

## Report of the Head of Service Improvement to the meeting of Environment and Waste Management Improvement Committee to be held on Wednesday 9 February 2005.

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### Subject:

Recycling -

### Summary statement:

Improving the District's rate of recycling is a specific objective within the Council's Corporate Plan: *Improving Waste management and the Environment; Creating a less wasteful District.*

To help inform the focus and any future Committee activity relating to recycling, this report presents a summary of the activity undertaken and evidence collated by the previous Environment Overview and Scrutiny Committee during the municipal year 2003/04. This information should be considered in the context of the Executive decision [November 2004] relating to managing waste in the district. The report to Executive, *Waste Strategy: Developing Proposals for an Alternative to Landfill*, discussed on 9 November 2004 is appended to the report.

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## 1 Summary

- 1.1 Improving the District's rate of recycling is a specific objective within the Council's Corporate Plan: *Improving Waste management and the Environment; Creating a less wasteful District.*
- 1.2 To help inform the focus and any future Committee activity relating to recycling, this report presents a summary of the activity undertaken and evidence collated by the previous Environment Overview and Scrutiny Committee during the municipal year 2003/04. This information should be considered in the context of the Executive decision [November 2004] relating to managing waste in the district. The report to Executive, Waste Strategy: Developing Proposals for an Alternative to Landfill, discussed on 9 November 2004 is appended to the report.

## 2 Background

### Executive Report: Waste Strategy: Developing Proposals for an Alternative to Landfill

- 2.1 On 9 November 2004, the Executive received and considered a report, attached as Appendix 1, that highlight some of the short, medium and long-term challenges faced by the Council in trying to reduce the amount of bio-degradable (organic) waste currently sent to landfill, in particular the inevitable and significant increases in overall waste costs for the foreseeable future. The report also proposed a strategy to contain costs in the long-term.
- 2.2 At the meeting, the Executive resolved:
1. *That a procurement process be now started to seek long term (25 years) alternatives to waste disposal by landfill.*
  2. *That the actions outlined in Document "AC" to reduce cost control waste and encourage new recycling initiatives be taken forward.*
  3. *That the cost implications of waste disposal are included in the Council's long term financial strategy.*
  4. *That, on behalf of the Executive, the Environmental Services Director make representations to the Government in support of the position put forward by the LGA (Local Government Association)*

### Environment Overview and Scrutiny Committee

- 2.3 Between December 2003 and February 2004, the Environment Overview and Scrutiny Committee sought and received a range of information and evidence relating to recycling. Alongside proposals to develop a Sustainable Growth Park

within West Yorkshire, the evidence considered included details relating to recycling in general terms, activity with the Bradford District and activity within other local authorities.

- 2.4 The information was gathered through a variety of methods including a service briefing, site visits and a series of 'select committee' style hearings. In addition, some further information was sought and additional work undertaken by Service Improvement between March and May 2004.
- 2.5 During December 2004, a review of the information gathered was undertaken; this highlighted a number of areas that may need to be revisited and/ or where additional or updated information may be required.

### **3 Report issues**

#### Executive Report: Waste Strategy: Developing Proposals for an Alternative to Landfill

- 3.1 The report attached at Appendix 1 outlines the implications of the proposed introduction by the Government of a Landfill Allowance Trading Scheme (LATS) alongside a strategy to contain costs in the long-term. Alongside some issues to take into account when considering a procurement process, the report primarily focuses on the need to move towards alternative treatments for waste and the associated cost implications. The report also raises issues regarding the:
- Performance Reward Grant, a new funding stream for authorities that perform well or show significantly improved performance on recycling;
  - The Landfill Allowance Trading Scheme (LATS) – a Government scheme proposing that local authorities should be required to buy [from other authorities] the right to landfill more than their individual allocation;
  - Introduction and use of a 'residents permit system' and a 'large van ban' for the District's Household Waste Sites;
  - Payment of 'recycling credits' to pre-approved voluntary organisations, as a method of stimulating activity to generate new ideas for recycling;
  - Viability of the trade waste business.
- 3.2 In addition to an outline of the procurement process and identification of key dates, it may be useful for the Committee to consider each of the above issues in detail at a future meeting.

#### Environment Overview and Scrutiny Committee – evidence and information

- 3.3 Details of the previous Committee's activity, including summaries of the main/ key points identified, are attached as Appendix 2. Clearly, as much of the information presented relates to a period of time between December 2003 and May 2004, perhaps this is better considered as providing a snapshot of activity rather than a definitive analysis.

- 3.4 As previously outlined, a review of the information gathered was undertaken during December 2004. This highlighted a number of areas that may need to be revisited and/ or where additional or updated information may be required, including:
- Data analysis – a comprehensive update of the key data provided; including performance goal and targets; number and types of collection methods in operation [including the number of bins in use; yields etc.]; performance of individual Household Waste Sites (HWS)
  - Finance update – providing an up-to-date budget position in terms of available resource and associated activity [current and planned].
  - Policy update – providing an up-to-date position on current recycling policy [in the overall context of the Waste Management Strategy] and any planned policy development. This may include the issues already highlighted in paragraph 3.1 of this report, in addition to any current / planned activity to target ‘hard-to-reach’ properties within the District and any proposed changes to current services;
  - Promotion and raising awareness – an issue identified as a key role of the Council; an up-to-date outline of the current and/or planned activity around promotion, awareness raising and creating a ‘recycling culture’ within the District;
  - An operational update – outlining the type, level and location of services and recycling facilities provided across the District, including mainstreamed, temporary or pilot services.

#### **4 Options for Members**

- 4.1 Members may wish to consider the information presented in this report and associated appendices in the context of requesting further information / evidence as outlined in paragraphs 3.1 and 3.4.
- 4.2 Given the timing of this report and the potential implications of any 2005/06 budget changes, it may be more useful to the Committee to consider any additional evidence once Council has agreed the 2005/06 budget.

#### **5 Contribution to corporate priorities**

- 5.1 Improving the District’s rate of recycling is a specific objective within the Council’s Corporate Plan: *Improving Waste management and the Environment; Creating a less wasteful District.*
- 5.2 As the remit of the Environment and Waste Management Improvement Committee is directly related to the strategies, plans, policies, functions and services directly contributing to the Corporate Priority for Improving Waste management and the Environment, the issues identified in this report are legitimate matters for the Committee to consider.

#### **6 Recommendations**

- 6.1 That the Committee consider this report in line with the options set out in section 4.

## **7 Appendices**

Appendix 1 – Executive Report, 9 November 2004, Waste Strategy: Developing Proposals for an Alternative to Landfill

Appendix 2 – Scrutiny of Recycling: Summary of Evidence

## **8 Background documents**

**8 October 2003:** Report of the Director of Scrutiny and Performance Management to the Environment Overview and Scrutiny Committee – Scrutiny of ‘Recycling – Achieving Our Targets’ – Terms of Reference.

## **9 Not for publication documents**

None

## *Report of the Environmental Services Director to the meeting of the Executive to be held on 9 November 2004.*

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### SUBJECT:

**Waste Strategy: Developing Proposals for an alternative to landfill**

### SUMMARY STATEMENT:

The Council faces changes in the way in which it deals with its waste. The UK has to comply with the EU Landfill Directive and reduce the amount of bio-degradable (organic) waste that it sends to landfill. Government has recently announced the introduction of a Landfill Allowance Trading Scheme (LATS) and has written to all councils with a provisional allocation of permitted landfill rights. LATS will require authorities to buy the rights to exceed their landfill allowance. Trading will be introduced next year and by 2006/7 buying these rights will be more expensive than the likely costs of alternative methods of waste disposal. Government also proposes that authorities will be fined if they exceed their allowances.

This report proposes a strategy to contain costs in the long run but acknowledges the **inevitable and significant increases in overall waste costs** over the foreseeable future.

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### IMPROVEMENT COMMITTEE

Environment and Waste Management



## 1. SUMMARY

- 1.1 The Council faces changes in the way in which it deals with its waste. The UK has to comply with the EU Landfill Directive and reduce the amount of bio-degradable (organic) waste that it sends to landfill. Government has recently announced the introduction of a Landfill Allowance Trading Scheme (LATS) and has written to all councils with a provisional allocation of permitted landfill rights. LATS will require authorities to buy the rights to exceed their landfill allowance. Trading will be introduced next year and by 2006/7 buying these rights will be more expensive than the likely costs of alternative methods of waste disposal. Government also proposes that authorities will be fined if they exceed their allowances.
- 1.2 This report proposes a strategy to contain costs in the long run but acknowledges the inevitable and significant increases in overall waste costs over the foreseeable future.

## 2.0 BACKGROUND

- 2.1 The Council deals with 220,000 tonnes of household waste and a further 68,000 tonnes of commercial waste (from local businesses) each year. The local PSA includes a commitment to increase recycling from the current level of 17% (2004/5 to date) to just over 25% by 2005/6. Recently published research suggests that 30% is the maximum recycling level likely to be achieved in large metropolitan areas such as Bradford.
- 2.2 Achieving a recycling level of 25% is highly ambitious: particularly as household waste handled is increasing by 2 - 3% per year in the District, following national trends. Our current recycling activities have captured a large amount of the "easy to reach" recyclate: expanding the quantities in the future will be more difficult. Experience to date suggests that there will also be increased costs in achieving rates over the current levels as multi material recycling involves sorting waste into different fractions and has significant labour costs.
- 2.3 The current strategy is planned to achieve a recycling rate of 20% by providing:
- paper collections at the kerbside covering all properties.
  - increasing recycling at household waste sites and;
  - expanding the network of recycling banks and voluntary activity across the District.
- 2.4 Currently the Council has contracts for landfill disposal for all waste not recycled. The contracts finish in 2008 and provide for an average of 220,000 tonnes landfilled per year. Given our present and probable future recycling rates, and the landfill allowances under LATS, we will not have a problem in meeting our current contractual landfill obligations. Indeed because we have more municipal waste than pledged under the landfill contracts, there will be some headroom to redirect waste by 2006. To date we have deposited 497,000 tonnes compared to a contractual target of 453,000. Assuming current levels of activity, by 2006 there will be an opportunity to re-direct approximately 50,000 tonnes to an alternative disposal outlet.
- 2.5 Clearly there is a probable 5% shortfall in achievement of our recycling target and the Council has to consider how it will achieve the energy recovery targets that are to be imposed by way of Landfill Allowance Trading. To meet both the need to recover value from bio-degradable waste and add to the amount of waste recycled

(at their meeting on 18<sup>th</sup> September 2003) Executive agreed to seek tenders for expressions of interest in the provision of a trial disposal plant for 60,000 tonnes of waste per year for 2/3 years. The idea of the trial was to test treatment technology for organic waste using significant quantities of waste, but exclude the use of incineration as a disposal system. Such treatment technologies are generically known as advanced thermal conversion (ATC).

2.6 We have now sought expressions of interest from waste management companies in providing the trial and in June we interviewed 6 companies. The following key points emerged:

- All the companies reported that trials of 3 years would not justify the levels of capital investment required or give the authority value for money during the trial. 25 year contracts were seen as essential;
- Since the objective was to treat biodegradable waste, the process used should be based on biological principles rather than thermal. This supports the Council's view that incineration should be avoided, but also suggests that other technologies (such as gasification) should be avoided;
- Costs would be greater than existing landfill disposal even if subsidies from energy production (Renewables Obligation Certificates) could be included.

### 3.0 OTHER CONSIDERATIONS

#### Government Review on Incineration

3.1 In May 2004 Government published its promised review of impacts from waste processing - aimed particularly at dealing with fears over incineration. The review concludes that it:

*“did not find a link between the current generation of municipal solid waste incinerators and health effects. Adverse health effects have been observed in populations living around older, more polluting incinerators.... We considered cancers, respiratory diseases and birth defects but found no evidence for a link between the incidence of disease and the current generation of incinerators”.*

*(Review of the Environmental and Health Effects of Waste Management – HMSO)*

#### Performance Reward Grant

3.2 Government intends to introduce a new Performance Reward Grant for authorities that perform well or show significantly improved performance on recycling. £45m will be available in 2005/6 and, according to the draft proposed allocation criteria the grant will be worth about £170K to Bradford. It will be paid if recycling reaches over 25% or is improved by 8% over 2003/4 levels. Our recycling rate was 13% in 2003/4 and our PSA is 25.2%. Therefore, achieving that would give us the Performance Reward Grant.

#### Landfill Allowance Trading Scheme (LATS)

3.3 The EU Landfill Directive requires that by 2020 each Member State can only landfill a maximum of 35% of the biodegradable municipal waste deposited in 1995. The UK government is proposing that local authorities should be required to trade with each other to buy the right to landfill more than their individual allocation and that



these permits (LATS) should sell at £200 per tonne (over the prevailing waste disposal cost). Although the EU imposes deadlines in stages (at 2010, 2013 and 2020) our government is proposing annual (incremental) reductions from 2005/6 to ensure a smooth transition to the EU targets. The high cost of LATS is clearly designed to stimulate the adoption of alternative disposal methods away from landfill. This will be exacerbated by the increase in Landfill Tax which is scheduled to rise to £35 per tonne by 2010. Trading is programmed to commence next year:

- 3.4 Annexe 1 shows the impact of LATS for the Council's overall municipal waste stream (household waste plus commercial waste). The EU Directive applies to Council collected commercial waste and the cost impact on this discretionary service may question the viability of this business in the future. At this stage our assumption is that any increased costs are passed to the customers and the effect of the Directive (for commercial waste) is cost neutral. Legislation requires Councils to operate commercial waste services at charges that cover costs. Assuming the current rates of commercial to household waste, 76% of the predicted cost increases will be borne by Council Tax, with 24% being recovered from trade customers.

#### 4.0 **OPTIONS FOR WASTE DISPOSAL**

- 4.1 Executive has previously agreed that incineration is not an acceptable method of waste disposal for the District. Accordingly, the companies interviewed proposed alternative solutions for us to consider. The most promising proposals from the shortlisted companies were for the provision of
- a) plant that steam treats the waste (autoclaving) so that it can be safely handled in the unsorted state. Glass, metals, textiles and some plastics would be removed (thus adding to the recycling rate) and the organic fraction could be further treated or sold. Further treatment could involve sale as a refuse derived fuel (subject to market availability) in the short term or (and more acceptable in environmental terms) as material for a process such as anaerobic digestion (AD). In the AD process, gases are produced as the organic waste biodegrades in the absence of air – producing mainly methane.
  - b) plant that composted the mixed waste, thus driving off moisture, so that the waste could be mechanically sorted to remove recyclables (mechanical and biological treatment) . The residue could again be sold as refuse derived fuel (subject to market availability) or used as soil conditioner in brownfield land developments. Lancashire County council is currently building such plant and the technology is used in Europe, especially in Italy.
- 4.2 Obviously there is a lead time, for building and commissioning plant, of about 2 years. The costs of such processes are estimated at £70-90 per tonne compared with current waste disposal costs of £36 per tonne (£14/tonne landfill + £15/tonne landfill tax + £7/tonne waste transport). Whilst, at first sight, this seems prohibitively expensive, the increases in Landfill Tax (to £35 per tonne by 2010) and the introduction of LATS regime makes such a proposal attractive.
- 4.3 Waste flow through such a system, compared with compliance through LATS is shown in Annexe 2.

## 5.0 FINANCIAL AND RESOURCE APPRAISAL

- 5.1 The costs of LATS are shown in Annexe 1 and have been adjusted to take into account the assumption that commercial waste bears any cost increases within the business. The cost of the alternative process has been assumed at £100/tonne and its availability assumes a 2 year purchase and build time. This figure is likely to be pessimistic but reflects the fact that, in the early years, economies of scale may not be achieved and increased costs will arise from additional recycling from the process.

### *All Costs £000s*

<b>Year</b>	<b>Cost of refuse collection and disposal (incl waste growth and landfill tax escalator)</b>	<b>Additional Costs for purchase of LATS</b>	<b>Additional costs of ATC</b>
<b>2004/5</b>	16,900		
2005/6	17,300	3,700	Not built
2006/7	18,300	6,100	Not built
2007/8	19,200	8,600	4,000
2010/11	22,700	17,500	8,100
2019/20	28,700	29,700	10,500

*Note: There are revenue costs based on gate fee charges to private sector waste disposal companies. They do not assume any capital infrastructure provided by the local authority.*

- 5.2 The financial benefit to the Council of waste disposal by advanced thermal conversion is clear. Costs of LATS will have to be borne for the next two years (subject to the comment in 5.6) as plant will take approximately 2 years to build and, in any event, the Council has landfill contracts in place.
- 5.3 There will be a significant impact on local costs if residents from outside the District or traders bring waste to household waste sites. Accordingly it is suggested that we come into line with other Districts to introduce a residents permit system and a large van ban.
- 5.4 Significant cost increases will make other disposal options financially attractive and voluntary organisations and other companies (together with the council itself) will be incentivised to generate new ideas for recycling. In order to stimulate such activity amongst voluntary organisations it is suggested that a recycling credit (equivalent to the actual final disposal cost) should be made available to groups approved by the Council. Payment would be made for the weight of material removed from the household waste stream that had been recycled by a reputable re-processing company.
- 5.5 The issue of the viability of the trade waste business will need to be clarified. The business has a turnover of £4.2m per annum and makes a trading surplus of £300,000. Crucially it also has £500,000 support service costs, some of which is overhead recovery: costs which are fixed and would be borne by other services. However, customers will face increased charges as the legislation impacts on municipal commercial waste and not privately collected commercial waste. As a

consequence a number of local authorities are divesting themselves by either closing or selling their trade waste service.

- 5.6 The LGA is lobbying Government for LATS to be traded without real money at least up until 2010 when the UK becomes obligated under the EU Directive. So far, Defra has not agreed to this suggestion – insisting that local authorities need to have a financial incentive to move away from landfill.

## 6.0 **LEGAL APPRAISAL**

- 6.1 The Waste and Emissions Trading Act 2003 provides the legislative framework for the implementation of the Landfill Allowances Trading Scheme. Government is currently advising local authorities on the maximum permissible bio degradable waste that each can dispose to landfill.

## 7.0 **OTHER IMPLICATIONS**

### 7.1 **EQUAL RIGHTS**

None.

### 7.2 **SUSTAINABILITY IMPLICATIONS**

- 7.1 Recycling is a PSA, Best Value and Corporate Plan priority. Failure to meet targets will subject the Council to adverse publicity, and miss the Performance Reward Grant. Recycling is a high priority for many members of the public.

- 7.2 There are no operational landfills in the District and all the household waste generated in Bradford is taken outwith: currently to Craven, Leeds and Wakefield. This involves significant vehicle movements and environmental impact.

### 7.3 **COMMUNITY SAFETY IMPLICATIONS**

None.

### 7.4 **HUMAN RIGHTS ACT**

None.

### 7.5 **TRADE UNION**

The Waste Strategy has been an item on Departmental consultation meetings (Level IV). Any implications arising from the proposals in this report will be fully discussed with the trades unions as part of normal consultation in the Department.

## 8.0 **NOT FOR PUBLICATION DOCUMENTS**

None

## 9.0 **RECOMMENDATIONS**

- 9.1 It is recommended that:

- a) a procurement process is now started to seek long term (25 years) alternatives to waste disposal by landfill.
- b) the actions outlined to reduce cost control waste and encourage new recycling initiatives are taken forward and;
- c) the cost implications of waste disposal are included in the Council's long term financial strategy.

## 10.0 **APPENDICES**

- 1 – Landfill Allowance Trading Scheme: Impact on Waste Disposal Costs (Municipal Waste)
- 2 – Predicted Waste Flow: Compliance through Reliance on Landfill (Buying LATS) or Treatment through Alternative Process.
- 3 – Waste Disposal Options: Examples from other authorities

## 11.0 **BACKGROUND DOCUMENTS**

Previous reports to Executive:

- Developing a Municipal Waste Management Strategy – 29 January 2002
- Waste Recycling: Proposals for expanding the service – 10 September 2002
- Refuse Collection & Waste Disposal: Improving Services and developing the strategy – 18 September 2003.



### Landfill Allowance Trading Scheme - Impact on Waste Disposal Costs (Municipal Waste).

Year	1 Municipal Waste (tonnes)	2 Equivalent BMW (assuming 68%) (tonnes)	3 Estimated BMW permitted to landfill (tonnes)	4 Recycling and Composting (tonnes)	5 Balance of BMW requiring treatment or Trading Permits (tonnes)	6 Extra cost of buying LATS at £200 per tonne (£000s)	7 Impact of LATS at £200 per tonne on Council Tax
2004 / 05	290,880						
2005 / 06	312,976	212,824	163,459	25,120	24,245	4,849	3,685
2006 / 07	323,436	219,936	153,688	26,225	40,023	8,005	6,084
2007 / 08	330,354	224,641	140,614	27,379	56,648	11,330	8,610
2008 / 09	337,425	229,449	124,297	28,584	76,568	15,314	11,638
2009 / 10	344,651	234,363	104,716	29,842	99,805	19,961	15,170
2010 / 11	352,035	239,384	93,060	31,155	115,169	23,034	17,506
2011 / 12	359,583	244,516	81,404	32,525	130,587	26,117	19,849
2012 / 13	367,296	249,761	69,748	33,957	146,056	29,211	22,201
2013 / 14	375,179	255,122	66,756	35,451	152,915	30,583	23,243
2014 / 15	383,236	260,600	63,764	37,010	159,826	31,965	24,294
2015 / 16	391,471	266,200	60,773	38,639	166,788	33,358	25,352
2016 / 17	399,888	271,924	57,781	40,339	173,804	34,761	26,418
2017 / 18	408,490	277,773	54,789	42,114	180,870	36,174	27,492
2018 / 19	417,283	283,752	51,797	43,967	187,988	37,598	28,574
2019 / 20	426,270	289,864	48,805	45,901	195,158	39,032	29,664

#### Key

1. Waste growth is based on 2% growth in household waste per year plus growth in trade.
2. BMW = biodegradable municipal waste. Government has determined that municipal waste is 68% biodegradable.
3. Based on national targets it has given provisional allocations for landfill to all Councils.
4. Recycling and composting levels relate to biodegradable element and assume recycling of 20% household waste.
5. Tonnage of biodegradable waste to be processed after deducting our allowances and recycling achievement.
6. Total costs of LATS for household and commercial waste.
7. Total cost after deducting the costs of commercial waste.



**PREDICTED HOUSEHOLD WASTE FLOW: COMPLIANCE THROUGH RELIANCE ON LANDFILL (BUYING LATs)  
OR TREATMENT THROUGH ALTERNATIVE PROCESS (ATC)**

	<b>Tonnes</b>	<b>%</b>	<b>Compliance via ATC</b>	<b>Tonnes</b>	<b>%</b>
Recycling & re-use at household waste sites.	40,000	12	Recycling and re-use at household waste sites.	40,000	12
Recycling at kerbside, drop off banks	28,000	8	Recycling at kerbside drop off banks	28,000	8
Residual waste at household waste sites (to landfill)	40,000	12	Residual waste at HWS to landfill	40,000	12
Balance of waste permitted to landfill (as of right)	32,000	9	232,000 tonnes of waste to ATC process of which: 10% recycled 76% processed 14% landfilled	23,000 176,000 32,000	7 52 9
Additional recycling to achieve 25% targets	17,000	5			
Amount of landfilled waste for which allowances (LATs) have to be 'bought'	183,000	54			
Waste processed through new system (ATC) of which up to 10% will be required	-				
<b>TOTAL</b>	<b>340,000</b>	<b>100</b>		<b>340,000</b>	<b>100</b>

1. Based on predicted tonnage in 2020 of 340,000 tonnes and assumes maximum disposal for landfill permitted by EU Directive.
2. Maximum permitted landfill is 49,000 tonnes bio-degradable waste: Equivalent to 72,000 tonnes mixed waste.
3. Annexe 1 shows municipal waste, which includes Council collected commercial waste.
4. By 2020 the cost of processing through ATC might be £100 per tonne, compared with landfill of £55 (including tax): giving additional process costs of £10.5 m (the figure used in 5,1).



### Appendix 3

#### **Waste Disposal Options: Examples from other authorities**

##### Recycling

High diversion rates are achieved in low density areas (eg Coventry (44%), South Norfolk, Bath and North East Somerset).

Best Performing metropolitan area is L B Bexley at 21%. London strategy is to achieve 20%.

##### Incineration

Kirklees - Vine Street  
Sheffield - combined heat and power (district heating system)  
SELCHP - South East London (probably the largest UK plant)  
Goole - proposal has run into planning problems  
20% Project Integra (Hampshire) achieve 35% including incineration.

##### Mechanical or Biological Treatment

Leicester - Biffa plant under construction  
Scarborough - Yorventure has signed agreement – 2 parts of plant are complete.  
Output is refuse derived fuel. Investigating gasification.  
East London Waste - Shanks Intelligent transfer station recently completed.  
Italy - 9 plants operational.

##### Auto Claving

None operational for municipal waste but used for clinical operations.  
Proposal from local firm (Waddingtons) to build a plant  
2 plants under construction in Europe.

##### Composting

West London Composting - modern European plant opened in summer 2004.



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# ENVIRONMENT OVERVIEW & SCRUTINY COMMITTEE

## SCRUTINY OF RECYCLING: SUMMARY OF EVIDENCE

### PREFACE

It should be acknowledged that, in the main, the information presented in this document was gathered during December 2003 and May 2004. As the service is constantly developing and adapting to changes in circumstances, some of the information presented should not be considered as being definitive, but rather as providing a 'snapshot in time' of the service.

### SUMMARY OF BACKGROUND AND BRIEFING INFORMATION

After agreeing the terms of reference the Committee engaged in a briefing session with the Waste Management service to provide the context in which recycling occurs and to help ensure a consistent level of knowledge and understanding among Members of the Committee.

### Waste Management Context

- There is a Government expectation for all councils to develop and operate a Municipal Waste Management Strategy (MWMS).
- Currently the service operates within the general context of UK Government's Waste Strategy 2000 and the European Union (EU) Landfill Directive.
- Legislation affects the targets that the Waste Management service works towards.
- As part of the agreement between the Council and the Government (Local Public Service Agreement), the Council has set more a challenging (stretch) recycling target. To achieve 25.2% recycling by March 2006. Table 1 summarises performance, targets and predictions relating to household waste.
- The Environment and Waste Management Overview and Scrutiny Committee, 13 December 2001, accepted the proposed MWMS strategy.

### Waste Management Strategy

The Waste Management Strategy can be summarised under two stages:

#### ***Stage 1 – short-term (to 2005) options include:***

- Establishment of 15 additional drop off recycling sites with an annual plan and agreed targets for 2005, additional bottle banks being delivered to sites;
- Improvements to recycling/composting facilities at household waste sites;
- Development of an additional (8th) household waste site;
- Expanded kerbside domestic waste recycling collections – expansion based on a trial 'paper only' scheme currently underway;
- Potential for recycling from trade waste, bulky household waste and Council-generated waste to be evaluated. Office paper recovery to be expanded;

**Stage 2 – long-term options include:**

- Waste minimisation and re-use
- Recycling
- Composting
- Anaerobic digestion
- Thermal treatment
- Waste to energy/combined heat and power
- Landfill
- Ensuring that technology or partnerships are in place to meet government targets on recycling by 2015 and to look at longer-term (25 year) outcomes.
- Seeking tenders [by September 2003] for alternative disposal that:
  - Achieves value recovery targets
  - Reduces bio-degradable waste that goes into landfill
  - Contributes to the recycling targets.

This strategy was further developed and presented to the Executive:

- **29 January 2002:** outline of short-term and long-term actions, including the need to cost out a paper-recycling scheme and explore options with joint venture partners/waste management companies at an affordable cost.
- **10 September 2002:** proposals to expand kerbside paper collection, following DEFRA funding for an extra 85,000 bins, alongside a need to work with community organisations to expand the recycling of bulky household waste.

**Table 1. Performance, targets and predictions relating to household waste**

YEAR	TOTAL WASTE (TONNES)	RECYCLING (INCLUDING COMPOSTING)		NET RECOVERY OF VALUE (EXCL. RECYCLING TOTAL)	
		TONNES	%	TONNES	%
2003/04	220,000	24,200	11%	-	-
2004/05	220,000	36,250	16%	-	-
2005/06	240,000	60,000	25%	36,000	15%
2010	271,000	81,300	30%	40,650	15%
2015	324,000	106,920	33%	110,160	34%
2020	375,000	123,750	33%	127,500	34%

## Waste Management and Recycling in Bradford

### Waste Collection

- The Bradford District:
  - 473,000 (approx.) population
  - 20% ethnic mix
  - 200,000 (approx.) households
- Bradford provides an in-house domestic waste collection and disposal service via:
  - 2 transfer loading stations
  - 7 Household Waste Sites (HWS) – 900,000 visits / annum
  - 92 bring sites across the District
  - Weekly kerbside collection to 200,000 households
- 220,000 Tonnes of domestic waste produced annually
- Domestic waste growing by up to 3% each year.

### Recycling

- Current level of recycling [including composting] @ 11% (2002/03)
- Limited mixed dry recyclables kerbside collection in specific area of the district
- Kerbside waste paper collection scheme being rolled out across the district on the basis of:
  - Dedicated wheelie bin for households
  - Collection every 4 weeks
  - 5 year contract for sale of waste paper established
- 85,000 recycling bins in use (to date) with a further 15,000 bins to be delivered

### Customer satisfaction

- Recycling – improved from 49% to 56% in 2002/03
- HWS – improved from 60% to 79% in 2002/03

### Site Visits

As part of the Committee's initial research, Members took part in site visits to:

- **Bowling Back Lane (Bradford)** – a household waste site and one of the Council's transfer stations;
- **Dowley Gap (Bradford)** – a recently refurbished HWS, geographically central to the District; and,
- **Kirklees Metropolitan District Council** – a high performing, neighbouring authority operating a different collection and disposal policy, including an operational waste incineration plant. Some comparative information is outlined in Table 2.

**Table 2. 2002/03 Comparator Information**

<b>COMPARATOR DATA (2002/03)</b>	<b>BRADFORD MDC</b>	<b>KIRKLEES MDC</b>
Geographic Areas (Hectares)	36,536	40,910
Mix of Urban / Rural Areas	Bradford + smaller towns	Huddersfield + smaller towns
Diversity (Cultures/ Faiths)	Broadly similar	Broadly similar
Population	473,000	389,000
No. of Domestic Households	197,000	168,000
No. of Household Waste Sites	7	5
No. of 'Bring Sites'	92	130
Household waste per person	470kg	441kg
Total Domestic Waste Arising	220,000T	177,000T
• % Recycled	6.4%	9.1%
• % Composted	4.6%	3.2%
• % Recycled/ composted	11%	12.3%
• % Value Recovery	0%	58%
• % Landfilled	89%	30%
Cost of disposal per tonne	£33.65	£37.65

At each of the site visits, Members received an insight into how the facilities were organised and operated. In particular, Members considered the different type of operation in Kirklees and identified the following points:

- In April 1998 the Council retained responsibility for waste collection and entered into a 25-Year waste disposal contract.
- The contact provided a new combined incineration plant and recycling facility [capital cost around £60M],
- Broadly, the contact is based on
  - The incinerator plant and recycling facility is the property and responsibility of the contractor.
  - Two disposal points within the boundary of the Council
  - A dual bin collection system [mixed recycling and residual waste]
  - A quota / quantity of waste
  - Lump sum and £/Tonne payment
  - Recycling sorting facility – a combination of mechanical and manual sorting
  - Manual sorting is based on a 'negative pick' i.e. identifying materials that cannot be recycled
- Incinerator used to generate electricity – providing power to a Direct Heating Scheme [primarily] and to the national grid.
- Education was a significant issues – it's about winning hearts and minds but taking action for the benefit of the district.
- The incinerator plant is currently running at about 50% capacity, i.e. more waste could be handled and used as fuel.

**SUMMARY OF EVIDENCE PROVIDED TO THE COMMITTEE**

Following the initial briefing session and sites visits, the Committee held a series of 'select committee' style hearing. There were six hearings in total:

- Richard Wixey: Director of Environmental Protection and Waste Management (2 sessions)
- Helen Briggs: Doncaster MBC, Head of Service responsible for Waste Management
- Professor John Barton: Leeds University
- Paul Forrest: Bradford Environmental Action Trust (BEAT)
- Phil Hesford: Urban Mines

Each hearing was recorded and a transcript produced; a summary of the key points is provided below:

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**CITY OF BRADFORD MDC**
**Director of Environmental Protection and Waste Management – Richard Wixey**
**Summary of Evidence – January 2004**
**THE STRATEGY**

- Current landfill contractual commitment [until 2008] for 220,000T.
- The future strategy for Bradford is:
  - 1/3 waste to landfill,
  - 1/3 recycling
  - 1/3 waste energy recovery
- Executive agreed to a two/three year trial 60,000T [which represents headroom between contractual commitments and total waste projections] per annum as an alternative treatment.
- Longer term is to tender for some of the technologies for energy recovery, which will impact on recycling process;
  - Mechanical and biological treatment options require removal of glass, paper and cans earlier in the recycling stream.
  - Advanced thermal treatments [e.g. autoclaving] allow cans to be taken out lower down in the waste stream.
- Autoclaving followed by gasification will be cheaper than projected landfill costs.

**THE CURRENT POSITION**
**Household waste**

- Increased from 160,000T (1994) to 220,000T (2004) - a significant impact and growing between 1½% and 3% per annum:
  - At 3% compound growth, waste produced will double over the next 20 years.
  - Growth of waste is a huge risk: Recycling can increase by 1% or 2% but no effect if waste's growing by 3%.

**Recycling levels – current performance and targets**

- Currently recycling 10%-11% [25,000T (approx.)].
- The 2004 Best Value target is 16%.
- The 2005 statutory recycling figure is 24% (each local authority was set individual targets).
- By 2015 need to achieve 33% recycling
- Biodegradable waste targets apply between 2005 and 2015, resulting in needing to achieve 67% value recovery by 2015.
  - 1.5% growth factor in waste, by 2025 this will need to be 100,000T and 250,000T factoring in value recovery targets.
  - 3% growth factor in waste, by 2025 this will need to be 150,000T and 340,000T factoring in value recovery targets.

**The Council's Local Public Service Agreement (LPSA) for recycling.**

- 50% recycling of waste at Household Waste Sites [HWS] [currently 30% (excluding rubble)].
- 5% 'stretch' target on the overall 2005 statutory recycling target – equal to 25.2%
  - 55,000T needed by 2005 [25% of the 220,000T]:
    - 27,000T – HWS
    - 18,000T – Kerbside (paper)
    - 2,000T – Kerbside (glass)
    - 4,000T – Drop off banks
    - 3,500T – Other (Gap??)
- A Performance Reward Grant (£300,000) is payable if the targets are achieved.



### Current recycling schemes

- 5 year contract for recyclable paper:
  - £45 per tonne guaranteed income, compared to £27 per tonne disposal (1 April 2004); Net result being £72 per tonne
  - At the current level of landfill tax, a paper only scheme can be delivered without increasing Council Tax.
  - Business plan presented to DEFRA stated 85,000 bins would yield 14,400T of paper per annum. The aim is to achieve 18,000T; 14,400T plus the contribution via mixed kerbside schemes.
- Successful glass only collection scheme trial [Ilkley]
  - Funding secured from a glass merchants.
- Not pursuing multi-material recycling, with sorting costs, the cost equation doesn't work.
- Promoting home composting; 2,800 home composters sold.

### FINANCIAL ISSUES

- Landfill in the UK is the cheap option.
- Future waste management is going to cost lot more money as most treatments are more expensive:
  - Landfill costs @ £12 plus £15 landfill tax = £27 per tonne;
  - Incineration costs @ £35-£40 per tonne;
  - Recycling costs @ £60 per tonne.
- £2.6 million available for HWS improvement scheme.
- £1.4 million [DEFRA funding secured] for 85,000 new wheelie bins - targeted for paper. Hoping to run a trial on glass and cans to see if co-collection is possible, glass contamination of paper may be an issue.
- Additional £1.5 million bid [DEFRA funding] including:
  - Further 30,000 bins for paper recycling; bringing the total number up to 130,000 recycling households in the District. (65% of the households - the maximum for a second bin)
  - An additional HWS; likely to be in inner north Bradford [somewhere around Frizinghall]
  - An additional 15,000 bins for an expanded glass trial yielding 2,500T of glass.

### CULTURAL ISSUES

- Building cultural change in the organisation and in the District is important. Staff at HWS are trained to encourage residents to do the right thing with their waste but:
  - The Council needs to encourage all staff [as residents] to think about waste.
  - 10% of households in Bradford have someone working for the Council – potentially this could be a huge change agent.
- Kerbside recycling schemes need to re-energise people all the time, including employing people to encourage and help – an intention as part of the rollout programme.
- Consider expanding the range of materials that could be recycled.
- Recycling credits:
  - May have significant impact on voluntary organisations' viability;
  - Charity shops collect textiles without the payment of recycling credits;
  - Will stimulate voluntary organisations but doesn't yield significant recycled tonnage;
  - Potential to promote good environmental and social outcomes.

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## CITY OF BRADFORD MDC

### Director of Environmental Protection and Waste Management – Richard Wixey

#### Summary of Evidence – January 2004 [2<sup>nd</sup> session]

#### Budget information

- Total gross budget for the Authority @ £784 million.
  - Education takes @ 50% of the Council's overall expenditure
  - Social Services takes @ 25% of the Council's overall expenditure
- Budget for for the Department can be considered as:
  - Waste Management @ £27 million
  - Fleet Services @ £10 million
  - Environmental Protection @ £4 million
- £740,000 spent on recycling out of a total budget, funded via Council Tax
- £485,800 expenditure on kerbside recycling service
- £124,000 other income through Local Public Service Agreement (LPSA) pump priming. Recycling budget is subject to the annual budget discussions as to whether or not it grows, remains the same or indeed decreases.
- Statutory targets mean funding for recycling is likely to increase (as a percentage of the budget) if only to keep pace with rises in landfill tax
- 3% increase in waste will cost about £220,000 in 2004/05.

#### Costs & Income of Recycling

- Recycling is often associated with a net reduction in expenditure rather than a physical income, but currently generates a total income of @ £280k per annum, including @ £179k from paper.
- Aim to run the paper-recycling scheme at zero revenue cost, when it becomes properly embedded in the Authority.
- Some costs for Household Waste Sites (HWS) are apportioned to recycling, but many costs, other than disposal costs, within HWS exist irrespective of the level of recycling.
- Main HWS recycling [in tonnage terms] is organic waste, rubble and ferrous metals.
- No income from green waste but a lower disposal cost – £10 /tonne for organic waste disposal compared with £27 for landfill.
- Contract in place for appropriate dispose of fridges, handling around 14,000 fridges at a disposal cost @ £15 per fridge [@ £210,000 total].

#### Other Sources of Financing

- There are sources of funding, DEFRA is the principal one via the National Waste Minimisation and Recycling Fund:
  - Currently allocated @ £1.4 million, which is effectively a capital allocation to the Authority from DEFRA.
  - DEFRA bid set out proposal for schemes with relatively small ongoing revenue costs to help contain the overall budget.
  - £485,000 revenue costs on the £1.4 million capital that DEFRA have allowed us.
  - Additional DEFRA bid for £1.5 million for 2004/05; results known in February 2004.
- Bid for Neighbourhood Renewal Funding (NRF) (through Environment Partnership) with the aim of mainstreaming funding.

**Comparisons: Bradford against other authorities that are recycling**

- Compared with other metropolitan districts [similar types of authority]
  - Collection costs per household are greater than Bradford's (generally).
  - Disposal costs are more variable.
- Compared across all Councils
  - Top quartile on refuse collection costs
  - Second quartile on waste disposal costs
- Less favourable comparison for recycling rates
  - In 2002/03 combined recycling and composting rate of 10.8% compared with top quartile of 18%.

**Recycling credits**

- Recycling credits could help voluntary organisations currently recycling material out of the household waste stream.
- By taking waste that's currently in the dustbin there may be an opportunity to enter into some sort of agreement/ contract which would pay 'credits' for disposal.
- Currently the Council is working with two groups [Bradford Community Environment Project and Throstle Nest Recycling] that are attempting to deliver complementary recycling to residents.
- Would like to see recycling credit scheme developed in the District but concern around overall expenditure if introduced

**Budget Issues**

- Budget shortfalls have been managed successfully over recent few years, while steadily increasing recycling rates.
- Landfill tax is going to increase to the same sort of level as the disposal by recycling and other waste management practices, so disposal costs will inevitably rise and there is a need to be pragmatic about meeting targets.
- Increased budget needed for the step changes to achieve the immediate statutory targets (17% and 25% recycling) but there is a point at which where recycling targets only come with considerably expenditure (e.g. beyond the 25%).
- Priority-led budget bid for £1.3M in 2004/05.
  - Expanding materials collected at the kerbside @ £700,000 in 2004/05.
  - Development of advanced thermal treatment for waste @ £500,000
  - Waste and recycling awareness campaign @ £200,000.
  - Rising to £3.3M by 2006/07: £2 million bid to achieve short-term objectives of recycling 25%.
- Bradford Council resource gap (for disposal)
  - Achieving the statutory targets is likely to be between £6M (1.5% growth in waste) and £10M (3% growth in waste).

**DONCASTER MBC****Head of Community First – Helen Briggs****Summary of Evidence – January 2004****Zero Waste Strategy for Doncaster**

- Being developed.
- Environmental Charter for the Council – setting standards for office managers to recycle significantly more and to lead by example.
- Working with businesses to encourage them minimise level of waste generated:
  - Talking to retailers about reducing packaging.
  - Talking with local supermarkets about providing free recyclable shopping bags.
- Develop ways of tackling waste at source – encourage home composting to reduce waste stream.

**Doncaster MBC recycling**

- Doncaster MBC currently recycling 14%.
- DEFRA funding required to expand kerbside recycling – 2004/05 target 20%.
- Bringing kerbside green waste collection – 2005/06 target 40%.
- DMBC offer a (blue bag) kerbside collection scheme for paper - operated by an external partner.
- DMBC still operate have weekly collection – aim to move very quickly to alternate week collection, i.e. recyclables one week; the following week residual waste.
- Launch of Community First (area based service) has been key providing a high degree of responsibility for staff; higher community ownership and pride.
- Named and shamed communities into helping.
- DMBC work with a range of community groups through the Doncaster Community Recycling Forum (DCRF)
- Recycling credits are paid to local groups and re-invested in recycling through educational information
- In 2002/03, £41000 recycling credits paid to non-commercial organisations – currently pay £30 / tonne recycling credit

**Recycling – promotion and education**

- Essential to make it very easy for people to recycle – promotion and education key
- Educational barriers in deprived communities – need to target a different campaign to encourage buy-in into community recycling.
- ‘Making a Difference (MAD)’ weeks – targeted campaigns – recycling week with home composting clinic.
- Campaign billboards around Reduce, Re-use, Recycle – the three Rs campaign (DEFRA funding)

**Community Recycling**

- Area based community-recycling organisations being established and developed.
- Biggest success is where community organisations are involved – compared with other efforts to encouraging recycling.
- Doncaster MBC is about to tender for dry kerbside recycling for 57,000 properties - virtually half of the borough.

**Doncaster Community Recycling Partnership (DCRP)**

- A community not for profit organisation
- Collects dry recyclables (kerbside) – 26,000 properties.
- Significant role in providing publicity and education
- Employs 23 staff.
- Awarded the National Recycling Project of the Year Award (2003)
- Recycled over 1,200 tonnes of waste (2002/03); equivalent to 10% of recycling contribution collected from an area equal to 20% of the borough (approx.)
- Embedded a community desire to contribute to the environment and improve recycling.
- Funding
  - Used Neighbourhood Renewal Objective 1 funding to contribute towards the capital and revenue costs.
  - Also accessed New Deal and other European funding.
  - Level of Council support is affected by the EC Procurement limits.
  - Any expansion beyond the 26,000 properties will be subject to tender.
- Community recycling is very much tailored to communities,
- Provides an added value service to the community – e.g. issues around terraced housing and back allies, addressed by assisted pull-outs, returning to properties etc.

**Doncaster MBC Household Waste Sites (HWS) and related services**

- 6 HWS within the borough - most households within five or six miles from a household waste site,
- HWS opening hours 9.30 – 17.00 (winter) and 9.00 – 19.00 (summer)
- HWS employ three to four staff at peak time, such as Saturday and a Sunday.
- HWS considering earlier opening times because people want to use them on the way to work.
- HWS recyclables are separated out either by the person bringing the waste or by operatives picking over the waste.
- Significant quantities of green waste go to compost – pilot project turning mixed green and kitchen waste into quality liquid fertiliser.
- 45% HWS recycling target – contractor achieving 60%.
- 42 adopt-a-bank schemes using local businesses to sponsor recycling banks.
- Bulky items collection service – £10 charge (means tested) per collection (any amount)

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**PROFESSOR JOHN BARTON – LEEDS UNIVERSITY**
**Summary of Evidence – January 2004**
**BACKGROUND**
**General**

- Current recycling rates across England and Wales @ 11%.
- Around 70% of the household waste actually arises at the household.
- History demonstrates that in the days of non-mandatory recycling rates, not a lot happened. Recycling rates progressed from @ 3% in 1990 to @ 10% in 2000 where the aspirational target was 25%.
- The Waste Commission Trading Bill, will set targets for diversion of biodegradable waste from landfill, those targets will require Council's to either meet them or buy landfill diversion from other Authorities that have met targets.
- Beyond 2005/6 there will be a need to target nearly all waste streams.

**Kerbside Recycling Schemes**

- Huge number of systems; they're very well established in suburban areas [southern England]
- Range of collection systems include:
  - Segregation at the household;
  - Sort at the kerbside into separate containers – usually using a specialised vehicle;
  - Some systems combine commingled – containers for plastics, glass and metals while keeping paper separate;
  - Collect as a combination of materials – this requires sorting to take place elsewhere, for example, at a sustainable growth park.
- Not well established in big metropolitan areas, particularly in areas of deprivation
- Collect systems can achieve very high recovery rates, particularly for materials such as newspaper and glass.
- Diversion rates tend to yield between 10% and 35% within the scheme area.
  - This equates to between 7% and 27% points to the recycling rate [Household waste equates to around 70% of waste]
  - If schemes are only available to 70% of the households it will be down to between 5% and 20% contribution to the recycling target.
  - The level of diversion is determined by how well you maintain the systems and the materials targeted
- Analysis of household stock is essential, as the balance of materials will vary. This will help to ensure targeted schemes and systems are developed.
- Kerbside collection schemes with high diversion rates may not contribute to the overall recycling rate as much as anticipated. For example:
  - Only 70% of the waste is collectable;
  - Offered to 70% of the population;
  - Probably only 80% actually participate
  - Even achieving 40% diversion on the above, ***the contribution to the overall recycling rate is only 16%.***
- Household Waste Sites [HWS] and some 'bring facilities' will be retained irrespective of the collection system.

**Research into kerbside recycling**

- The Bradford Millennium scheme
  - A small pilot scheme of 140 households.
  - All recyclables were targeted.
  - Achieved very high diversion rates.
  - Provided a weekly 'Rolls Royce' service, not implementable in practice:
    - A weekly wheeled bin collected;
    - A plastic bag to keep recyclables in the house
    - Simple instructions were given.
- Research is looking at the influence of scheme design, scheme maintenance, targeted materials, observed participation and recovery levels.
  - Before introduction 98% of population said they would use it: Actual 91%.
  - Another example: a paper recovery scheme in Leeds;
    - 98% of population said they would use it: Actual 49%.
  - In terms of paper recovery:
    - 84% of all paper was recovered in the Millennium,
    - 50% of all the paper in the Leeds scheme

**What the research is telling us**

- How a scheme is introduced, delivered and maintained can significantly affect overall recovery rates.
- In any kerbside recycling scheme it is key to: inform, communicate, educate and provide positive feedback to the participating public.
  - Effective feedback makes a big difference in behaviour.
  - When introducing a scheme allocate a budget to talk to the people – on a continuing basis.
- The lowest socio-economic groups, show reduced performance on a collection system.
  - Most disadvantaged areas need more communication and education.
- As the material gets more inconvenient to recycle [i.e. separation, cleaning etc] recovery levels reduce
- Paper, newspaper, magazines, stationery have high recovery levels
- Metals, plastics were not recovered as well as paper/glass.
- An effective recycling service needs to at least match the convenience of your refuse collection service.
- It is important to consider the target as a change in behaviour
- Kerbside recycling is popular, and much lower initial investment costs have been key.
- Cost per household are generally in line with the refuse collection costs
  - Most systems cost a lot of subsidy per tonne of material collected due to the relatively low tonnages.
- Single material systems:
  - Costs per household tend to be fairly low;
  - Costs per tonne tend to be high;
  - Tend to be cheaper to implement.
- High capture, low participation costs less than low capture, high participation, so publicity for those that are participating on the scheme rather than just generally is far more cost effective.
- The community sector has a very important role in putting over the message, particularly in hard to reach groups.
  - A central issue is 'think global act local message'.

## Recycling Strategies

- Councils should develop recycling and collect systems that are flexible and adaptable so that they can move to the most cost-effective systems as the landfill tax and recycling targets increase.
- Financial and political expediency requires investment decisions now - under a low cost landfill regime when additional recycling tends to give you additional costs.
- In the current financial climate [if just considering financial issues] cost driven Councils will rarely aim to exceed targets.
- Currently, with the level of landfill costs, recycling costs might be totally uneconomic but future [predicted] increases in landfill tax will make recycling more attractive [economically]. The general cost trends for both [weekly] refuse and recycling collections are:
  - Higher landfill cost - higher overall cost;
  - Higher recycling rates – higher current cost framework;
  - Higher recycling rates – lower cost future.
- In the longer term commingled recycling systems may provide a cost advantage and should be significantly cheaper than kerbside sorting.
- Few Councils have reduced residual waste refuse collection but many employ reduced recycling collection frequencies
  - The logical progression is to reduce the frequency of both, alternate collections preferably. This will really provide the most cost advantage.
- Long-term the waste service should not dominate, the recycling service should be a premium service.
- In a deprived multi-cultural area or multi-occupancy area recycling needs to be considered as part of an holistic approach to improving peoples' lives.

## Bring facilities

- Generally inexpensive but they don't recover very much.
- Usually retained – even when a collect system is introduced.
  - Intensive use of 'bring facilities' at street corners etc. can improve recovery but costs may be similar to a collection system.
  - Selective use of 'bring facilities' for areas not suited for kerbside collection may be beneficial.
  - If properly developed and controlled they can achieve very high levels of diversion [from landfill]
- Particularly useful at HWS as effective civic amenity sites might contribute between 8 to 15 percentage points of the recycling rate.

## Household Waste Sites

- HWS need to:
  - Be well designed - good signage, good infrastructure design/layout,
  - Be properly targeted and cost efficient.
  - Have a level of staff willingness and participation – considering HWS staff as resource managers as opposed to waste disposal operatives.
  - Introduce incentivisation – ensuring that the primary job is to divert waste from landfill.
    - Training and education has a key role to play.
    - Contracts of employment and quality of life at work should be reflective of achieving good diversion.
- A metropolitan authority should not be satisfied with less than 50% diversion from HWS.



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**BRADFORD ENVIRONMENTAL ACTION TRUST (BEAT)****Representative – Paul Forrest****Summary of Evidence – January 2004****Background**

- In 1990 the Environmental Protection Act gave:
  - Collection authorities powers to pay credits to third parties, in part, to support recycling within the community sector,
  - A duty to disposal authorities to pay credits according to the amount of waste recycled
- Until 1998, when the disposal authority was disbanded, West Yorkshire Waste Management paid Bradford Council £3 per tonne credit for paper being recycled.
- Benefits of supporting third parties in recycling efforts via recycling credits are:
  - Environmental: Resource consumption, reduced pollution, atmospheric and ground water pollution, avoidance of landfill and quite often reduced transportation costs.
  - Social: Providing local jobs, supporting the local economy and helping to provide stability in the voluntary sector.
- Recycling credit schemes are generally aimed at smaller groups and voluntary sector organisations.
- The level of payment, amount of publicity and limitations on eligibility will affect the number of applicants and the tonnages of material diverted from landfill.

**Guidance**

- Payment of recycling credits to third parties, as part of Waste Management Strategies, is highlighted in a number of area:
  - DEFRA's guidance for waste management strategies;
  - Best Value guidelines [including an indication of the sort of activities that should be supported].
  - Bradford District and Council policies, including the Environment Strategy.
- DEFRA is considering how to make recycling credits more effective and encourage local authorities to bring more voluntary sector organisations on board.

**Recycling credit systems elsewhere**

- Both Leeds and Kirklees operate re-use as well as recycling credits:
  - In Leeds, of the 2,358T claimed, over 2,000T came from a single furniture store
  - Something that the voluntary sector would certainly like to see in Bradford, recognising activity further up the hierarchy of waste.
- Calderdale and Wakefield have a higher rate per tonne: both pay exclusively to recyclers as opposed to re-users and composters.
- Bradford is alone [in West Yorkshire] not operating a recycling credits scheme.
- Recycling credits in Lancashire:
  - £29.16 per tonne
  - Very targeted publicity
    - Promoted on the radio and via the website;
  - Regular rolling programme to raise and maintain awareness.
  - Straightforward system of scheme administration and monitoring.
  - Over 120 users of the scheme.

**Issues to consider**

- A tailored approach is essential to address different cultural groups, different geographical areas and different areas of deprivation.
  - The most sustainable waste reduction, recycling and composting schemes have arisen from local activists and community sector organisations
  - Tends to be a greater feel of personal involvement in community-based schemes.
  - Community sector organisation can better convey new information to their clients and householders.
- The voluntary sector needs support to raise local awareness, to fill few niches that provide logistical difficulties for the Council or are unattractive to the private sector, for example:
  - Disposable nappy education;
  - Timber recycling and re-use; and,
  - Effective local furniture re-use networks
- Recycling credits could be used to lever some voluntary sector organisations already active in communities to include recycling as part of their core activity.
- Ensuring the survival of small recycling operations, by providing reasonable recycling credits, could draw other money into the District's local economy.
- Recycling credits would not represent a huge level of expenditure in terms of Council budgets but in terms of the voluntary sector, survival of local organisations, they could have a significant impact.
- The Council would have to determine the boundaries of any recycling credits system that would need to consider and address issues around:
  - Application criteria;
  - Source of material, including ensuring only residential materials [within District] are counted;
  - Activities considered to be 'avoiding' landfill;
  - Activities considered to be limiting the generation of waste;
  - Avoided costs of waste collection and/or disposal; including those associated with bulk waste collection.
  - Minimum tonnage levels;
  - Effective, efficient and 'simple' administration and monitoring processes;
  - Publicity of the scheme – initial and ongoing;
    - Using established networks to promote and publicise.
  - Credit payment of around £30 per tonne – budget of around £15,000 (+administration costs) based on @ 500 tonnes per annum;
  - Review mechanisms to ensure the scheme operates effectively
- The Waste Forum could be better utilised as a vehicle to get things moving, providing material support, and opening channels of communication so there is a better understanding of what decisions are being made within Council.
- Long-term people need to buy into the waste hierarchy and to embrace a reduction of what they use. This comes from:
  - Practical solutions on a local level with good infrastructure for composting, recycling and re-use.
  - Concentrating on minimising waste and education.
  - Communities having the opportunity to contribute, understanding their contribution and feeling good about it.

## URBAN MINES

### Project Director – Phil Hesford

#### Summary of Evidence – January 2004

#### Background

- Urban Mines is a not-for-profit organisation set up on 1995:
  - Chairman: Barry Sheerman [MP for Huddersfield]
  - Chief Executive: Jane Foreshaw.
- The role of Urban Mines is to:
  - Create wealth from waste by bringing forward initiatives in the sustainable waste management field.
  - Innovative ideas and businesses in the waste management and recycling business.
  - Take forward the Sustainable Growth Park [SGP] by co-locating waste with people who can reprocess waste.
- By 2006, West Yorkshire must recycle more than 3 times what it did in 2000:
  - Against a background where waste is increasing by 3% per annum.
  - Even to stand still something has to be done.
  - Increased levels of recycling need outlets for that recycled product.
- Legislation is driving projects like the SGP.

#### Sustainable Growth Park [SGP] - Vision

- The vision is to create a regional facility with up to 300 new jobs on a 35-acre brownfield site in Castleford, [part of the former Welldale Fryston Colliery].
- The site borders the Aire and Calder navigation and there is a wharf, which opens up the possibilities for waterborne transportation of waste.
- The partnership consists of Urban Mines, Marshalls [the developer], Cleanaway [the waste contractor and anchor tenants].
- There is support from Wakefield MDC [site located within Wakefield boundaries].
- Close links with the regional development agency, Yorkshire Forward, and English Partnerships
- Working towards a 'green' design for the SGP
- Work on site is planned towards the end of 2004, with the first tenants planned for mid 2005.

#### Sustainable Growth Park [SGP] – What's needed?

- An essential element is that Cleanaway have household waste contracts in place with local authorities, and are currently in discussions with a number of local authorities.
- The investment will be @ £25 million.
  - Applications to the European Regeneration and Development Fund [ERDF] for gap funding for the capital aspect of the build.
  - Also be a need for revenue funding to support the business innovation centre in its first three or four years.
- Discussions currently taking place with prospective reprocessing tenants and schemes are being drawn up for the premises they require.

**Possible Risks**

- Not attracting sufficient re-processing tenants.
- Cleanaway not securing sufficient local authority waste management contracts.
- Funding is not [yet] secured.
- Planning permission has not [yet] been granted.

**Sustainable Growth Park [SGP] - Operation**

- The SGP will comprise three areas:
  - Materials Handling Zone – typically operated by a waste management company who will bring and segregate waste, alongside a household waste facility and green waste composting.
  - Re-processing Zone – tenant businesses who feed off the recyclable material, they will turn it into some value added secondary material.
  - Business Innovation Centre – to encourage and incubate new businesses in the environmental field; develop partnerships with business support providers and universities to establish Research and Development (R&D) facilities [themed on recycling and environmental activities]; an education centre where schoolchildren and members of the public can learn about recycling.
- The Materials Handling Zone will handle about 200,000 tonnes per annum of household, industrial and green waste, located in a Materials Recycling Facility (MRF)
  - Cleanaway will operate a clean MRF, to take dry recyclables only, handling about 90,000 to 100,000 tonnes per annum.
  - Urban Mines will seek to match the material flows [from the waste stream] with imported materials from elsewhere, to match the needs of the tenants
  - The dynamics of those material flows are something that Urban Mines will pay close attention to.
- Types of re-processors
  - Wood; Plastics; Paper; Glass; Battery

**Opportunity for Bradford**

- A state of the art recycling plant being developed nearby with the capacity to handle mixed household waste, green waste and composting.
- The potential to help meet recycling targets.
- There are established markets for glass, plastic and paper and a desire to develop new markets.
- May be able to form part of Bradford's recycling strategy.

**SUMMARY OF ADDITIONAL INFORMATION**

During March – May 2004, some additional details were requested from the Department of Environmental Protection and Waste Management, including:

- Paper recycling: details of the numbers of additional bins in use and the tonnage collected:

Month	Number of bins in use	Tonnage Yielded
January 03	9,237	237
February 03	11,637	232
March 03	21,637	253
April 03	33,057	268
May 03	33,057	380
June 03	43,090	338
July 03	53,420	448
August 03	53,420	438
September 03	53,420	488
October 03	58,670	501
November 03	67,470	579
December 03	71,670	627
January 04	82,370	578
February 04	82,370	666
March 04	82,370	-
	<b>TOTAL</b>	<b>6033</b>

- There are 13 collections per annum (one collection every 4 weeks)
- Currently there is no policy to alter/ vary the traditional weekly domestic refuse collection service.
- An analysis (Sept 2003) of collection and recycling rates at HWS identified a variance in the recycling facilities available at individual HWS, perhaps reflecting the range of recycling rates between sites:

Household Waste Site	% of Waste Recycled
Wilson Road, Wyke	50%
Dowley Gap, Bingley	47%
Bowling Back Lane, Bradford	45%
Sugden End, Keighley	43%
Royds Way, Keighley	38%
Ford Hill Depot, Queensbury	28%
Golden Butts Depot, Ilkley	25%

- Currently with the District there are approximately 70,000 properties classified as 'difficult to reach'.
  - A trial recycling bag scheme is being piloted in Saltaire from May 2004. If successful, it is planned to roll-out this system to other hard-to-reach properties.
- A sample of 'operational' job descriptions was provided; the focus of these tended to be on waste disposal rather than 'resource recovery'.

## **BEST PRACTICE EXAMPLES – INTERNATIONALLY**

A study commissioned by DEFRA into recycling experience internationally (published April 2001)<sup>1</sup> and based on a series of case studies, identified potential ways forward to increase recycling in the UK. Key proposals were:

- Increase significantly and refine landfill taxes for organic and non-organic waste to further redress the balance of costs between landfill and recovery. The Landfill Tax goes some way towards achieving this;
- Introduce an incineration tax (depending on the relative costs of disposal by incineration and recovery through recycling);
- Introduce producer responsibility: examples so far include the packaging waste and newsprint sectors (Italy, Germany, the Netherlands);
- Improve the recycling infrastructure to increase the density of recycling centres. Target areas could be areas of large-scale public use (eg supermarkets). The density of recycling containers for flats could be much higher;
- Roll-out of kerbside recycling over larger areas of the UK;
- Research into the most effective means of increasing organic waste composting;
- Volume-based charging for waste collected for disposal from households (systems adopted in Denmark, Germany, California, Seattle also promote householder participation in source-separation of recyclables and in waste minimisation schemes);
- Sustained and targeted public awareness campaigns across all media, co-ordinated nationally, regionally and locally. Public awareness is a key driver behind all the case studies but must be linked to a recycling infrastructure that allows people to recycle easily, once motivated to do so;
- Market development initiatives such as government procurement programmes to encourage strong markets for recycled materials, together with research and development in uses for recycle.

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<sup>1</sup> 'Research Study on International Recycling Experience'