

18 January 2008

Statement to the West of England Waste Management and Planning Strategy Joint
Overview and Scrutiny Reference Group 21/1/08 on behalf of Bristol Friends of the Earth

You may be aware of the statement submitted to the Joint Waste Board meeting on 18 December by Bristol Friends of the Earth, which I attach to this statement for reference. In our submission we highlighted a number of problems with the Rubbish or Resource Consultation and the Joint Residual Waste Strategy. We were disappointed that so few of our questions were addressed during the meeting, and hope that some of these issues will be pursued by the Scrutiny Reference Group.

We remain concerned that

1. no modelling/costing work was done for a scenario assuming 50% recycling rates by 2010
2. no modelling/costing work was done for a 'greener' and, we believe, in the long-term cheaper and more flexible scenario in which the West of England authorities:
 - a) adopt a 50% recycling target ASAP
 - b) work on waste minimisation, and
 - c) use a range of smaller-scale waste treatment facilities, rather than one large incinerator.

We would welcome any recommendation by the Scrutiny Reference Group that the Joint Waste Board should commission some alternative costed scenarios. At present, all that has been costed is one large incinerator vs one large BMT plant. These options are obviously attractive to waste contractors, and easiest to manage in terms of procurement, but may not offer best value – financially or environmentally – for the people of the West of England. We are concerned that the market is being allowed to dictate the solution to us, rather than that we are getting what we want.

No costing has been made of an alternative plan that has maximum recycling and waste minimisation at its heart, and employs a mix of relatively small-scale plants using, for example, anaerobic digestion with energy generation for food waste; a composting system for garden waste; and MBT (after sorting to remove all remaining recyclables and with stabilised output going to landfill) for the mixed residual waste.

We fail to see how any WoE councillors can make an informed decision on waste strategy without considering these sorts of alternatives.

Incineration-based Energy-from-Waste is being presented as a tried-and-tested low risk option, but the following elements of risk connected with incineration have been deliberately factored out of the Joint Residual Waste Strategy.

1. Potential changes in the waste stream have not been taken into account, because these are 'too unpredictable'. In 2006 in Bristol, we saw a great rise in recycling rates and an associated drop in residual waste. Some people may consider that such a massive change in behaviour is unlikely to occur again, but what happens to the waste stream when we introduce tetrapak recycling, or the government bans single-use carrier bags? How will a long-term fixed-volume contract to an incinerator operator deal with this waste shortfall? Will the WoE end up paying to buy-in waste in order to satisfy our waste volume obligation?

2. What happens when the incinerator breaks down? As pointed out in our previous statement, incinerators are unreliable. There are 20 EfW incinerators in the UK. One of these is currently out of action, one has had a recent fire, one is described as being 'more often off than on', and two others have had major breakdowns in the past year. Councils need to have a contingency plan for dealing with the waste when the incinerator is out of action. This is likely to involve additional landfill disposal costs.

3. Who is liable for incinerator repairs or increasing costs in construction? The Allington incinerator in Kent is currently out of action, undergoing extensive repairs following its failure during test-firing. The contract was awarded in 2004, when there was little incinerator construction on-going in the UK. Under Kent's contract, the incinerator operator is liable for the repairs, but it is suggested that contracts awarded now, would not be so favourable.

As we highlighted in our previous statement, in Brighton, the cost of their incinerator has doubled since work began in 2003. The contractors there, though tied-in to bearing the additional construction costs, threatened to pull out, and in order to placate them, the local Council agreed to grant them an additional 5 years' contract on top of the 25 years already agreed. This is costing them £25 million.

4. What happens if the incinerator operator says it is impracticable to harness the waste heat from its operation? Government guidance states that incineration-based EfW plants should generate electricity and harness waste heat where 'practicable'. This condition is the key problem – incinerator operators will try to wriggle out of this aspect of their contract as it is expensive for them to implement; they are likely to claim that there is no customer for their heat. If an incinerator scheme goes ahead solely with the aim of generating electricity, this will take the efficiency of the plant down from 50–70% to around 27%. The West of England will also leave themselves open to legal challenge if they go ahead with a scheme that does *not* intend to fully capture heat.

As well as the potential legal challenge to the West of England authorities if they do not procure a genuinely heat-capturing incinerator, there is also a possible challenge to the whole way that the project has been undertaken – drawing up a *Residual* Waste Strategy without having a *Waste Strategy* in place.

As already mentioned in our statement to the Joint Waste Board, drawing up a strategy that **only deals with residual waste** is an inappropriate approach, lacks rigour and is certainly not good-, let alone best-practice. A lack of a comprehensive waste strategy tackling the whole of the waste hierarchy, starting at the top with waste minimisation does not accord with government guidance on Municipal Waste Management Strategies, which clearly states that:

“Thorough strategic planning is vital in seeking to meet these challenging objectives and Strategies should reflect both community aspirations and ensure cost-effective compliance with all existing statutory obligations. The development of the Municipal Waste Management Strategy should be a dynamic process and should result in a clear framework for the management of municipal waste, and waste from other sectors as appropriate. This should set out how authorities intend to optimise current service provision as well as providing a basis for any new systems or infrastructure that may be needed. The Strategy should act as an up to date, regularly reviewed, route-map for further investment required.”

The guidance on producing municipal waste management strategies is clear:

“5.3. Evaluation of Options: The Strategy should provide a critical evaluation of options for service development that seeks to drive waste management up the waste hierarchy. Local authorities should address waste as a resource wherever possible. Authorities should seek the environmental outcomes that do most to deliver the objectives set out in sections 2 and 3, but in developing service options this should be balanced against national, regional and local social and economic factors (including the availability of markets for recyclates). Any strategy produced should start by considering the practical extent to which the amount of waste produced can be reduced. Authorities should then repeat the process for each further stage in the hierarchy in turn (re-use, recycling & composting and energy recovery). Disposal of waste should be seen as the last option (but one which must be catered for). Stages in the hierarchy should not be missed without robust and thorough justification. However the way this process is carried out should not become rigid or mechanistic, and it is acknowledged that multiple solutions may be equally appropriate in a given area at any one time.”

This guidance relates to all Joint Municipal Waste Management Strategies.

The four West of England local authorities have decided to work in partnership on a joint strategy for residual waste and for land use options for waste management (not just residual waste management) in the Core Waste Strategy. Therefore it is inappropriate to only tackle a part of the waste in the waste strategy and not produce a full, comprehensive Joint Municipal Waste Management Strategy that not only deals with the whole of the hierarchy but also can truly inform the Core Waste Strategy and local development plan process.

As it stands the Partnership has only addressed the bottom of the hierarchy and this is wholly unacceptable.

There can be no serious attempt to model the future residual waste arisings without a comprehensive Municipal Waste Management Strategy covering the four waste authority areas. This is entirely missing either in four parts or as one whole and the Position statement on Joint Waste Management is wholly inadequate and fails both the purpose and the intent of the Government's policy on production of Municipal Waste Management Strategies. It has to be borne in mind that any single MWMS from one of the four WoE authorities must take into account the other three authorities' plans to arrive at a Joint Residual Waste position. As these plans do not exist, the authorities are failing their communities by not doing what the government has tasked all waste collection/ disposal authorities with.

Hyder's report of the strategy consultation recommends:

"that [the] statutory [waste development plan] consultation phase builds upon the work of Phases One and Two of the programme and looks to answer many of the questions raised, whilst identifying a number of potential sites and scoring them against specified criteria."

This is of course nonsense as the questions raised mainly related to reliability of data, the need for increased waste minimization and recycling, the need for climate change to be clearly addressed, the energy balance or energy inputs for each of the waste management options and more. These questions have generally not been adequately addressed in the strategy, and in major part it is because the strategy is incomplete as it only deals with the residual waste and the bottom of the hierarchy.

Without addressing these issues it is impossible to plan for all waste management – from recycling and recovery to residual collection and disposal – as they are not properly addressed in the Residual Waste Strategy.

Jane Stevenson

on behalf of Bristol Friends of the Earth

The Options Appraisal Report (Jacobs) and the Comparison of the Emissions Determined in the Options Appraisal Modelling and the WRATE Tool Modelling Report (WRATE)

The Options Appraisal Report produced for WoE Partnership was produced by Jacobs in January 2007. This note raises questions about some of the modelling and assumptions within this report. It is not intended as an exhaustive critique of the Jacobs report but to serve as an indicator that the report has omissions and errors and these have subsequently been translated into the Residual waste strategy.

The Options Appraisal Report produced for WoE Partnership by Jacobs has modelled inappropriately low recycling rates given that some of the local authorities in West of England are already achieving well above the national average then should be able to get well past 50% recycling in a relatively short period of time.

The capture rate modelling calculation is flawed and, for example, is showing that it is only possible to recycle 43% of paper and card, which is not the case. The factors they used to determine this “model” have been multiplied which is inappropriate as they are independent. It is not clear if they have modelled the incinerator as CHP and which one they have used for the purposes of their modelling. Nor is it clear if the Compact Power plant has been included in the modelling, nor if the capacity of the interim MBT solution has been deducted from the size of the incinerator. With the 34,000 tpa compact power plant (gasification) and an interim MBT the cheapest option may be to go for higher recycling.

In the WRATE assessment the gasification option scored well using WRATE and is very modular. But this does not seem to have been drawn out.

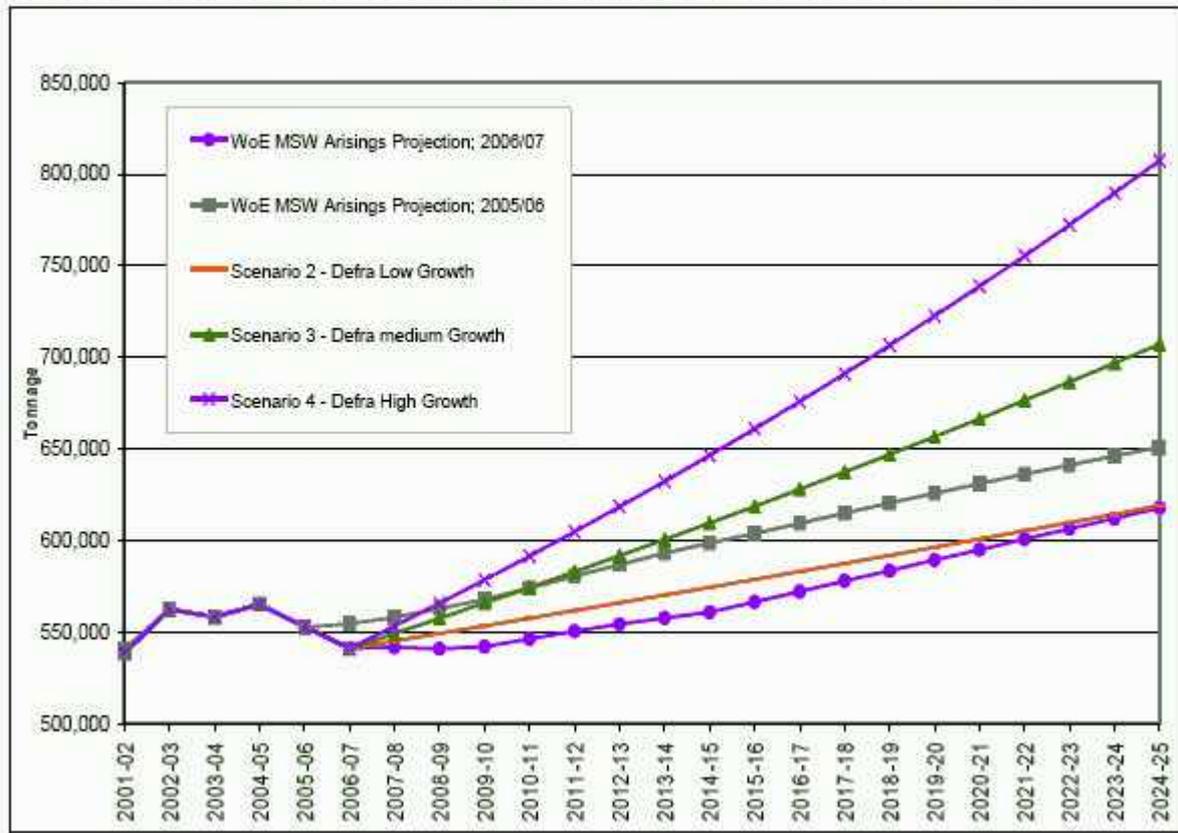
In undertaking the WRATE assessment, Jacobs also used different criteria - using only a 15% weighting criteria for environmental implications such as emissions to air and climate change, as against 24% in the Options Appraisal process.

Given what is already in place, current and projected recycling capture rates, WoE's LATS targets are achievable with higher recycling and only a small amount of added capacity.

Waste growth

The waste projections for West of England have been updated in the residual strategy but not in the Jacobs report. 30,000 tonnes has been taken off the waste tonnage for each year post 2010. The West of England projection this year sees waste as being flat for the next few years. The real data points from 2001/2 to 2006/7 show waste around the lowest this century. See figure below. This means that even with the unambitious minimisation and recycling scenarios being proposed by the 4 authorities the waste in West of England will only be matching the Defra low growth scenario. With a comprehensive waste strategy tackling the whole of the waste and starting, as it should, with waste minimisation and recycling, the waste growth in the West of England, would mean even less waste.

Figure 2.9 Comparison of 2006/07 Projected MSW Arising Scenario for the WoE



Jacobs modelling therefore is based on out of date data.

LATS

The issue of LATS is completely overblown.

The documents still talk of LATS costing £150/tonne over the whole of the period. the current market for LATS pre 2009/10 has collapsed as there will be no shortage and LATS are trading at under £5 per tonne.

The WoE area has a vast surplus of LATS for use before 2009/10. All the councils are running over 2 years ahead of target.

Jacobs modelling, the options processes, criteria assumptions, increased minimisation and recycling rates and climate change implications along with the lack of information were all raised as concerns by most of the stakeholders (as reported in the West of England Waste Management and Planning Strategy Consultation - Phase 2 Report from Hyder Consulting).

These concerns have not been adequately addressed in drawing up the residual waste strategy.

17 December 2007

Statement to the West of England Waste Management and Planning Partnership
Member Project Board Meeting 18/12/07 on behalf of Bristol Friends of the Earth

National Friends of the Earth and the four local Friends of the Earth groups in the West of England – Bath, Bristol, North Somerset and South Gloucestershire – all oppose incineration as a way of dealing with residual waste. Incineration is neither the safe, nor efficient, nor reliable technology that its industry advocates claim. There is no place for it within an environmentally sound Waste Management Strategy.

In Bristol, we already have in operation, one of the best recycling systems possible for an urban area. We have been used as an example of best practice within Europe. We are already way-ahead of other cities in having this recycling infrastructure in place, so why should we choose to throw all that progress away, by opting for a waste disposal technology that disincentivises future efforts to reduce waste volumes, to reuse materials and to maximise recycling?

Instead, if Bristol is serious about its 'Green Capital' aspirations, we should build upon our recycling successes, and not allow ourselves to be panicked into a LATS-avoidance strategy that will undermine those aspirations.

On the basis of existing information, we would suggest that instead of choosing incineration, we should look at adopting a policy along the following lines: We should set an immediate target of 50% recycling, with a longer-term aim of 70%. We should look at using separate treatment for garden and food wastes, with the potential end-products of safe and usable compost, and genuinely environmentally-friendly electricity, generated from anaerobic digestion. Sustainability should be reflected in our waste strategy as a whole, with residual waste being treated with mechanical biological treatment (MBT) and the residue landfilled (rather than incinerated). MBT is a small scale, flexible technology that is modular so can be scaled down over time as recycling increases, as more products are redesigned to be recyclable, and as residual waste decreases. MBT to landfill is also better for the climate than incineration.

We urge the West of England Project Board to reject Phase 3 of the proposed Joint Residual Municipal Waste Management Strategy, and to reconsider the alternatives.

In re-evaluating the proposed way forward, we would like to point out a few issues relating to the Rubbish or Resource consultation and to the conclusions drawn from it.

Problems with the Rubbish or Resource consultation

1. The projected growth in residual waste was over-estimated. In their presentations, Hyder cited growth rates of up to +3% per annum in their projections of future municipal waste growth across the WoE. For the past couple of years, the actual growth rate across England has been +0.2%.

The Joint Waste Strategy makes comparisons of the waste arisings that were calculated at the start of the consultation in 2006, and those made in 2007 in the light of 'Observing dramatic changes in the pattern of waste arisings in just one year' – after an overall reduction of 12,000 tonnes of MSW was achieved between 2005/6 and 2006/7. The revised waste projections up to 2024–25 make no allowance for the possibility of any further such falls in the volume of waste, but even so, the projected increase in the volume of waste is less dramatic than that presented during the public consultation. Respondents to the consultation may have decided that drastic – and otherwise undesirable – action was required, when faced with the prospect of vastly increasing future waste volumes.

2. The term 'Energy from Waste' was used throughout the consultation documents as a synonym for an incinerator that coincidentally generates heat and/or electricity. The actual word 'incinerator' was used once in the 16-page 'Issues and Options' booklet. People respond to the prospect of 'incineration' and 'Energy from Waste' in two very different ways. Incineration is notoriously unpopular, but 'Energy from Waste' sounds like a great thing in principle. **The consultation booklet is misleading because there are other types of 'Energy from Waste' processes** – heat and/or methane can be collected from composting-based systems, and the heat used directly, or to generate electricity – but here, EfW is used *only* to mean incineration. **Because of this misleading use of terminology, a vote for an option labelled as 'EfW' cannot necessarily be taken as an endorsement of incineration.**

3. Unreasonable claims were made for the efficiency of incineration-based EfW plants. The Rubbish or Resource 'Issues and Options' booklet claimed that such a plant could offer 61% energy recovery, with 7% to landfill.

a) The 61% energy recovery claim is very high. The Environment Agency state that the efficiency of an incinerator used to generate electricity only, is around 27%. If the heat generated during incineration can also be fully recovered (and this is a big *'if'*), then that can take the overall efficiency up to 50–70%.

In Nottingham, the Eastcroft incinerator was supposed to provide cheap central heating for homes and businesses. The Council was required to underwrite payment for all heat produced by the incinerator. As income from selling that heat has declined – due to household energy efficiency improvements – Council taxpayers are having to meet the shortfall of £100,000 per month

In order to fully recover the heat for use in WoE housing, the plant would need to be sited close to a new housing development. This is likely to prove extremely unpopular.

b) The estimate of the volume of ash sent to landfill is very low. The consultation document claims 7% ash will be left, whereas 40% is more likely. (Compared to the original amount of MSW, incineration is likely to produce 40% ash by weight, or 25% by volume.)

c) The consultation document also claims that the 'inert' ash waste can be recovered and used in construction materials. Whilst this *can* be done, it is less likely that it would be done. There are question marks over the safety of building materials made from incinerator ash (Is it really inert? If not, then what happens as soon as someone drills a hole into an incinerator ash breeze block?), and over the likelihood of there being a market for such materials.

d) At no point did the consultation documents mention that EfW incinerator ash would have to be disposed of to hazardous landfill, or point out that in changing the way we process our residual waste, that in the future we would be producing hazardous waste where now we do not. It is hard to predict what affect this might have had on respondents' votes, but it is likely that it would have been perceived as a backwards step.

e) There is no mention of where the incineration site would be – so it is difficult to tell if CHP would be an option. Difficult to know how the costs can be so accurately measured without taking into account the distance the waste could have to travel. Also it is not possible to calculate the cost of the toxic residual ash unless you know what site it is going to. The closest site in Gloucestershire is due to close in 2009 and after the introduction of the EC Waste regulations, the number of sites in UK actually licensed has gone down from 100 to less than a dozen, so this is an important factor.

4. Of the 1,000 people that are said to have participated in the second phase of the Rubbish or Resource consultation, only 166 people ranked EfW as their first preference amongst the 7 technology options on offer. The way that the options was presented was confusing, with a potential vote for BMT/MBT split over 3 different permutations of the basic process. Many respondents completing the questionnaire did not feel equipped to make such a detailed decision. While it may be true that 58% of the 285 questionnaires analysed did rank EfW as their first choice, 166 votes is not a glowing mandate – especially bearing in mind the bias of the consultation.

5. At the Bristol public meeting, a number of local residents were left with the impression that Hyder thought that 'large scale incineration was not the answer' and therefore not on the agenda.

Problems with the Joint Residual Waste Strategy

1. The Waste Strategy states that “EfW is a low risk, top performing technology for diverting BMW from landfill”. However, incinerators have proved to be unreliable. There are 20 EfW incinerators in the UK. One of these is currently out of action, one has had a recent fire, one is described as being ‘more often off than on’, and two others have had major breakdowns in the past year. The new Allington incinerator in Kent had to be closed down during testing, leaving the local Council with a bonus *saving* of £340,000/month, as they divert their waste to landfill, rather than burn it. The more common consequence of shut-down, however, is additional cost to Councils, and this will be a growing problem with the escalation of landfill taxes. If incineration is the primary waste disposal method for a Council, then they need to have a back-up plan for when that incinerator fails.

2. Under-estimate of likely costs. Incineration is presented as the cheaper of the technologies put forward for analysis, but everyone is familiar with how the cost of large capital projects can easily escalate. In Brighton, the cost of their incinerator has doubled since work began in 2003. The contractors, though tied-in to bearing the additional construction costs, threatened to pull out, and in order to placate them, the local Council has agreed to grant them an additional 5 years’ contract on top of the 25 years already agreed. This is costing them £25 million. The Council have also had to sign a blank cheque for any future legal costs incurred. Once we have committed to a 25-year contract to supply a large percentage of our waste to one contractor, then it is that contractor who will determine the West of England waste strategy – not us.

3. The Waste Strategy assumes that permission would be granted for building an incinerator in the region. The Waste Strategy for England 2007 emphasises the need for “flexible – e.g. modular – buildings, also flexible contracts, which do not lock in fixed amounts of waste for treatment which might become obsolete”. The DTI turned down plans to expand an incinerator at Edmonton, North London, and to build incinerators at Kidderminster and Ridham Dock – under grounds layed down in the Waste Strategy 2000 – that “care must be taken to ensure that contracts are sensitively designed to avoid ‘crowding out’ recycling”.

4. The Waste Strategy cites the success of EfW projects in Europe, in “Germany, the Netherlands, France, Italy and Denmark... These countries also have higher levels of recycling and composting than the UK.” However, regional data for household waste in Denmark (2005) shows that regions with high incineration rates had correspondingly lower recycling rates, and in the past year, recycling rates in Denmark have started to go down. Austria only incinerates 10% of its MSW, comes top in the EU recycling/composting league tables and is already meeting its Landfill Directive targets for the years 2016/20.

The Rubbish or Resource consultation and the recent Bristol Citizen’s Jury both state that participants were keen to pursue ‘best European practice’ – this is being narrowly interpreted as an endorsement for pursuing any European *incineration* practice.

5. The Waste Strategy ignores the predominant feedback from the Rubbish or Resource consultation:

- **We should reduce, reuse and recycle much more**
- **Any waste disposal technology should be selected with an aim to reduce our carbon footprint**
- **We should reduce our ‘waste miles’ (the distance that waste is transported to disposal site)**
- **We should have small, local facilities, close to where waste is produced**
- **We should have relatively short-term, flexible contracts with waste contractors, so we can adapt to decreasing waste streams, and take advantage of new technologies.**

The Joint Waste Strategy asserts that the presence of a 200,000-tonne incinerator in the region would not crowd out recycling. The projected volume of MSW for 2015, when the incinerator would come on-board, is around 555,000 tonnes. 200,000 tonnes amounts to 35–40% of this capacity, which would leave us with a goal of 64% recycling. We have increased the recycling rate in Bristol by 19% in one year, from 18 to 37%. With question marks over the waste projection figures, and many unknowns about future developments in packaging, recycling etc, the presence of a 200,000-tonne capacity incinerator starts to look like a disincentive to push towards the best European recycling rates of around 70%.

6. Climate change. In Eunomia's analysis of the climate impacts of dealing with residual waste, incineration fared badly. Of 9 ranked technologies – where landfill was the worst option – electricity-only incineration was ranked 6th, heat only incineration was ranked 3rd, and anaerobic MBT with metals and plastics extracted for recycling and residual waste sent to landfill was ranked in first position. **Opting for incineration may be incompatible with Councils' climate-change policies.**

7. Lack of flexibility to deal with future change. Friends of the Earth Europe are pressing for 'a phase out, by 2020, of the incineration or landfill of any waste that can be reused, recycled or composted'. If such an aspiration became European law, it would leave the West of England having to buy-in genuine waste in order to feed our incinerator.

8. It is possible that the JWMS does not meet the Defra Guidance on Municipal Waste Management strategies 2005 as WoE does not appear to have a joint waste management strategy which has to come first before you discuss dealing with residual waste. The strategy should state how all four authorities jointly plan to deal with all waste streams including commercial and industrial waste and including any sharing of facilities for recycling, reuse and repair. As far as we can tell, this has not been produced. Therefore the residual strategy may be open to legal challenge.

9. There are a string of issues involving the cost modelling as to items counted (including non-residual waste costs) and others left out (no consideration of PFI, inflation and repayment of capital loans not included) which we would be happy to list.

It is not clear if the presence of a 34,000 tpa Compact Power plant has been taken into account in the modelling. It is also not clear if the capacity of the interim MBT solution has been deducted from the size of the incinerator. With the 34,000 tpa Compact Power plant (gasification) and an interim MBT the cheapest option may be to go for higher recycling.

10. The Jacobs report (WoE Waste Management and Planning Appraisal report 3/1/07) has shown that EfW would have the highest emissions of all the options by a factor of at least three. This is of vital importance to local residents.

11. Over-estimate of LATS costs. The documents still talk of LATS costing £150/tonne over the whole of the period. The current market for LATS pre 2009/10 has collapsed as there will be no shortage and LATS are trading at under £5 per tonne. The WoE area has a vast surplus of LATS for use before 2009/10. All the councils are running over 2 years ahead of target.

12. Subsidy of commercial waste disposal. The incinerator as costed, allows for the intake of commercial and municipal waste. As municipal waste volumes decrease, WoE council tax payers are going to find themselves subsidising the disposal of commercial waste.

Jane Stevenson and Pip Sheard
on behalf of Bristol Friends of the Earth