeholders, a range of facilities for the treatment of residual municipal waste.

These will deliver significant reductions in the amount of waste, particularly biodegradable waste, being sent to landfill sites. They will also maximise the efficient recovery of resources and encompass environmental, social and economic factors.

Each local authority will maintain a long term commitment to increase waste reduction, reuse, recycling and composting, and will move toward a longer term aim of achieving zero waste.

## Why a joint strategy?

We believe that working in Partnership provides best value for the tax payer and offers economic, environmental and social advantages such as:

- Maximising economies of scale
- Minimising environmental impacts
- Minimising transport requirements

This strategy has been developed in response to significant challenges – including local, national and international obligations for meeting environmental targets and policies.



## Our aim

Our principal aim is to develop a sustainable action plan for residual municipal waste management in the West of England. This will enable us to meet or exceed the landfill diversion targets for biodegradable municipal waste, set down by Government.

This aim will be achieved:

- In consultation with local residents and special interest groups;
- As soon as practicable – to avoid unnecessary financial penalties and landfill tax costs;
- To comply with all environmental laws and regulations.

# Strategy context

## How much waste is generated in our area?

Residents and businesses in the West of England area together generate around 1.5 million tonnes of rubbish every year. (A line of wheelie bins with this amount of waste would stretch for 2000 miles.)

Much of this is handled by the commercial waste industry and is sent outside our area. But by 2020 we will have to find space for a further 800,000 tonnes per year – that's enough waste to fill four major sports stadia **every year**.

Imagine Ashton Gate, the Memorial Ground, the County Cricket Ground and the Bath Recreation Ground all full of waste.



With around 100,000 new homes coming to the West of England in the next 20 years, this is a problem which will not go away.

Just under half of the 800,000 tonnes is household waste and has to be managed by the councils. But councils still have a legal requirement to plan for where the rest of it is to be recycled or disposed of, even if they don't commission or run the facilities.

A separate planning document is being prepared to look at options for locating new waste facilities and the public will be consulted on this later in 2008.

Failure to divert from landfill could cost West of England councils **£12.7 million in 2019/20 alone**



## The Waste Hierarchy

- The waste hierarchy demonstrates the right way to assess action on waste. It stresses that waste prevention and reduction should always take priority over other methods of waste management with disposal i.e. landfill, being the last option.

The Waste Strategy for England 2007, focuses on the importance of this waste hierarchy. It emphasizes waste prevention and gives greater responsibility to businesses for the environmental impact of their products and operations.



# Biodegradable waste (waste that rots)

## The Landfill Allowance Trading Scheme (LATS)

The government permits a diminishing amount of biodegradable municipal waste to be sent to landfill. Councils sending more than their permitted annual LATS allowances will be fined. These landfill allowances can be traded (bought and sold) with other councils who have excess permits. Trading prices will fluctuate with demand.

Fines for sending excess biodegradable waste to landfill will be £150 per tonne. Failure to divert from landfill could cost West of England councils £12.7million in 2019/20 in that year alone.



### Going down...

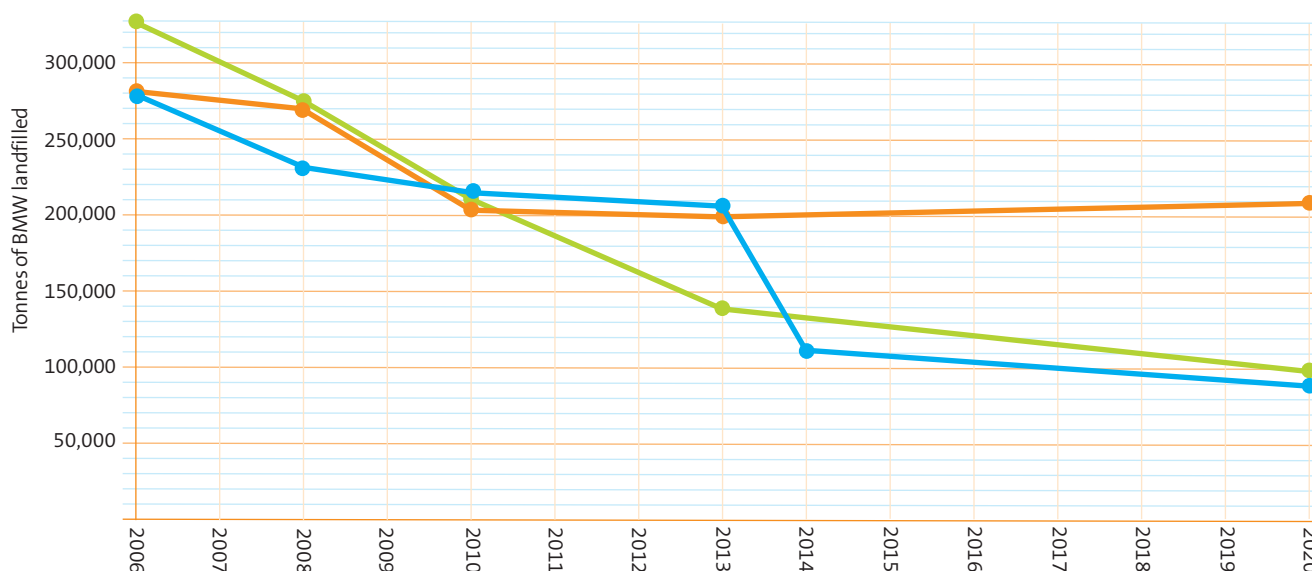
The amount we are allowed to send to landfill.



### Going up ...

The amount of waste we have to deal with will inevitably rise – despite our very best efforts at recycling – due to increasing population levels.

### ● Predicted biodegradable waste levels in relation to LATS allowances



In the graph above:

- The green line is the amount of biodegradable waste we are permitted to send to landfill without paying fines. This level is set by government and is irrespective of population growth.  

- The orange line shows that until 2010 there is a steady reduction in biodegradable waste due to planned improvements in recycling and composting. Future population growth means this still rises a little over time, to well above the permitted level.  

- The blue line shows what will happen when **Phase 3** of this strategy (see page 7) is implemented. From 2015 we will drastically reduce the amount of biodegradable waste going to landfill and we will be below the line for LATS fines.



# Recycling

## Recycling and the 3Rs

**We are good at recycling and aiming to be even better**

 **reduce**

 **reuse**

 **recycle**

All four authorities have made great strides to improve recycling services and each intends to continue making further improvements.

A fundamental part of the Joint Waste Strategy is to increase the levels of recycling and to place even greater emphasis on the importance of waste reduction/prevention.

An education and awareness programme will bring this important issue to the forefront. We will try and ensure that services reach all residents in all areas, and we will introduce schemes that allow us to recycle additional materials that are currently not collected in some areas, for example, kitchen waste. We also intend to encourage more people to separate out their waste and participate in recycling.

The government requires us to recycle half of all our rubbish by 2020. Here in the West of England it is our ambitious aim to match or exceed these targets for recycling and composting. In fact in some areas we are already well on our way to meeting these targets nearly ten years in advance of the deadline. That doesn't mean we will be complacent. The commitment to reduce waste and increase recycling is in all our environmental and financial interests.

### However

High recycling and composting rates alone are not enough to meet the longer term targets for diverting biodegradable waste from landfill. Further treatment will still be required on the waste which is left over i.e. residual waste.

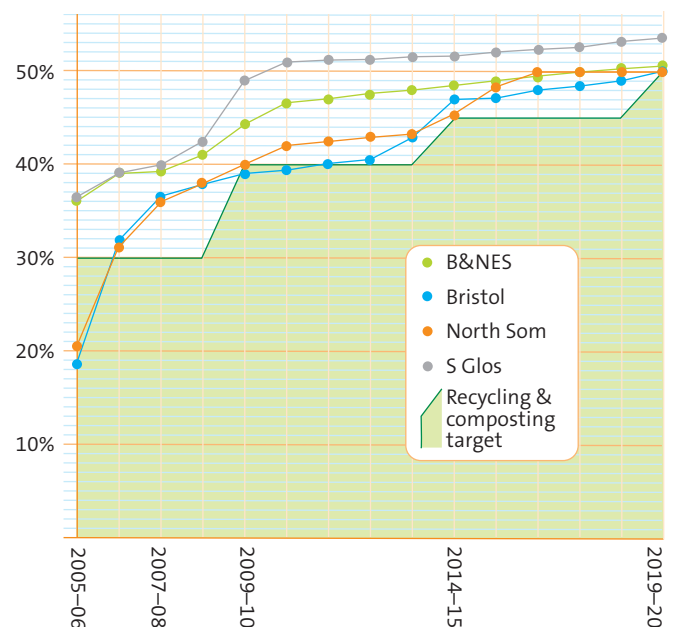
### This means

- New recovery and disposal facilities will need to be built to ensure compliance with the LATS from the Waste and Emissions Trading Act, 2003.
- Landfill will be used as the last option after residual waste treatment and for wastes that cannot be treated.

The graph shows how rapidly we have increased our recycling levels in the last few years and how this will continue.



### ● Predicted recycling and composting performance



# What the public told us

**Two high profile consultations have helped us understand the public's views on a range of waste and planning matters. The second of these – held in Spring 2007 – was on the Issues and Options for Waste in the West of England. Several key themes emerged:**

## **Reduce, Reuse, Recycle**

Many people want to see more emphasis placed on reducing waste levels and on increasing the opportunities to reuse and recycle.

## **Waste treatment technologies**

Thermal Treatment of waste which produces energy is generally seen as a viable and effective technology for treating residual waste. 58% chose Energy from Waste (EfW) as their preferred technology option.

## **Carbon footprint information**

Some people requested more information about the carbon emissions impact of the proposed technologies.

## **Reduce transportation**

The need to see a reduction in the distance that waste is transported was frequently expressed.

## **Small and local facilities**

Many voiced an opinion in favour of a large network of smaller facilities widely dispersed across the area.

## **Complex data**

It was recognised that a high degree of expertise is needed to make decisions about complex technologies. However, people welcomed the opportunity to comment where they were able to.

## **In addition to this ...**

- Consultation events were held with environmental interest groups and with waste and industry professionals to gather as wide a range of well informed opinion as possible.
- In an exercise to test the waste industry's specific views, the West of England team also spoke directly to representatives from a number of waste management companies. This helped in understanding the market drivers as well as the options and availability of treatments for two of the key phases of the Joint Waste Strategy. The industry representatives gave support to a phased approach.
- West of England project leaders have also liaised with key representatives from the Department for the Environment and Rural Affairs (DEFRA) and with the Government Office South West (GOSW) to ensure that the Joint Waste Strategy is being developed in accordance with government guidelines.



# The Joint Waste Strategy – a phased approach...

## A phased approach...

In preparing The Joint Waste Strategy, The Partnership has not only listened to the public's views, but has also taken into account technical, environmental and financial issues; as well considering the practical requirements of the waste industry which will build and operate any new facilities.

As with any major item of new public infrastructure, it will take time to finance, procure and build new waste treatment facilities. The most

likely date for a new facility to be operational is 2015. However, between 2010 and 2015 there will remain a need to resolve the financial challenge that LATS penalties present. So, for maximum flexibility, the approach we have taken is one which can be implemented in phases.

Central to this approach is a committed and continual desire to reduce the amount of waste and to increase recycling targets to meet or exceed those set out by the government.

## Phase 1: Waste reduction and source segregation



- The Partnership will create greater awareness of the need to reduce waste and will generate publicity to encourage a reduction in the amount of residual waste generated by each person or household. We will explore and provide more opportunities to improve the way materials are segregated at their source through a range of improvements to waste collection services.
- This strategy encourages and expects each council to aim as high as it can to achieve the best possible recycling rates. If retailing practices and consumer lifestyles change sufficiently then, in the future, we may all be making very little waste, and be able to recycle more than ever before.

## Phase 2: Interim treatment for waste



- The Partnership has the option to trade Landfill Allowances during the period to 2015, but recognises that it would be better to divert waste through a treatment process.
- The treatment solutions that would be considered in Phase 2 include methods using a variety of mechanical, biological and autoclave treatments which would reduce the amount of biodegradable waste sent to landfill. They are variants of those listed as Options 2, 3 and 4 in the Issues and Options consultation.
- An initial short term contract of 5–10 years is envisaged for this phase which may overlap with Phase 3.
- Facilities would not be built, run or owned by the West of England Partnership. Instead they would be owned and operated by one of the waste industry companies.
- The Partnership will seek competitive bids for the use of facilities as needed.

# The Joint Waste Strategy – a flexible approach...

## Phase 3: Waste treatment to meet LATS to 2020



- A three partner group (Bristol, North Somerset and South Gloucestershire) consider that Energy from Waste by incineration (EfW with power generation and heat recovery) should be used as a benchmark or “reference” project with which to measure any facility proposed by the waste industry. Any such facility must meet the need to avoid LATS fines in the period up to 2020 as well as fulfilling a wide range of criteria that have been established through a rigorous technical options appraisal process. It is expected that the size or capacity required for use by the three councils would be 160,000\* tonnes per annum.
- Procurement, planning, construction and commissioning a major contract takes time but the aim is for it to be operational by 2015.

\* See over page for explanation of size.

## Phase 4: Longer-term treatment – beyond 2020



- Beyond 2020, there is great uncertainty in the waste industry about which of the new and emerging technologies, such as pyrolysis/gasification (which is currently being piloted in the West of England) will prove their worth. Many other factors could influence future choices. These include the way people respond to future recycling and waste reduction initiatives, government policies, climate change actions, LATS trading practice after 2020 and the success of new technologies.
- We recognise that new technologies are being developed by the waste industry and, for the longer term outlook, it would be sensible to see how the market develops.

## A flexible approach meets the councils' individual needs

All four authorities of the West of England are committed to working together to reduce waste and reduce the impact that waste has on our community and our environment. Throughout Phases 1, 2, and 4 the partnership is supported by all four councils.

Bath & North East Somerset intend to work in partnership to procure “Phase 2” facilities to treat residual waste for a 5–10 year period. During these years they will continue to develop further Zero Waste initiatives and increase recycling within their area.

They will not take part in the procurement of facilities during Phase 3.

Bath & North East Somerset will consider whether an extension of the Phase 2 contract would be appropriate to fulfil their needs for a longer period. They will assess any viable alternatives that may exist at that time.

Bath & North East Somerset will work jointly with the partnership when Phase 4 approaches around 2020.

# You may well ask...

## What's the alternative?

- We looked at the financial implications of making no changes at all. This would mean continuing to export waste to landfill and paying LATS fines. The effect would be to impose a serious financial burden on council tax payers and so we regard “doing nothing” as an unsustainable and environmentally unacceptable option.
- New and interesting technical advances are being made in waste management. Until they are proven to be efficient and effective in dealing with household waste they remain experimental. By Phase 4 these new methods, if successful, will be considered.



## Why is Energy from Waste the benchmark in Phase 3?

- The Technology Options Appraisal, the consultation and the funding options appraisal have shown that EfW offers a viable and robust reference technology against which all others can be evaluated following competitive tendering.
- It is a tried and proven technology, with a track record of good performance in both the UK and Europe.
- It offers an opportunity to provide power/heat for local users.
- It is safe and clean.

*For more information about Energy from Waste visit [www.rubbishorresource.co.uk](http://www.rubbishorresource.co.uk)*



## Why this size?

- The size of 160,000 tonnes per year has been deliberately chosen to be just big enough to avoid paying LATS penalties to 2020. But it is not big enough to handle all the waste we will produce. So there will remain a powerful incentive to continue waste reduction, recycling and reuse practices.
- If we are continuously successful in reducing the amount of waste we produce, any surplus capacity can be made available for business and industrial waste.



# Making it happen – implementing the strategy

## Future milestones

Preliminary work on this Joint Waste Strategy started in 2005. Since then a great deal of research and two major public consultations have taken place.

Commercial waste management companies have also been canvassed to discover their views on the ideas in this waste strategy.

- **2008 June – July:**  
Joint Waste Strategy Document to be approved by each UA.
- **2008 September:**  
Phase 2 – Commence procurement of interim treatment contract.
- **Late 2008 – early 2009:**  
Statutory Consultation on the Joint Waste Development Plan Preferred Options (Planning).
- **2009 January:**  
Phase 3 – Commence Procurement process.
- **2009:** Submission of the Joint Waste Development Plan Document to the Secretary of State .
- **2011 April:**  
Phase 2 – Commence interim treatment contract.
- **2011:**  
Adoption of Joint Waste Development Plan Document.
- **2011–2014:**  
Phase 3 – Planning, consenting, construction and commissioning of facility.
- **2014/15:**  
Phase 3 – Commence facility operations.
- **2015–2018:**  
Phase 4 – Major review of Joint Waste Strategy and technology options.
- **2018–2020:**  
Phase 4 – Procure/commission as appropriate.

## Strategic Environmental Assessment (SEA)

The SEA Environmental Report, issued in January 2007 and revised in April 2008, highlighted the importance of regular monitoring procedures and reviews to ensure that sustainability objectives are met.

- The commitment to sustainable as well as efficient recovery of resources.
- The recognition of the benefits of energy efficiency in waste management and the importance of minimising greenhouse gas emissions.
- The inclusion of a policy to promote public awareness and information on waste management issues.

## Monitoring and reviewing

- This Strategy will be monitored for compliance with government policy and guidance ensuring it is current and relevant in the light of changing circumstances.

The Strategy will be subject to regular review and revision.

## Planning and locations

- A separate planning document is being prepared to look at options for locating new waste facilities and the public will be consulted on this later in 2008.

# Contact us

The full length technical version of this Joint Waste Strategy may be viewed and downloaded from the website:

[www.rubbishorresource.co.uk](http://www.rubbishorresource.co.uk)

The [www.rubbishorresource.co.uk](http://www.rubbishorresource.co.uk) website also contains background and supporting documents, full consultation results and other information relating to the Joint Waste Strategy and the joint development plan.

If you wish to speak to an officer involved in the preparation of this report please contact us by e-mail; [info@rubbishorresource.co.uk](mailto:info@rubbishorresource.co.uk) or alternatively call any of the following numbers:

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● If you would like this document in another language, large print, Braille or audiotape please contact 01454 863 860 or 0117 922 3838.