

Brent Ealing Harrow
Hillingdon Hounslow Richmond
West London Waste Authority

DRAFT JOINT MUNICIPAL WASTE MANAGEMENT STRATEGY
September 2005

Volume 1: Core Report



West London Waste Authorities and
Constituent Boroughs

Municipal Waste Management Strategy

Volume 1: Core Report

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WEST LONDON JOINT WASTE STRATEGY

DRAFT FOR CONSULTATION

This statement provides a summary of the policies of the West London Waste Authority and constituent boroughs formulated for the purposes of the joint Municipal Waste Management Strategy, in compliance with the Waste and Emissions Trading Act (section 32 (4)).

This Joint Municipal Waste Management Strategy (the Strategy) covers the West London Waste Authority area, encompassing the Boroughs of Brent, Ealing, Harrow, Hillingdon, Hounslow, and Richmond upon Thames (Richmond). The West London Waste Authority (WLWA) and constituent Boroughs must produce a Strategy by law. The purpose of which is to set out how the authorities intend to manage municipal solid waste arisings between 2005 and 2020.

The Strategy should, in simple terms, answer three questions:

- where are we now?
- where do we want to be and when? and
- how do we get there?

This document provides a summary of the policies of the authorities with regard to the Strategy and is supported by a number of Annexes and technical reports which explain how and why these policies have been formulated and how they will be implemented. Together, they form West London's Strategy.

The Annexes:

- *Annex A* explains how the Strategy has been developed;
- *Annex B* reviews current waste management in West London and requirements for how waste should be managed;
- *Annex C* provides a summary of regional and local policies within which the Strategy must fit; and
- *Annex D* provides Action Plans for how the Strategy will be implemented and an assessment of the risks likely to be encountered.

Four technical reports are appended to the Strategy:

- Technical Report 1 provides the baseline assessment;
- Technical Report 2 provides a review of waste reduction and reuse options;
- Technical Report 3 provides a review of recycling and composting options; and
- Technical Report 4 provides a review of residual waste options.

West London needs to change the way it manages its waste. Like most other areas in the country, West London has relied upon disposing most of its waste in landfills until very recently. This now needs to change. Amongst other legal requirements, authorities must now meet statutory recycling and composting standards for waste from households by 2006 and must progressively reduce the amount of biodegradable municipal waste (BMW) landfilled each year between 2005 and 2020. This legislation will help reduce the impacts that waste has on our environment.

There are also sound financial arguments why more waste reduction, recycling, composting and recovery is needed. The amount of waste to be managed and the speed with which this grows has a major influence on cost. Reducing growth in waste will help to minimise costs. Further, the cost of disposing waste in landfills is rising year on year. The tax on landfilling waste alone is likely to almost double in the next six years and the penalty for not diverting sufficient amounts of BMW from landfill will be around £150 per tonne over the permitted amount. Measures to reduce the amount of waste arising and to divert material from landfill can be seen as investments which have the potential to save money over the medium to long term.

2.1

HOW HAS THE STRATEGY BEEN DEVELOPED?

The Strategy has been developed by the WLWA and the six constituent London Boroughs, working together to produce a joint way forward. Local people were consulted during its development through a waste forum and a community panel. Specific stakeholders such as contractors, local environmental groups and the Greater London Authority were also involved in the process (see *Annex A* for details). To ensure that the Strategy is workable and appropriate, local planning officers and finance officers have been involved in determining the Strategy and elected members were involved throughout the process.

Developing the Strategy involved the examination of a variety of different options for waste reduction and reuse, recycling and composting and residual waste. These were based on assumptions of how waste would grow in future. *Annex B* provides further details. Local people, specific stakeholders and elected members were engaged in determining criteria and in reviewing the results from these three studies. Technical reports summarising the outputs of the studies have been appended to the Strategy. The environmental impacts of residual waste options assessed have been assessed for the short and long term.

Decisions have been taken to seek the best environmental outcome taking account of what is feasible and what is an acceptable cost. This statement and appended Action Plans summarise these decisions. It is intended that this Strategy provides a framework for managing wastes in the future and remains flexible to change. It is also intended that a co-ordinated approach to the challenges of waste reduction and reuse should be pursued, working with the ALG and the Mayor of London.

2.2 ENVIRONMENTAL APPRAISAL OF OPTIONS

The preparation of the Strategy included an appraisal of options for the management of residual waste that is entirely consistent with the concept of the Best Practicable Environmental Option (BPEO) as laid out in Waste Strategy 2000. The appraisal is included in *Technical Report 4*. As the Strategy development process started before 21st July 2004 and as the West London authorities intend to adopt the strategy before 21st July 2006, the document will not be subject to Strategic Environmental Assessment (SEA). The appraisal of options within the Strategy is, however, largely consistent with a formal SEA as it reports on environmental impacts of proposals within the context of sustainable development; examines alternative options; builds in consultation with local communities; and demonstrates, in the final report, how consultation responses have been taken into account. Further information on SEA is provided in *Annex A*.

The West London Boroughs are collaborating on a Joint Waste Development Plan Document (JWDPD) for all waste streams, including municipal solid waste (MSW). In accordance with Planning Policy Statement 10: Sustainable Waste Management (PPS10) the JWDPD will draw on the Strategy for options for MSW management. The JWDPD will be subjected to a Sustainability Appraisal/SEA in due course. It is the Strategy's intention to make available to this process as much information as possible concerning the impact of the Strategy's proposals, including the appraisal of options in the *technical reports*.

2.3 WHAT WASTES DOES THE STRATEGY COVER?

The Strategy addresses all of the waste arisings within the WLWA area that come under the heading of 'municipal solid waste' (MSW). This includes waste produced by households, as well as trade wastes, fly-tipped materials and abandoned vehicles.

West London's Strategy has been based on sound data and analysis for the latest year for which complete data are available (financial year 2004/5). A detailed review of West London's current waste management practices and performance is provided in *Annex B*.

The WLWA area collected some 826 000 tonnes of MSW in the financial year 2004/5. Around one sixth of the waste collected was recycled and composted, with remaining material being landfilled. *Table 3.1* summarises waste arisings in West London.

Table 3.1 *Summary of Arisings & Waste Management 2004/05**

	Brent	Ealing	Harrow	Hilling- don	Hounslow	Richmond	WLWA
Municipal waste (‘000 tonnes)	131	164	122	157	140	112	826
Household waste (‘000 tonnes)	117	144	106	131	107	86	691
Waste generated per household (kg/hhld)	1 121	1 201	1 272	1 295	1 186	1 087	1195
Household waste recycling rate (%)	14.3	14.0	18.8	27.3	17.4	24.4	20.06

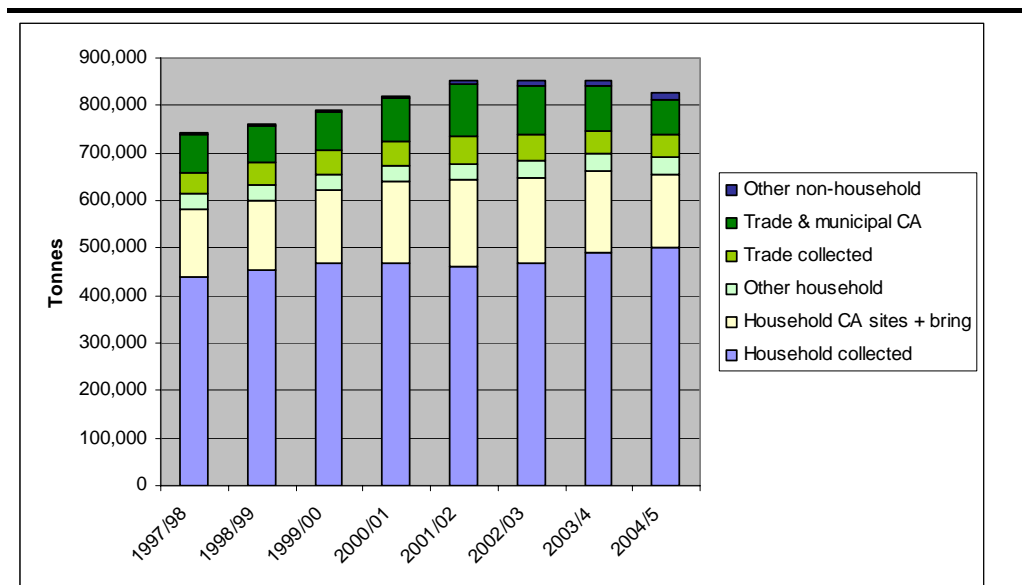
*Arisings and performance data updated as of 24 August 2005, information derived from West London's Matrix C

3.1

TRENDS IN WASTE ARISING

Figure 3.1 shows how municipal waste arisings in West London increased up to 2001/2 and have decreased in the last four years. This decrease reflects a decrease in civic amenity (CA) site and non-household waste arisings and has occurred despite the underlying increase in household waste collections shown in the figure. It is thought unlikely that this decrease will continue in future, without targeted waste reduction and reuse programmes.

Figure 3.1 *Arisings of Municipal Waste between 1997/8 and 2004/5*

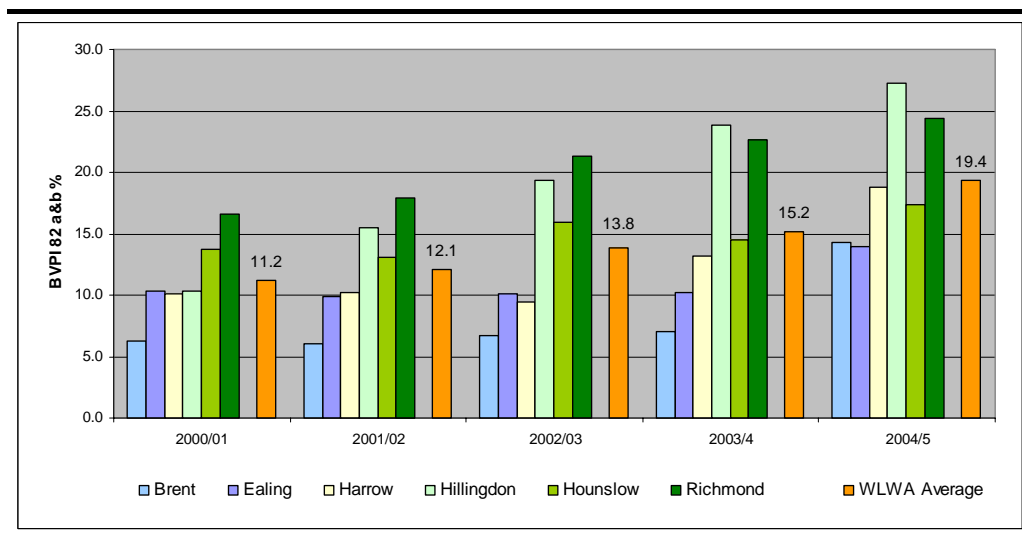


'Other non-household' wastes include fly-tipped waste and other, uncategorised MSW. 'Other household' wastes include special (bulky) waste collections, street sweepings and litter and clinical waste.

3.2 *RECYCLING & COMPOSTING PERFORMANCE*

Of the 699 000 tonnes of waste collected from households alone in 2003/4, some 17% was recycled or composted, just below the statutory performance standard of 18% for 2003/4, but a significant increase from the 11% recycling rate in 2000/1. *Figure 3.2* shows how recycling and composting rates have increased across all West London authorities in the last five years.

Figure 3.2 *Household Waste Recycling and Composting 2004/5*



Services for the collection of a number of different materials, including recyclable or compostable materials, hazardous waste, end-of-life vehicles and electrical goods are provided across WLWA (*Annex B*). *Table 3.2* outlines the collection system operated by each constituent Borough.

Table 3.2 *Constituent Boroughs' Waste Collection Infrastructure*

Borough	Details of Collections		
	Residual	Recyclables	Organic
Brent	Wheeled bin	Green Box	Wheeled Bin & degradable bags
	Weekly	Weekly	Fortnightly
Ealing	Black sack	Green box	Degradable bag
	Weekly	Weekly	Fortnightly (Seasonal)
Harrow	Wheeled bin	Green box	Wheeled bin
	Weekly	Fortnightly	Fortnightly
Hillingdon	Black sack	Clear plastic sack	Plastic sack
	Weekly	Weekly	Fortnightly
Hounslow	Black sack	Green box	Degradable bags
	Weekly	Weekly	Weekly (Seasonal)
Richmond	Black sack	Black box	Degradable bags / 240l bin
	Weekly	Weekly	By appointment

Refer to annexes for further information on each Borough's collection system.

In terms of waste transfer and disposal, in 2004/5,

- **76% (412 000 tonnes)** was delivered to two rail transfer stations which WLWA operate at Transport Avenue, Brentford, and Victoria Road, South Ruislip.
- **8% (43 000 tonnes)** was distributed between the Authority's Twyford transfer station and the Boroughs' CA sites.
- **14% (76 000 tonnes)** was delivered to private sector operated transfer stations at which WLWA has arrangements. And just over 1% (7,000 tonnes) was delivered to West London Composting Ltd's newly opened facility at Harefield.

In addition to the waste delivered by the constituent Boroughs, WLWA's three transfer stations also received a total of 23 000 tonnes of commercial waste, which was delivered for disposal by the private sector.

Figure 3.3 shows the location of key waste management facilities within West London. This shows that there are limited existing facilities for managing West London's waste by recycling, composting or solutions that do not involve transfer of waste to landfills outside the capital.

Figure 3.3 *Location of Waste Facilities in West London*



In line with sustainable development, the West London Waste Authority and the London Boroughs of Brent, Ealing, Harrow, Hounslow, Hillingdon and Richmond-upon-Thames are committed to changing the way waste is managed. The authorities' objectives are to:

1. manage waste in accordance with the waste hierarchy: reduce waste first, then reuse, recycle and compost resources, then recover energy and, as a last resort, dispose of waste ;
2. manage waste at the nearest appropriate facility by the most appropriate method or technology;
3. make changes to the way waste is managed now to prevent environmental degradation, rather than postpone decisions;
4. manage waste in a way that protects human health and the environment;
5. manage waste in a way that meets the needs of West London's population now without compromising the ability of future generations to meet their own needs;
6. deliver services that offer value for money, not necessarily the cheapest service;
7. develop flexible services, so that new technological developments and legal requirements can be incorporated;
8. minimise the costs of waste management while complying with legislative requirements;
9. exceed performance required by current targets, to reduce the risk of failure and to put in systems that allow West London to be ahead of the game;
10. work together to develop coordinated services and infrastructure for waste collection, treatment, transfer and disposal and to share the costs and rewards of implementing the strategy; and
11. work together to encourage waste reduction and reuse initiatives within the wider community.

4.1**POLICIES**

This section sets out the policies formulated for the purposes of the Strategy. A separate document sets out Action Plans for achieving the Strategy objectives and meeting these.

By law, the West London authorities need to consider the guidance of the Secretary of State and the Mayor of London's Municipal Waste Management Strategy in preparing policies for their Strategy. Currently, this means taking account of Waste Strategy 2000 (as revised July 2005), consultation guidance

on preparing strategies, PPS10 and Rethinking Rubbish in London. These documents are changing, however, and any future policy development will need to take account of revisions (particularly to the national and London waste strategies) and anticipated guidance on preparing waste strategies.

Compliance with National Legislation

Current and future policy development should also take account of other national, regional and local guidance and the Best Value Performance Plans and Corporate Plans, Aims, Objectives and Strategies of all the authorities. *Annex A* explains how this has been incorporated into the current Strategy.

Policy 1: Current and future policy development will have regard to the National and Mayor of London's Municipal Waste Management Strategies and other relevant national, regional and local guidance.

Waste reduction and reuse

Waste reduction and reuse is at the top of the waste hierarchy. By reducing waste and reusing materials, the authorities will reduce the overall cost of waste management and help to achieve statutory requirements. In the past, waste reduction and reuse has not had a sufficiently high profile and therefore it is important that the Strategy provides a commitment to prioritise these activities.

Policy 2: West London Waste Authority and its constituent Boroughs will prioritise waste reduction and waste reuse.

Recycling & Composting

Though the authorities are performing relatively well in terms of recycling and composting (17% of household waste in 2003/4), more needs to be done. There are statutory targets to achieve 27% recycling and composting locally by 2005/6. Nationally, there are targets to achieve 30% household waste recycling and composting by 2010 and 33% by 2015. In London the Mayor aspires to higher targets for recycling and composting and considers they can be achieved in the longer term.

The authorities have agreed to set a challenging target for recycling: to recycle half the municipal waste arising by 2020. These targets are placed on all waste (municipal, including some commercial) collected by the Boroughs, rather than just waste produced from households. Interim targets to achieve these aims are set out in the Action Plans.

Policy 3: Jointly, the West London Waste Authority and constituent Boroughs will aim to recycle and compost at least:

- 28% of municipal waste by 2006/7;
- 40% of municipal waste by 2010; and
- 50% of municipal waste by 2020.

These targets will aim to be reached from a base of meeting statutory

performance standards for household waste recycling and composting in each authority by April 2006. The Action Plans will set intermediate targets.

The Mayor's Municipal Waste Management Strategy proposes that authorities provide all households with a collection of three materials for recycling. The Household Waste Recycling Act requires two materials to be collected separately by 2010. To deliver high levels of recycling, the West London waste authorities will aim to exceed this requirement and provide all households with recycling collections of at least four materials by 2008.

Policy 4: The collection authorities will serve all households with recycling collections of at least four materials by 2008.

Landfill

West London relies upon landfill to manage waste. The National and London waste strategies require authorities to recycle and recover more and landfill less. The authorities are also required, by law, to reduce the amount of biodegradable municipal waste sent to landfill by specific amounts each year. Authorities can choose to meet these requirements or to trade with other authorities who can divert more (using the Landfill Allowances Trading Scheme). The plan for how the West London authorities will meet these requirements (through recycling, composting, trading, residual waste treatment) is set out in the Action Plans.

Policy 5: West London Waste Authority and its constituent Boroughs will reduce biodegradable municipal waste landfilled with regard to the Landfill Allowance Trading Scheme.

Residual waste management

It is certain that the WLWA cannot meet the requirements for reducing biodegradable municipal waste landfilled through waste reduction, reuse, recycling and composting alone. A new way of managing remaining (residual) waste will be needed. In choosing and procuring the best option, or options, the authorities will keep the waste hierarchy in mind and will find an option that provides value for money and long term reliability.

Policy 6: West London Waste Authority and constituent Boroughs will seek a residual waste management solution in accordance with the waste hierarchy, that presents value for money and that offers reliability in the long term.

Other waste management services and streams

Other waste management services such as street cleaning, bulky waste management and trade waste collections will be managed in line with best value and provide customer satisfaction and meet legislative requirements. There are also requirements that West London need to meet for particular waste streams. These streams include hazardous waste, electronic equipment,

abandoned vehicles and clinical wastes. Separate Action Plans have been provided for these streams.

Policy 7: The West London Waste Authority and constituent Boroughs will seek to provide waste management services that offer good value, that provide customer satisfaction and that meet and exceed legislative requirements.

Sharing burdens

It is important that all the authorities work together to achieve the aims of the strategy and to ensure that burdens and rewards fall to authorities in an equitable manner.

Policy 8: The West London Waste Authority and constituent Boroughs will work together to achieve the aims of this strategy and are committed to share equitably the costs and rewards of achieving its aims.

5.1 HOW TO ACHIEVE OUR AIMS

The authorities recognise that major changes will need to be made in order to implement the objectives of the Strategy. A range of options for waste reduction and reuse, recycling and composting and residual waste treatment have been considered during the development of the Strategy. *Technical Reports 2-4* provide further detail on these analyses.

Changes to waste management in West London will be significant. In the short term, there will need to be a clear focus on tackling waste reduction and reuse and improving levels of recycling and composting. The Strategy encapsulates the waste management hierarchy and is underpinned by the desire to decouple economic growth from waste generation. Reduction and reuse initiatives that make a useful impact on reducing waste generated have been assessed and are already being explored and implemented by the Boroughs. The Strategy includes an ambitious timeline for the roll-out of new collections for recycling and composting material in order to meet obligations under LATS. It sets a target of 40% recycling and composting for 2010 that represents a significant challenge for the Boroughs. This demands substantial progress to be made towards this target year on year from 2005/06. The Action Plans in *Annex D* present the way forward for the implementation of collections across the Boroughs in the short-term, with decision points regarding further fundamental improvements such as the introduction of kitchen waste collections and a shift to fortnightly collections of residual waste. *Table 5.2* summarises the key elements of these plans.

Beyond 2010, and as LATS allowances reduce dramatically, a recycling and composting based Strategy will prove insufficient for WLWA to meet its obligations. Whilst the Strategy requires continued progress on raising recycling and composting rates towards a 2020 target of 50%, achievable rates will not be enough to prevent a LATS shortfall without a new residual treatment facilities becoming operational. The shortfall is likely to amount to approximately 150 000 tonnes of residual waste.

The appraisal of residual waste options ⁽¹⁾ shows that the options that offer the best performance and fit with the circumstances of WLWA are mechanical biological treatment (MBT) and energy from waste (EfW). New MBT and EfW facilities will take many years to implement, EfW longer so than MBT. It is extremely unlikely that any new plant, of a significant size, could be operational before 2010, and it could well be 2013 or later before capacity to divert residual waste from landfill comes on stream. This delay beyond the date at which the new contracts are let has significant implications for WLWA's LATS strategy. Options for bridging the gap include: the

(1) *Technical Report 4*

procurement of an interim small-scale MBT plant; procuring EfW capacity from outside the West London area; or paying LATS penalties/trading permits.

Table 5.1 provides a summary of the main costs, benefits and risks associated with the key options for residual waste management. Costs are indicative and are presented as aggregated figures over the Strategy time period.

Table 5.1 *Indicative Costs, Benefits and Risks of Waste Management Options ⁽¹⁾*

Long Term Option	Indicative Potential Cost (aggregated 2006-2020)	Indicative Avoided Cost (aggregated 2006-2020)	Principal Risks
<i>Baseline scenario – ‘do nothing’ ⁽²⁾</i>	<ul style="list-style-type: none"> • c £770 million baseline waste collection costs • c £480 million LATS fines • c £730 million landfill tax and gate fees 		<ul style="list-style-type: none"> • LATS penalties • Unknown market price for LATS permits
<i>High recycling, MBT long term treatment technology</i>	<ul style="list-style-type: none"> • c £750 000 promotion of reduction/reuse* • c £172 million rec/comp collection additional to baseline • c £170 million MBT gate fees (inc RDF disposal) • c £370 million landfill tax and gate fees 	<ul style="list-style-type: none"> • c £14 million avoided collection/disposal through reduction/reuse • c £480 million avoided LATS fines 	<ul style="list-style-type: none"> • Market for RDF • Large capacity requirement (approx 400ktpa)
<i>High recycling, EfW long term treatment technology</i>	<ul style="list-style-type: none"> • £750 000 promotion of reduction/reuse* • c £172 million rec/comp collection additional to baseline • c £75 million EfW gate fees • c £400 million landfill tax and gate fees (inc hazardous) 	<ul style="list-style-type: none"> • c £14 million avoided collection/disposal through reduction/reuse • c £480 million avoided LATS fines 	<ul style="list-style-type: none"> • Delivery of facility • Large capacity requirement (approx 240ktpa)
Interim Option	Indicative Cost (aggregated 2006-2013)	Indicative Avoided Cost (aggregated 2006-2013)	Principle Risks
<i>Procurement of small MBT plant</i>	<ul style="list-style-type: none"> • c £20 million MBT gate fees (inc RDF disposal) 	<ul style="list-style-type: none"> • c £15 million avoided LATS fines 	<ul style="list-style-type: none"> • Market for RDF
<i>Procurement of EfW capacity outside West London</i>	<ul style="list-style-type: none"> • c £6 million EfW gate fees 	<ul style="list-style-type: none"> • c £15 million avoided LATS fines 	<ul style="list-style-type: none"> • Availability of capacity on appropriate timescale
<i>LATS payment/trading in interim period</i>	<ul style="list-style-type: none"> • c £15 million LATS fines 		<ul style="list-style-type: none"> • LATS penalties • Unknown market price for LATS permits

*Based on the four options for reduction and reuse assessed (Technical Report 2)

(1) All cost assumptions can be found in *Technical Reports 2-4*.

(2) Based on 2003/04 figures for recycling and composting

The Strategy will therefore require an initial procurement of residual waste treatment and/or disposal capacity to bridge the LATS gap expected from 2010 – 2013 or thereabouts. The cushion that this will provide places WLWA in a position of strength with regard to the trading of LATS allowances, and creates a safety net in terms of diversion from landfill should one or more of the Boroughs be unable to match the demands of the recycling and composting based approach through until 2010. The initial procurement should use the same basis as a reference case as recommended for the main procurement for new contracts in 2008: MBT or EfW. *Annex D* and *Table 5.2* also provide information on the Strategy and decision points for residual waste management.

Table 5.2 *Summary of Plan for achieving Strategy Aims*

Date	Action
2005/6	<ul style="list-style-type: none"> • active promotion of waste reduction & reuse initiatives • improve efficiencies in existing recycling/composting services to meet BVPIs
2006/7 – 2009/10	<ul style="list-style-type: none"> • prepare detailed plans for achieving strategy aims • continue to promote waste reduction and reuse initiatives and improve participation • improve recycling and composting services to achieve 40% MSW recycling by 2010 • divert biodegradable municipal waste from landfill • secure residual treatment capacity to help meet requirements to reduce biodegradable municipal waste landfilled • use Landfill Allowance Trading Scheme (buy/borrow) to meet any shortfall between performance and required reduction in biodegradable municipal waste sent to landfill. • prepare new collection contracts (Brent, Hounslow) and new disposal contract (2008) to be consistent with the Strategy. • work to bring forward the date by which non-landfill residual waste treatment infrastructure can be secured. WLWA will not meet LATS after 2010 without this.
2009/10 – 2012/13	<ul style="list-style-type: none"> • continue to promote waste reduction and reuse • improve recycling and composting rates to achieve 43% MSW recycling by 2013 • continue to improve recycling and composting collection systems, through initiatives such as making recycling compulsory • recycling & composting strategy becomes insufficient to meet LATS • maintain capacity outside West London for residual waste treatment • construct / secure non-landfill residual waste treatment infrastructure
2012/13 – 2019/20	<ul style="list-style-type: none"> • improve recycling and composting rates to achieve 50% recycling by 2020 • dedicated residual waste treatment infrastructure is likely to become available by this date • sell landfill allowances to others

There is strong corporate support for making the actions within the Strategy happen. The changes required are being considered for inclusion in budgets for 2006/7. At the time of drafting the Strategy itself has not been adopted by all constituent Authorities, but is being submitted for approval.

By law (WET Act, section 32 (2)) the WLWA and constituent Boroughs are required to keep the policies formulated under the joint Municipal Waste Management Strategy under review. The authorities' plan for making this happen is to update the Action Plans each year as a minimum, at the same time as Best Value reviews are prepared. If the Action Plans no longer fit with the overarching Strategy, this will trigger a review of the high-level document.

At the latest, the overarching document will be revised in 2008, before the implementation of the new contract, in line with the Mayor's Municipal Waste Management Strategy and before the first key year (2009) for reducing biodegradable municipal waste landfilled. This revised document will be subject to Strategic Environmental Assessment. Thereafter, the Strategy will be reviewed every five years, or in line with revisions to the Mayor's Municipal Waste Management Strategy.

The Action Plans provide the next steps in Strategy development, further details of how progress against the Strategy will be measured and actions for how the authorities will maintain a close working relationship with local people and key stakeholders.

Appendix A

How has the Strategy been developed?

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This appendix summarises the way in which the West London Waste Authorities have prepared their Joint Municipal Waste Management Strategy (the Strategy). It contains information on:

- who was involved in developing the Strategy;
- stages involved in Strategy development;
- issues regarding the appraisal of waste management options;
- information on the outputs of waste forum meetings; and
- information on the outputs of focus group meetings.

A2.1 WHO WAS INVOLVED IN DEVELOPING THE STRATEGY?

West London's Municipal Waste Management Strategy was prepared by officers from the West London Waste Authority (WLWA) and constituent Boroughs, in close consultation with local people and key stakeholders in the area. The project team for the Strategy was supported by external consultants Environmental Resources Management Ltd (ERM) and Eunomia Research and Consulting.

A strong working relationship was established between the WLWA and constituent Boroughs through regular meetings to steer the Strategy process. This was further cemented by the fact that WLWA's board is already composed of one elected member from each constituent Borough. A waste forum, including elected members and officers and community representatives from each of the Boroughs was established to support the development of the Strategy. More details on the Waste Forum are provided in *Section A4*. Separate waste focus groups were also held within certain Boroughs to engage Members of the public and other stakeholders. More details on the focus groups are provided in *Section A5*.

A2.2 STAGES INVOLVED IN DEVELOPING THE STRATEGY

The Strategy was developed during 2004 and early 2005. *Table A2.1* summarises the stages involved.

Table A2.1 *Stages involved in Developing West London's Strategy*

Date	Activity
Early 2004	Initial Strategy Tasks: Preliminary preparation of Strategy by WLWA and constituent Boroughs
Dec 2004 – Jan 2005	Baseline Assessment: Baseline Assessment of waste arisings and management, infrastructure, socioeconomic data and legal and policy requirements, plus forecasts of likely quantities of waste by external consultants ERM & Eunomia. This document forms <i>Technical Report 1</i> of the Strategy.
18 th January 2005	First Waste Forum Meeting: Introduction to the Strategy, presentation of the Baseline Report. Discussion of most appropriate course for the Strategy. Included discussion of likely options for waste management and criteria by which the options would be assessed.
January – March 2005	Options Development & Appraisal Consistent with draft guidance from Defra, WLWA, and consistent Boroughs identified and evaluated options at all tiers of the waste hierarchy. Separate analyses were provided for waste reduction and reuse; recycling and composting; and residual waste.
21 st March 2005	Second Waste Forum Meeting. Discussion of the outputs of waste reduction and reuse and residual waste management options.

Date	Activity
March – April 2005	Options Refinement. Options were refined and assessments updated following comments from the waste forum. The final options assessment reports form <i>Technical Reports 2, 3 and 4</i> of this Strategy.
April – June 2005	Preparation of Strategy & Action Plan. Preparation of first drafts of high level Strategy document and action plan.
May 2005	Consultation with GLA. WLWA consultation with GLA on likely direction of Strategy.
24 th May 2005	Third Waste Forum Meeting. Second discussion of residual waste management options. Discussion of strategic objectives for the Strategy and potential policies.
21 st June 2005	Borough Engineers Meeting. Meeting of borough engineers to discuss draft Strategy and action plans.
Late May 2005	Revision of Strategy. Updating of Strategy to take account comments and finalise documents for WLWA meeting
29 th June 2005	WLWA meeting. Consideration of the Strategy by WLWA.

Following the WLWA meeting in June, the Strategy will undergo detailed consideration by each of the constituent Boroughs and revisions will be made. Strategy finalisation is planned for Autumn 2005.

The preparation of the Strategy included an appraisal of options for the management of residual waste that is entirely consistent with the concept of the Best Practicable Environmental Option (BPEO) as laid out in Waste Strategy 2000. The appraisal is included as one of the reports in *Annex A*.

Defra published a consultation paper on proposed changes to the waste management decision making principles in *Waste Strategy 2000* on 6 December 2004 (<http://www.defra.gov.uk/corporate/consult/wasteman-strat/index.htm>). Sustainability Appraisal (SA), incorporating Strategic Environmental Assessment (SEA), is now required for Regional Spatial Strategies, Development Plan Documents and Supplementary Documents which identify waste management infrastructure needs, and SA will identify the extent to which the spatial planning strategy delivers the objectives set by Government for sustainable waste management.

In effect, therefore, SA incorporates the concepts underpinning the process for determining the BPEO, which means there is no longer a need for a separate BPEO process. The principles that were encapsulated by the BPEO nevertheless remain valid and will be addressed through SA/SEA in future. These are, that:

- in taking decisions, there should be consideration of alternative options in a systematic way;
- engagement with the community and key stakeholders should be an important and integral part of the decision-making process;
- environmental impacts of possible options should be assessed by looking at both the long- and the short-term; and
- decisions should seek the best environmental outcome taking account of what is feasible and what is an acceptable cost.

An SEA must be undertaken for all **new** strategies as a requirement of the Environmental Assessment of Plans and Programmes Regulations 2004. However, an SEA is not required where the Strategy development process commenced before 21st July 2004, provided that the Strategy is completed and adopted prior to 21st July 2006.

The 'First Preparatory Act' for the WLWA Strategy predates 21st July 2004, and WLWA and its constituent Boroughs intend to adopt the Strategy before 21st July 2006. **As a result, this Strategy will not be subjected to an SEA *per se*.** Nevertheless, the appraisal of options for residual waste undertaken is largely consistent with a formal SEA, as well as the BPEO process in that it:

- reports on the environmental impacts of proposals within the context of sustainable development for public consultation;
- examines alternative options;
- built in consultation with local communities and stakeholders; and
- demonstrates in the final report how the consultation results have been taken into account.

The West London Boroughs are collaborating on a Joint Waste Development Plan Document (JWDPD) for all waste streams, including municipal solid waste (MSW). In accordance with the emerging Practice Guide on draft PPS10, the JWDPD will draw on the Strategy for options for MSW management. The JWDPD will be subjected to an SA/SEA in due course. It is the Strategy's intention to make available to this process as much information as possible concerning the impact of the Strategy's proposals, including the appraisal of options.

The Waste Forum was primarily set up to engage and reflect accurately the views of the community and constituent Boroughs as an aid to developing the Waste Strategy. It was also established to validate the method and procedures used in developing the Strategy and key data used to inform the Strategy.

A4.1

WHO WAS INVOLVED AND WHAT WAS THE PURPOSE?

Invitees to the Forum Meetings included: elected Members and officers from each of the constituent Boroughs and West London Waste Authority (WLWA); and community representatives from each constituent Borough.

A key function of the Forum was to identify issues that Members and community groups might raise, and deal with them promptly, so that their validation of, and confidence in, the overall process could be gained from the start. The meetings involved presentation of key information with discussion groups to consider elements of choice and debate priorities and direction for the Strategy.

A4.2

WHEN AND WHERE?

Three Waste Forums were held at the Hounslow Civic Centre. Each Forum was held at specific stages of Strategy development.

18 January 2005:

Introduction to the Strategy, presentation of baseline report and consideration of *where are we now?* and *where do we want to get to and by when?*

21 March 2005:

Update of Strategy progress, presentation and discussion of reduce and recycling appraisal work and presentation and discussion of residual options

24 May 2005:

Update of Strategy progress, presentation and discussion of residual options and presentation and discussion of strategic objectives and policy

A4.3

OUTCOME OF FIRST FORUM MEETING (18 JANUARY 2005)

The purpose of the first meeting was to present the Strategy development process and the baseline report, and to elicit from delegates input that would frame the second Strategy development phase: option development and appraisal.

Comments and questions reported in this section are a report of the meeting and do not necessarily represent the views of ERM.

A4.3.1 Summary of Responses

Key points raised in the three group discussions were:

- not enough information to rule out any of the waste technologies;
- sustainability is key;
- all options have to be practical in the West London area;
- options and chosen technologies must be chosen through looking at what would work now and also in future with regards to legislation and proven/ upcoming technologies etc;
- the Strategy should remain flexible and should not be a case of putting all eggs in one basket; and
- possible barriers to technologies could be the London Mayor's position on incineration.

The final whole group discussion concluded that the most important criteria were generally seen as:

- cost/financing;
- reliability of delivery;
- practicability (in West London);
- transport/proximity principle;
- public involvement/communication; and
- conformance with waste policy (meeting targets and SEA/SA requirements).

Other criteria that should be taken into consideration also included:

- harm to public health;
- climate change/greenhouse gas emissions;
- equality of impact across Boroughs; and
- contractual requirements/flexibility.

Employment, visual impact and local amenity were considered to be of less importance.

The purpose of the second meeting was to present and discuss the assessment methods and results for *stages 1* and *2* of the assessment process:

- *Stage 1*: waste minimisation & reuse; and
- *Stage 2*: recycling & composting.

The results of these stages were expected to influence *stage 3* (the residual waste management options) through the amount and type of waste remaining to be treated. The Forum was requested to consider and validate the work undertaken to date.

A4.4.1

Summary of Responses

The meeting began with a whole group question and answer session, details this was followed by three break out group discussions. The main points raised in the break out discussion groups were that:

- site identification is an issue – due to transport of waste, scale of facility, impact across borough/s, NIMBY and the type of technology to be used;
- only options that contribute to the achieving of BVPI and LATS targets should be considered;
- there is a need to have a good education and awareness campaign that is integrated within the options chosen and inform residents of the role they play;
- the Strategy needs to incorporate both short and long term implications such as climate change;
- the types of products produced from the chosen technology(ies) need to be considered carefully; and
- policies to enforce waste management aspirations are important.

The meeting was concluded with a whole group discussion. The outputs from this were that:

- zero waste has been acknowledged as a concept and vision but the Strategy must focus on practicality;
- the Strategy should set realistic targets and not be over ambitious;
- the first residual waste management facility needs to be in place by 2009 and the focus should be on this and determining what happens in the interim;

- equality across the WLWA area needs to be considered as a criterion in the residual waste management options (the forum agreed to include it in planning risk); and that
- the government needs to take more action with regards to waste minimisation and recycling.

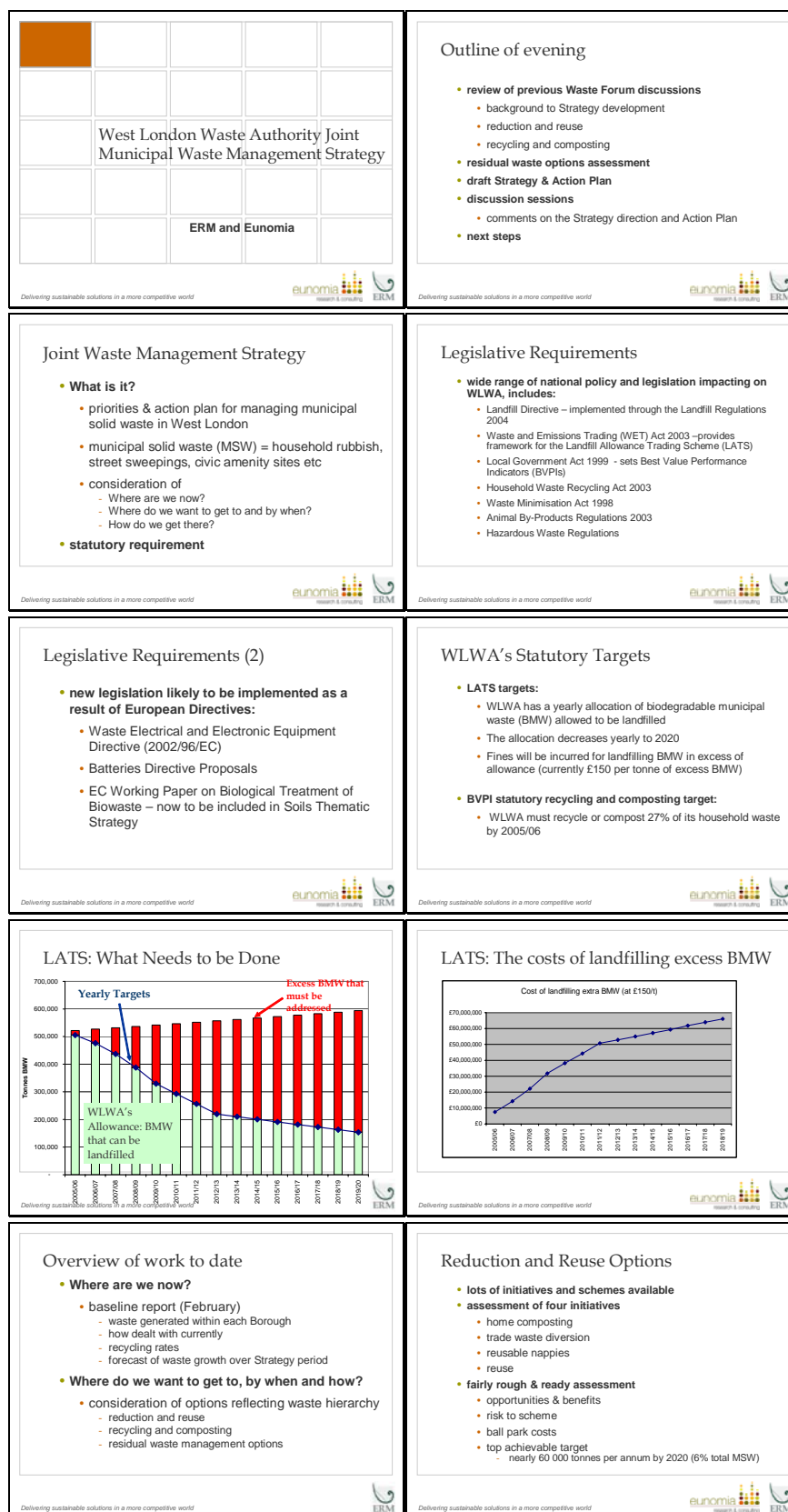
A4.5

OUTCOME OF THE THIRD FORUM MEETING (24 MAY 2005)

The purpose of the third Waste Forum was to present and discuss the findings of earlier waste forum discussions and work to date (baseline study, options for reduction and reuse, recycling and composting and residual waste management). The presentation given at the Forum is given in *Figure 4.1*.

The meeting began with a whole group discussion on residual waste options assessment process and its implications for the Strategy. This was then followed by the group being split into two to discuss the structure and policies of the draft Strategy.

Figure 4.1 Presentation given to the Third Forum Meeting



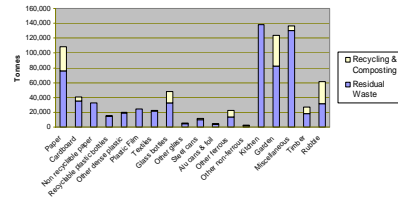
Recycling and Composting Options

- **key objectives to identify:**
 - potential impact of recycling and composting on household collected waste
 - likely cost of recycling and composting over the Strategy period
 - likely quantity and composition of residual waste over the Strategy period
- **objective was not to decide the collection systems to be used by the boroughs**

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Current Recycling in West London



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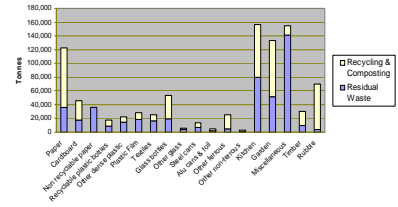
Long term conclusions

- recycling/composting rates of 50% of municipal solid waste are probably achievable by 2020
- all high performing scenarios were based on collection of plastics, cardboard and kitchen waste
- all entailed the collection of residual refuse on a fortnightly basis
- all entailed significant increases in collection cost over the status quo
- best practice at CA sites also required

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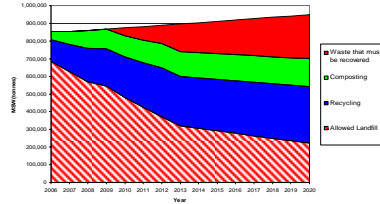
Long Term Recycling in West London



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Residual Waste Management Requirements



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Residual Waste Options Assessment (1)

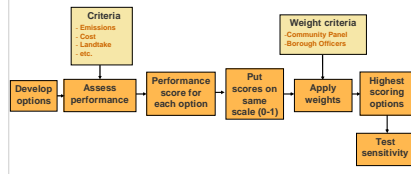
- **two stage assessment process**
- **does not rule out technologies/options but identifies highest scoring options and sets benchmark**
- **Stage 1: assessment of alternative technology options**
 - determine better performing technology/s for residual waste
 - new facilities in 2013
 - assessed MSW arisings between 2013-2020
- **Stage 2: assessment of integrated options for residual waste management**
 - composite options
 - based on lead technologies identified in stage 1
 - total MSW arisings over Strategy period (2005-2020)

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Residual Waste Options Assessment (2)

- **same assessment process for each stage**



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Assessment Criteria

- | | |
|--|--|
| Environmental <ul style="list-style-type: none"> • depletion of resources • air pollution (acidification) • greenhouse gas (GHG) emissions • emissions injurious to human health • extent of water pollution • transport: distance & mode | Practicable/Social <ul style="list-style-type: none"> • landtake • cost • reliability of delivery • risk (liability of end product) • compliance with waste policy |
|--|--|

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Assessment of Performance Against Criteria (1)

- **Resource Depletion, Acidification, GHG emissions**
 - emission factors from Environment Agency (EA) WISARD software applied to resource requirements of technologies (tonnes diesel, kWh electricity etc.)
- **Health Impacts**
 - health impact scores for technologies determined from Defra Health Effects report
- **Water Pollution**
 - EA OPRA (Operator & Pollution Risk Appraisal) methodology used to determine risk scores
- **Transport**
 - total expected distance travelled calculated using geographical information system (GIS) software
- **Landtake**
 - published data for existing plants

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Assessment of Performance Against Criteria (2)

- **Financial Cost**
 - published data for existing plants
- **Reliability of Delivery**
 - options scored on two scales: required no. sites (1 highest, 3+ lowest); and proven technologies (proven in UK on large scale highest, proven on small scale in Europe lowest)
- **Liability of End Product**
 - end product/s from technologies awarded scores based on current risk associated with end-market
- **Compliance with Policy**
 - technologies scored according to position on waste hierarchy (reduction/reuse – 5, recycling/composting – 4, EFW/recovery – 3, landfill – 1)

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Weighting of Assessment Criteria

- Weight set derived from consultation with Community Panel and constituent Borough Officers

Depletion of Resources	0.07
Air Pollution (Acidification)	0.08
Greenhouse Gas Emissions	0.08
Emissions Injurious to Public Health	0.09
Landtake	0.05
Extent of Water Pollution	0.06
Total Road Kilometres	0.05
Financial Cost	0.16
Liability of End Product	0.09
Reliability of Delivery	0.15
Compliance with Waste Policy	0.11

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Stage 1: Alternative Technology Options

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7
Anaerobic Digestion	✓						
Gasification		✓					
Autoclaving			✓				
Energy from Waste (EFW)				✓			
Mechanical Biological Treatment (MBT)					✓	✓	✓
No. Facilities	1	1	1	1	1	2	6
Landfill	✓	✓	✓	✓	✓	✓	✓

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Stage 1: Highest Scoring Options

- **Option 5 (MBT)**
 - scored well against
 - air pollution (1st)
 - water pollution (1st)
 - compliance with waste policy (1st)
 - depletion of resources (2nd)
 - greenhouse gas emissions (2nd)
 - reliability of delivery (2nd)
- **Option 4 (ERW)**
 - scored well against
 - landfill (1st)
 - financial cost (1st)
 - reliability of delivery (1st)
 - transport (2nd)
 - liability of end product (2nd)
- **Option with 1 large facility scored higher than options with 2 and 6 plants**

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Stage 1: Sensitivity Analysis

- **Key Points**
 - if alternative weight sets are used, ERW (option 4) becomes the better fitting technology on majority of occasions
 - option 5 assumes cement kiln market for Refuse Derived Fuel (RDF). If this fails, ERW (option 4) becomes the better fitting technology
- **Implications for Stage 2**
 - integrated options should consider both MBT and ERW as lead technologies
 - stage 2 options to encompass all reasonable means of meeting LATS targets (2005-2020) using MBT and ERW

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Stage 2: Integrated Options

	Option A	Option B	Option C	Option D	Option E	Option F
% Recycle (2020)	50%	50%	50%	50%	50%	50%
MBT (RDF to cement kiln)	✓ (2010, 2013)	✓ (2010)			✓ (2010)	
MBT (RDF to ERW)						✓ (2010)
ERW (WLWA facility)			✓ (2013)	✓ (2013)	✓ (2013)	✓ (2013)
ERW (exported)			✓ (2010-13)			
No. Facilities	2	1	1	1	2	2
Landfill	✓	✓	✓	✓	✓	✓

Option D does not meet WLWA's LATS targets between 2010 and 2013

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Stage 2: Highest Scoring Options

- **Option B (1 MBT facility in 2010)**
 - scored well against
 - depletion of resources (1st)
 - greenhouse gas emissions (1st)
 - air pollution (1st)
 - water pollution (1st)
 - landfill (1st)
 - compliance with waste policy (1st)
- **Option C (1 ERW facility in 2013, export to external ERW facility between 2010-2013)**
 - scored well against
 - financial cost (1st)
 - reliability of delivery (1st)
 - liability of end product (1st)
 - transport (2nd)

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Stage 2: Sensitivity Analysis

- **Key Points**
 - waste reduction and reuse efforts result in lower capacity requirements but do not influence relative performance of options
 - if alternative weight sets are used, option C (1 ERW facility in 2013 and export to ERW from 2010-2013) (option 4) scores more highly on majority of occasions
 - assessment assumed that more treatment facilities = less reliable to deliver. If this is not so, introducing a small MBT facility in 2010 scores more highly (options A and E)
 - if cement kiln market for RDF from MBT fails, ERW options (C and D) likely to be highest scoring

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Whole Group Discussion

- **residual waste options assessment process**
- **outcomes of the assessment**
- **implications for draft Strategy – how should outcomes be taken forward?**

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Draft Strategy

- **statutory requirement for two-tier waste authorities to produce a Joint Municipal Waste Management Strategy**
 - Defra guidance on how to prepare and produce strategies
- **must take into account the Mayor's Municipal Waste Management Strategy, *Rethinking Rubbish in London***
 - sets out policies and proposals for action

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What does the Draft Strategy Include?

- **a policy statement**
 - "to meet and communicate the responsibilities of the WLWA for the collection, treatment and disposal of household and municipal waste"
 - an integrated Strategy involving the WLWA, the WCAs and the WDA
 - focus is on waste minimisation, recycling and recovery"
- **a document explaining the policy statement**
 - where we are now?
 - where do we want to get to and when?
 - how are we going to get there?
- **an Action Plan of how things will get done**
- **supporting technical information**

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Draft Strategy: Objectives (1)

1. **to manage wastes according to principles of:**
 - waste hierarchy
 - proximity principle
 - precautionary principle
2. **to promote and establish services that are:**
 - increasingly environmentally sustainable
 - cost effective
 - flexible in the long term
3. **to minimise costs of waste management, while complying with legislative requirements**
 - statutory recycling and composting targets
 - LATS targets

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Draft Strategy: Objectives (2)

4. **where possible, to exceed performance required by current targets**
 - reduce risk of failure
 - reduce long term cost
 - anticipate future changes in national policy/legislation
5. **to develop coordinated services and infrastructure for waste collection, treatment, transfer and disposal**
6. **to facilitate waste reduction and reuse initiatives within the wider community**

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Draft Strategy: Key Policies (1)

- **Policy 1** – Current and future policy development will have regard to the National and Mayor of London's Municipal Waste Management Strategies
- **Policy 2** – WLWA and constituent Boroughs will prioritise waste reduction and waste reuse
- **Policy 3** – Jointly, the WLWA and constituent Boroughs will exceed:
 - 28% by 2006/7
 - 40% by 2010
 - 50% by 2020
- **Policy 4** – Jointly, the West London authorities will work to meet statutory Borough recycling and composting standards for household waste

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Draft Strategy: Key Policies (2)

- **Policy 5** – the collection authorities will serve all households with recycling collections of at least three materials as soon as is practicable
- **Policy 6** – WLWA and constituent Boroughs will reduce BMW landfilled as best fits with the Landfill Allowance Trading Scheme
- **Policy 7** – WLWA and constituent Boroughs will seek a residual waste management solution in accordance with the waste hierarchy, that presents value for money and that offers reliability in the long term
- More policies will be drafted on issues of detail

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Break Out Group Discussion

- **comments on draft Strategy**
 - structure
 - key policies
- **how should these policies be implemented?**

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Next steps

- **refinement of Action Plan and Strategy**
- **presentation of final Strategy to WLWA**
- **wider consultation within constituent Boroughs**
- **publication of Strategy**
- **copy of the revised statement of policy to**
 - Secretary of State
 - Environment Agency
 - Mayor of London

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A number of questions and comments were raised during the whole group discussion. The outputs of this session are presented in question and answer format below.

Q: Has the Chinnor Kiln been relied on in the assessment of available options? If so can this really be relied on to deal with increased future waste in the 25 year time span of the Strategy with regards to over subscription and transport implications etc...?

A: Yes to a certain degree. We do need facilities to deal with future extra waste.

Q: MBT: The proximity principle will be followed to assess whether the preferred treatment should be housed by one large plant or by a series of smaller plants. If one large plant were to be placed in only one borough wouldn't this bring benefits to just the borough for which it is located in?

A: Single plants and multiple numbers of plants were looked at when working up the options. We have not looked at physical locations but the choosing of treatment plants and their locations has to be a collective effort between all the boroughs.

Q: Gasification came third but very close to options one and two but scored a considerable amount more than the fourth option. Please could you explain where it scored lower than options one and two and also confirm whether this will be dismissed or will still be looked at further.

A: Gasification scored particularly well against the criteria:

- extent of water pollution (1st)
- transport distance (1st)
- liability of end product (1st)

However, each of these criteria were given relatively low weightings and so overall gasification accumulated a lower score than MBT and EfW. This does not rule out gasification as a potential technology to manage WLWA's residual waste. The main barrier currently lies with the lack of full-scale facilities accepting municipal waste, currently in place in the UK, or Europe.

Gasification performed less well than MBT against the environmental criteria (resource depletion, acidification and greenhouse gas emissions) as the energy recovered during the process is assumed to displace the production of grid electricity (which is a mix of coal, gas, oil and renewables). In comparison, the energy recovered from burning RDF from MBT in cement kilns is assumed to displace the combustion of coal. This coal displacement delivers a resource depletion benefit greater than the displacement of grid electricity production. The technology also scored less well than MBT in terms of compliance with waste policy, as relatively less material is separated from the process for recycling.

Gasification performed less well than both MBT and EfW against the reliability of delivery criterion, as it has currently not been proven in the UK.

A4.5.2 Break-out Discussion Groups

Key points resulting from these group discussions have been detailed below.

Group 1 Discussions

Outputs from group 1's discussions were that

- the technical terms used within the Strategy document will require explanation so that the public may understand them more clearly;
- there should be a paragraph to say that sustainability is the over arching theme to the whole Strategy not just the second objective;
- the term "Cost effective" in objective 2 needs to be "cost fair". If a borough is doing well it should be rewarded and not brought down by poor performing boroughs. A statement of principle could be inserted into the Strategy to state this;
- there needs to be a paragraph that recognises the fact that external costs are not included within the gate fees;
- the term "Where possible" should be erased from objective four and changed to "aim to", it is not positive enough;
- the term "facilitate" for objective six should be replaced by a term such as "effort", "promote", "direct", "encourage". The group recognised that it was not possible to put in stronger terms as the rise in waste is also affected by a strong economy; and
- there is a need to explain where the Strategy does/doesn't fit in with the sub regional Strategy.

Comments on the suggested policies were that:

- problems have been highlighted in acquiring planning permission;
- policies three and four should be combined because they make the same points;
- in policy five an alternative needs to be found for "as soon as possible" it is not positive enough;
- in policy five more than three materials need to be targeted - to meet the targets in policy three, more than three materials would need to be collected anyway. It was suggested that a time scale be put to the policy (eg 2008); and
- in policy six that consideration needs to be taken of the fact there is no current knowledge on how well boroughs will perform against LATS and that no strategy has yet been made with regards to over/under exceeding targets.

There were queries on whether the targets, within policy three, were the same as the Mayor's targets. When established that these were more difficult, there were discussions around whether these would be achievable for West London.

There was general agreement with the policies presented, with the exception of policy five – for which it was commented that more than three materials should be targeted.

Comments were made on the Strategy direction. These are presented in question and answer format below.

Q: There is a case for LATs trading – shouldn't we be looking at buying allowances?

A: Agreed – and this will be introduced in the Strategy as a potential way forward. This option was not assessed, however, due to the unknown financial costs of LATs trading. Looking at the current UK picture highlights a major shortfall in LATs diversion, which is likely to drive up costs, for example. Monitoring developments such as these is an important part of the Strategy.

Q: In this case we shouldn't rush into procuring technologies?

A: Any procurement will need to be based on a detailed business case.

Q: But we can't keep putting off decisions?

A: Agreed - we need to move on to the next stage of the Strategy development and make some decisions, based on the analyses carried out. The Strategy sets out broad directions and time horizons – which form the basis of the Action Plan. There needs to be commitment on a direction to take, otherwise WLWA could be left, for example, with no credits to purchase.

Q: What is the idea behind the Defra incentives for new technologies?

A: As part of the Waste Implementation Programme (WIP), the New Technologies Programme looks at advanced technologies such as MBT, gasification, pyrolysis, autoclaving etc. The Demonstrator Programme further provides capital support for small, full-scale pilot plants, some of which will be up and running next year.

Q: What about sites for waste management facilities?

A: A Joint Local Development Framework for Waste is currently being developed for West London. This will identify potential sites for facilities and will be in place by the time facilities need to be procured. Existing sites at Transport Avenue and Victoria Rd will form a key part of this.

Final Whole Group Discussion

The meeting finished with a whole group discussion and invitation for further questions resulting from the feedback from each group on the draft Strategy. The outputs of this discussion are presented in question and answer format below.

Q: What other outlets are there apart from producing Refuse Derived Fuel (RDF)?

A: Landfill.

Q: The use of RDF is crucial to some of the options, have we looked at procuring this and asking a contractor about how we can get rid of it?

A: The power sector may be interested in the Energy from Waste (EfW) market in the future if the DTI report on renewable obligations comes back positively.

Q: Are RDF and EfW a more expensive way of burning waste.

A: Yes, but there are a lot of opportunities in relation to these. For example these treatments could be staged in. A Materials Recycling Facility (MRF) could be used in the first stage to deal with waste until the time when the extra capacity is required. An EfW plant could then be introduced after this, giving time for the EfW market to become established, learning from other experiences within Europe.

Q: Did you look at incorporating a compulsory recycling such as the scheme that the London Borough of Barnet introduced?

A: Yes, but this scheme increased the recycling rate and did not reduce the waste produced and disposed of.

The Waste Collection Authority (WCA) Focus Group meetings were held to engage further public participation. Resources were made available to each Borough to enable participation with development of the Strategy. The form, content and audience of the Focus Group were for each Borough to decide and as such, meetings were held with different groups and in different formats.

The following section gives information on where and when each of the focus groups were held, what was discussed and main outcomes, if available. Comments and questions reported in this section are a report of the meeting and do not necessarily represent the views of ERM.

A5.1 *FOCUS GROUPS IN BRENT*

Focus Groups for the London Borough of Brent were held on the following dates:

22 September 2004	Brent House
30 September 2004	Town Hall
05 October 2004	Vale Farm
07 October 2004	Kingsbury High School
12 October 2004	College of North West London
26 May 2005	Brent House

At each meeting issues relating to the preparation of the Strategy were discussed.

A5.2 *FOCUS GROUPS IN EALING*

Whilst a number of meetings were scheduled, all had to be cancelled due to unforeseen circumstances.

A5.3 *FOCUS GROUPS IN HARROW*

The Focus Group meetings were held in harrow in 18th May 2005. Three separate sessions were run. The first session comprised a group of managers, operations staff and trade union representatives, all of whom work in the waste management service. The other two sessions comprised groups of members of the public drawn from Harrow Council's residents' panel. As far as possible, the members of the public were selected to be a representative cross-section according to age, sex, ethnic origin and employment status.

All three sessions were run in the same way. A great amount of information had to be presented to participants so that they could understand the background to the Strategy, requirements for change and the various policy and technical options available. Participants were invited to ask questions and discussions took place at various points during each session.

A5.3.1

Focus Group 1: Staff

This session included managers, operations staff and trade unions representatives. As with all sessions, three topics were discussed:

- collection systems;
- compulsion, fines and charging; and
- alternatives to landfill.

Collection systems

Considerable time was spent discussing collection methods, Harrow currently collects dry recyclables using a box and kerbside sorting system and this is not popular with the operating staff or their trade union. Their preference is to collect co-mingled recyclables using wheeled bins, with the recyclables being sorted at a materials recycling facility (MRF).

The council's proposals for the next eighteen months were discussed in detail. The outcomes of the discussions were that:

- there was general acceptance of change in frequency of collection of brown bin and waste bin;
- concern was expressed about the impact of introducing plastics collection into the existing service;
- concern was expressed that if systems do not work for the workforce they will not work for the public;
- two sites within the borough were identified for a MRF;
- building the MRF as a joint facility with another borough should be considered;
- change would mean increasing the number of bins per household to three – in some parts of the Borough this would not be physically possible; and
- any new system or change made would require a sustained publicity and education campaign.

Compulsion, fines and charging

Conclusions from discussions of compulsion, fines and charging were that:

- the Barnet compulsory recycling scheme worked not because of the threat of fines but because it educated people about the system;
- Harrow will have to introduce compulsory recycling to reach a 50% recycling target;
- fixed penalty notices would mean that front line staff would possibly face angry residents; and

- compulsory recycling would require political buy-in to ensure successful introduction.

Alternatives to landfill

Participants were given a presentation and overview of the various alternatives to landfill. In the discussion that followed there was no clear consensus on the best option. Conclusions were that:

- incineration was recognised as the most technically sound solution – but the most controversial;
- the lead time for incinerator building could be as much as 10 years and this would not help with meeting LATS targets;
- smaller scale technologies with smaller treatment facilities would require fewer vehicle movements; and
- it was recognised that new facilities would face difficulties with gaining planning permission.

A5.3.2

Focus Group 2: Residents (afternoon meeting)

This group focused on residents. A large proportion of older people attended this session. The group expressed a feeling that the generation of waste could be greatly reduced if there were less packaging on goods. Again, , three topics were discussed:

- collection systems;
- compulsion, fines and charging; and
- alternatives to landfill.

Collection systems

The group agreed that recycling should be increased and that this would mean a change in the way waste is collected. Other findings were that:

- there was no opposition to collecting recyclables weekly and residual waste fortnightly;
- there was no opposition to alternate week collection of waste;
- the collection of plastic bottles in the green box was welcomed; and that
- residents felt that money should be spent on publicity and education of people, especially in schools.

Compulsion, fines and charging

The conclusions from this session were that:

- there was no disagreement to making recycling compulsory;
- there as no disagreement to the fining or charging of people who do not recycle, some of the group added that as long as it was preceded and supported with a continuing information and education campaign; and

- there was greater acceptance of the charging of people for the amount of waste they dispose of when it was suggested it could work by people being charged more for what went in their residual waste bin and less for what went in their recycling bin.

Alternatives to landfill

Like the first session, there was no clear consensus on the best alternative option to landfill. Some conclusions, however, were reached:

- there was no objection to incineration as long as it was regulated properly; and
- the group felt strongly about the size of treatment plants and wanted to ensure that visual intrusion and number of lorry movements was minimised.

A5.3.3 *Focus Group 3: Residents (evening meeting)*

Focus Group 3 also focused on residents. In general, the session attracted younger participants than session 2. As with previous sessions, collection systems, compulsion, fines and charging and alternatives to landfill were discussed.

Collection systems

The main conclusions from this session were that:

- the group agreed that more materials should be collected;
- there was no opposition to alternate week collections;
- the collection of plastic bottles in the green box was welcomed;
- opinion was evenly divided in expressing a preference over bin or box;
- packaging waste presents the main barrier to waste reduction; and
- there should be a campaign of education and information to accompany any scheme chosen by the council.

Compulsion, fines and charging

The main conclusions from this session were that:

- the group were not opposed to compulsory recycling; and
- the use of financial incentives to encourage recycling as well as penalties for non-participants was seen to be a good idea.

The findings from this discussion were that:

- there as opposition to incineration in principle due to the environmental impacts of vehicle movements;
- the group recognised that seeking planning permission for facilities may be problematic; and
- the group felt that a number of smaller processing plants would share the pain more fairly between boroughs rather than one large facility in only one borough.

A5.4

FOCUS GROUPS IN HILLINGDON

A Community Workshop was held in Hillingdon Civic Centre on 17th February 2005. Key elements of the Strategy were outlined and this as followed by a question and answer session broken into three sections: Where are we now? Where do we have to get to? and Waste Management Technology Options. Notes of this session are presented below.

A5.4.1

Where We Are Now

Q: 106 000 tonnes of material recycled from 840 000 tonnes of municipal waste does not constitute a 17% recycling rate for West London.

A: Recycling targets and performance are calculated as a proportion of household waste only. The 840 000 tonnes of municipal waste quoted includes trade wastes and other streams, such as fly-tipped waste. Approximately 685 000 tonnes of household waste were generated in West London in 2003/04.

Q: On what basis are the recycling targets set?

A: Hillingdon, and WLWA's other constituent Boroughs, is set targets that stem from a previous level of performance. The constituent Boroughs' targets are combined to comprise an aggregate target for WLWA. It is agreed that targets are often fairly arbitrary and do not reflect what is achievable.

Hillingdon's individual target household recycling rate for 2003/04 was 14%. It was the only London Borough to meet and exceed its target, achieving 24% recycling. This year Hillingdon's recycling rate is expected to reach 27%.

Q: Hillingdon only collects four materials for recycling/composting. How come their recycling rate is so high?

A: Hillingdon targets the largest components of the waste stream and so can achieve high diversion rates. For example, paper and green waste together comprise over half of the household waste stream.

Hillingdon's overall Strategy has been to firstly establish the recycling service and then introduce new materials, on a cost effective basis. To this effect, glass may be added to the collection service next summer.

Q: Why are only plastic bottles collected?

A: Currently Hillingdon collects plastic bottles of all types. There are a number of issues associated with collecting other plastics:

- plastics are not very dense and so are expensive to collect;
- if all polymers are collected together they will need to be separated prior to reprocessing. Infrared systems that can do this exist, but are expensive; and
- PET has a high market price, but other polymers generally have low prices – a market needs to exist to make it cost effective to collect any material.

Q: What are the residents of Hillingdon getting back in return for recycling their waste?

A: Materials that are separated for recycling tend to be transported and reprocessed through national networks. The exception to this is a system that Hillingdon has developed whereby green waste is composted within the Borough, and the compost is sold back locally.

Q: How many tonnes of waste per week does Hillingdon send to landfill?

A: It varies.

A5.4.2

Where We Have To Get To

Q: Are we ever going to get rid of our dependency on landfill?

A: There will probably always be some reliance on landfill but we need to move away from this as its impacts are long lasting.

Q: Landfill sites are very costly to renovate and can only be used for some purposes. Are we just moving the cost to the end of the waste management chain and would it not be better to put money into reducing the amount of waste created?

A: Agreed – it is part of the Strategy process to get this message across and think of the long term gain of diverting waste from landfill.

Q: A lot of waste is caused upstream, by manufacturers. Isn't it better for efforts to be focused on, for example, reducing overpackaging?

A: There is only a certain amount that Hillingdon can do with respect to this, as most effort will need to come from central Government. The most significant thing that WLWA, Hillingdon and householders can do is continue to lobby government for change in this area.

There is existing legislation ⁽¹⁾ that makes industry and commerce responsible for the packaging waste they help to produce. However, much of this is realised further upstream in the supply chain (eg transit packaging) and the legislation has not achieved as much as was originally thought. Another piece of legislation, the Essential Requirements Regulations, requires producers to only use an appropriate amount of packaging. The Regulations are controlled by Trading Standards and court action can be taken for non-compliance. However, there has only been one prosecution since 1999.

(1) The Packaging Directive (94/62/EC).

Q: Is it possible for the Government to impose a tax on anything that is not recyclable or biodegradable?

A: Some initiatives are in place, but Hillingdon is continually lobbying Government for further progress.

Integrated Product Policy (IPP) is a new policy initiative from the EU that aims to put pressure on manufacturers to target areas such as hazardousness, recyclability and energy efficiency of products. Virgin material taxes have also been considered, such as the levy on aggregate extraction.

Q: Is Hillingdon likely to be penalised if the other West London Boroughs do not meet their Landfill Directive targets?

A: It is not yet known how the performance of individual boroughs will be taken into account in apportioning any additional costs resulting from the Landfill Allowance Trading Scheme (LATS). However it is likely that, yes, Hillingdon would be penalised.

As a point of note, it is a statutory requirement for the WLWA and constituent Boroughs to produce a joint Strategy. Despite Hillingdon's current good performance, a stepwise change is needed by all boroughs to address the challenging new targets. There are also elements of benefit in working together in this way, such as the economies of scale that can result from establishing shared waste management facilities.

Q: We should be looking at the benefits to residents of the new legislation, not just penalties, for example in terms of decreased pollution.

A: Identifying opportunities is a very important part of choosing and evaluating the alternative waste management options. Through this part of the Strategy development process, risks and benefits will be considered to identify the best option. Penalties are a stick, but also an opportunity in terms of developing services for Hillingdon and other constituent Boroughs.

Q: Are there any plans to work with schools with respect to awareness-raising? It was generally felt throughout the community group that this is where education regarding waste issues needs to begin.

A: This is an important point for West London's waste Strategy and how it can be undertaken will be addressed during the development of the Strategy's Action Plan.

Q: A strong focus on education will help West London Boroughs to achieve their targets.

A: Agreed – this is a very important part of the Strategy and one of the aims of this workshop is to inform and communicate, albeit to an educated and motivated audience. The message needs to be spread throughout the community, so that it reaches those who are less motivated. Hillingdon, along with each of the constituent Boroughs, will need to work in partnership with the community in order to implement the Strategy's Action Plan and meet targets.

Q: Simplicity of technology is important, as the simpler the chosen method is, the less likely there will be additional costs associated with it.

When assessing waste management options, the alternatives need to be fully considered. For example, promoting the use of reusable nappies will shift burdens to the sewage system and is likely to result in an increased use of chemicals eg disinfectants.

A: Agreed - options need to be carefully considered. With respect to nappies, Hillingdon have met with the Women's Environmental Network (WEN) and have asked them to provide evidence that providing reusable nappies to residents would be a favourable option. They are yet to do so, however.

Q: If methane release from a landfill site can be captured, what is the problem with landfilling wastes?

A: Landfill is not a sealed system, in comparison with technologies such as anaerobic digestion and, as a result, only a proportion of the methane generated can be captured. The rest will escape to the atmosphere. There are also periods during a landfill's working life (at the beginning, or end) during which methane production is at such a low level that it cannot be usefully captured, or burnt off. The burning of landfill gas also has the associated problem of creating further emissions.

Another environmental impact associated with the use of landfill is the production of leachate. This can, on occasion, leak through the landfill's liner to pollute groundwater.

Q: Is Hillingdon/WLWA supporting the Colnbrook incinerator?

A: No decisions have been taken as yet. When the Strategy is released Hillingdon will consider Colnbrook if incineration has been chosen as a favourable option.

Q: Are flue gas desulphurisation plants used to reduce sulphur emissions from waste incinerators?

A: Under the requirements of the Waste Incineration Directive there are stringent limits to the amount of sulphur that can be emitted from incinerators. All incinerators are regulated by the Environment Agency to ensure that they meet these limits – but will not necessarily require flue gas desulphurisation.

Q: Is Hillingdon planning to improve how garden waste is collected?

A: Yes – Hillingdon is unhappy with the current quality of labour and will be addressing this over the next 12 months. The choice of a bag-based system was made on the basis of a cost trade-off. However, it may be reviewed in the future.

Q: There should be more focus on home composting, rather than collections. In Harrow the Council has wormeries available for residents to purchase. Would this be useful in Hillingdon?

A: Wormeries are one form of home composting, others include green cones, bins etc. No one method is necessarily better than another but it may be a good policy to provide residents with a wider range of choice.

Q: Do waste management facilities have to be built within West London?

A: The majority of West London's waste is currently exported to landfill sites in the Home Counties and recyclable materials are sent to reprocessors nationwide. There are benefits associated with treating waste within the Borough, or West London area – such as decreased transport impacts and an increased local responsibility for waste – but it is not always possible, and there is no statutory requirement to do so.

Q: If waste must be treated within London, this will have major implications with respect to the number of available sites.

A: Agreed – we have to be able to deliver our chosen solution and the availability of sites is an important part of this. Our options evaluation process does not take site specifics into account. However, the planning process will address this in due course.

Q: Where are the two Mechanical Biological Treatment (MBT) plants that are being built as part of East London's waste management strategy?

A: One is being built in Newham, and one in Redbridge.

Q: Are there any plans to build Pyrolysis or Gasification plants here, or internationally? We will need to think about whether the technology is practicable before committing resources, particularly if we need to start planning now for targets up to 2020. Is it worth considering these technologies?

A: It is the cost of making these technologies work that is the potential problem. On a small scale, gasification has potential as a waste management option, but may not be the answer in terms of the volumes of waste that arise in West London. However, at this stage it is worth considering all of the technology options.

Q: The Borough should provide markets for recyclable materials, such as using recycled glass in place of aggregates and enforcing the demolition protocol, that all demolished building should be recycled, and all new buildings should contain 15% recycled materials.

Is there any evidence that weekly recycling collections result in increased capture (collection) of recyclable materials?

A: Yes – studies show that, on average, a 20% increase in capture of materials is achieved. Weekly collections are favourable to residents for two main reasons:

- less storage space is needed if materials are collected more often; and
- it is easier and less potentially confusing to coordinate collection timescales with residual, 'black bag' collections.

A5.4.4 *Other topics discussed*

Q: What is our purpose at this community workshop? We cannot make any judgement on the complex waste technologies involved.

A: We are trying to gather your opinions and views on the general direction that you would like to see things moving, in terms of waste technologies, and what issues are more/less important.

Q: When economics are taken into consideration we cannot influence the direction taken. We are best placed to suggest ideas as to what can be done in the community to influence the people of the Borough.

A: Through consultation, such as this, we need to find out if technologies and their associated costs and impacts are acceptable to the public. We do agree that education is crucial to the Strategy and that groups such as this can be well placed to provide suggestions as to actions that can be taken in the community.

Q: It would be helpful if information on technology costs etc. was provided prior to the next meeting.

A: The register taken at the beginning of this session has provided us with your contact details and we will do so.

A5.5 *FOCUS GROUPS IN HOUNSLOW*

Hounslow undertook a members briefing at the Civic Centre on 10th February 2005. Details of the West London Waste Authority (WLWA) and constituent Borough's Strategy were outlined including:

- the Strategy development process;
- results of the baseline review – where we are now;
- where we have to get to; and
- the waste management technology options available.

This was followed by a general questions and answer session. Details of these are presented below:

Q: Which is the cheapest and most environmentally friendly option?

A: There is no cheapest and most environmental friendly option. When developing West London's Strategy we are trying to find the waste management option that provides the best balance of environmental, economic and social performance.

Q: Why aren't Hounslow carrying out any plastics recycling?

A: A plastics recycling scheme in Hounslow is to start shortly. In general, the problem with plastics recycling schemes is that they are expensive to run, as the volume of plastics that a collection vehicle can hold represents a relatively low weight of material. This also then contributes less to recycling targets. The diversion of plastics for recycling also does not contribute to the diversion of biodegradable municipal waste (BMW), as will be increasingly required by new legislation.

Q: Why are the Americans so far ahead of the UK, in terms of recycling performance?

A: On average they are not. However, there is a large variation between the performance of different states and some states have a much better recycling performance than the UK, in part due to strong policy drivers.

Q: Does the technology exist to deploy incinerators at sea?

A: Not aware of any.

Q: Isn't legislation better focused upstream, for example to decrease over-packaging?

A: There is existing legislation that makes industry and commerce responsible for the packaging waste they help to cause. However, much of this is realised further upstream in the supply chain (e.g. transit packaging) and targets set so far do not significantly incentivise action on consumer packaging and post-consumer waste. The Waste and Resources Action Programme (<http://www.wrap.org.uk/>) are currently running a programme of schemes with retailers to encourage packaging minimisation and innovation.

Q: How is trade waste being considered by legislation?

A: In comparison with municipal solid waste (MSW), less legislation is targeted directly at trade wastes. However, policies, such as the increases in landfill tax, are aimed at making it more expensive to landfill waste and cheaper to use alternative methods of waste management.

Q: Collected orange sacks have been known to be transported overseas for sorting. Why? Is this a cheaper option?

A: It may be illegal to transport wastes for sorting overseas, and is unlikely to be a beneficial option, due to the lack of enforcement on the amount that is actually recycled etc. In general, the orange sacks, which contain co-mingled dry recyclables, are sent to a materials recycling facility (MRF) for sorting into separate materials for reprocessing.

Q: *Do we have a compost market in the UK?*

A: Yes, for example agriculture. The question is not so much how big is the market, but what price is it prepared to pay? (i.e. agriculture is a very large but low value market).

Q: *How will the Landfill Allowance Trading Scheme (LATS) work with respect to the split of fines between Boroughs?*

A: The fines will be real, but it is not yet known how the performance of individual Boroughs will be taken into account in apportioning any additional costs resulting from the scheme.

Q: *How are wastes that are potentially carcinogenic dealt with?*

A: The Landfill Directive has recently imposed a ban on the co-disposal of MSW and hazardous wastes. Hazardous waste must now be disposed of in much more tightly controlled landfill sites, and sometimes must be encapsulated prior to disposal.

Q: *Businesses often find it cheaper to burn combustible wastes such as cardboard. Is this so, or is it cheaper to recycle?*

A: The need for storage space oftens makes recycling collections uneconomical for small businesses. In the future, however, there may be an economic change, as Local Authorities may be able to offset collected materials against their LATS targets and so provide an incentive for businesses to present materials for collection. [Note: there are stringent restrictions on burning waste on-site]

Q: *What is Hounslow's current composting system?*

A: Green waste is sent by rail, via a transfer station, to an open windrow composting plant at Sutton Courtney in Oxfordshire. West London Composting has recently opened a new plant for green waste and kitchen waste in Hillingdon. The plant is a simple system comprised of a number of covered windrows.

Q: *What measures/incentives can be put into place to encourage residents to help to tackle the requirements of the Landfill Directive?*

A: Currently Local Authorities have limited powers to provide incentive to increase recycling and composition, or reduce waste growth. Some examples do exist, for example the London Borough of Barnet has introduced a compulsory recycling scheme (residents who do not recycle can be fined up to £1,000), but this is an area that is likely to develop in the medium term.

Richmond established a database of 800 residents and stakeholders who wished to be kept up to date with the development of the Strategy.

The Borough ran 4 public meetings to discuss different elements of the Strategy. Over 50 Richmond residents attended each session.

Richmond held a community workshop at Clarendon Hall on 1st February 2005 and a Waste Disposal Scrutiny Task Group at York House, Twickenham on 10th May 2005.

At the community workshops, an outline of the Strategy was given along with a brief overview of the waste arisings for the Borough. This was followed by questions and panel discussion.

A Task Group was established to scrutinise the Strategy development. Task Group members were taken on a number of educational site visits to find out more about different waste management technologies available. These included a centralised composting and energy from waste facility.

More information can be found on www.richmond.gov.uk/waste_disposal

Appendix B

Baseline Report: review of
current waste management
and requirements for how
waste should be managed

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The West London Waste Authority (WLWA) covers the area of the six London Boroughs of: Brent; Ealing; Harrow; Hillingdon; Hounslow; and Richmond upon Thames (Richmond). As a waste disposal authority, it is responsible for the treatment and disposal of household and municipal waste arising from each of the Borough's activities.

The Authority and its constituent Boroughs are working together to produce a Joint Municipal Waste Management Strategy for the WLWA area. The authorities have a statutory requirement to produce this document, which will have regard to the National Waste Strategy and the Mayor's Waste Strategy for London. In particular, the focus will be on waste minimisation, recycling and recovery in order to achieve the increasing levels of diversion of biodegradable municipal waste from landfill required by the Government's Landfill Allowance Trading Scheme (LATS).

LATS has been introduced by the Waste and Emissions Trading Act (refer *Section 3.1.6*) which also provides for a system of financial penalties and offences to encourage compliance. The Department of the Environment, Food and Rural Affairs (Defra) is yet to finalise the penalty charge, but current guidance is indicating a cost to the waste disposal authority of £150 – 200 per tonne. The WLWA and its constituent Boroughs is actively seeking to develop a Strategy that will ensure compliance with the LATS and thus avoid the financial consequences of inaction regards waste management.

The Joint Municipal Waste Management Strategy (the Strategy) addresses all of the waste arisings within the WLWA area that come under the heading of 'municipal solid waste' (MSW). This includes 'household' waste, as well as other waste streams such as trade wastes, fly-tipped materials and abandoned vehicles.

The principal purpose of the Strategy, in simple terms, is to answer three questions:

- where are we now?;
- where do we want to be and when?; and
- how do we get there?

The purpose of this document is to carry out a baseline assessment that addresses the first question, *'Where we are now'*. It includes a review of:

- MSW arisings and trends;
- waste minimisation initiatives in place;
- waste disposal arrangements provided by WLWA;
- current and future legislation;
- forecasts of future waste arisings; and
- the current waste management technologies available.

The review has been based on sound data and analysis for the latest year for which complete data have been available (financial year 2003/04). Figures for 2004/05 have recently been released and the baseline report will be updated with these data prior to the Strategy's finalisation.

B2.1

OVERVIEW OF CURRENT SITUATION

In the financial year 2004/05, the WLWA generated approximately 826 000 tonnes of municipal waste. Approximately 85% of this was waste from households, with the remaining 15% generated by commercial premises (trade waste) and other activities, such as street sweepings.

A breakdown of WLWA's municipal waste arisings is shown in *Figure 2.1*, whilst *Figure 2.2* details how this has changed over the last eight years ⁽¹⁾.

Figure 2.1 WLWA Municipal Waste Arisings in 2004/05

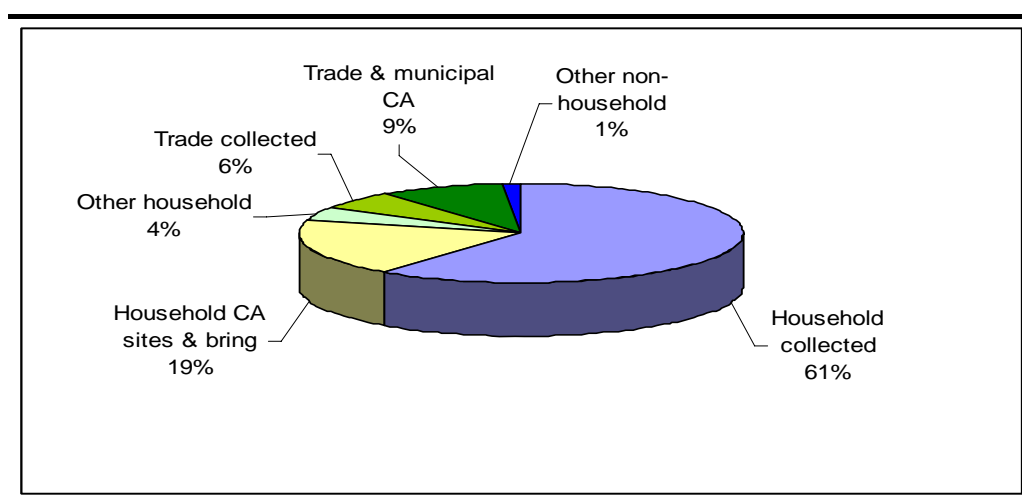
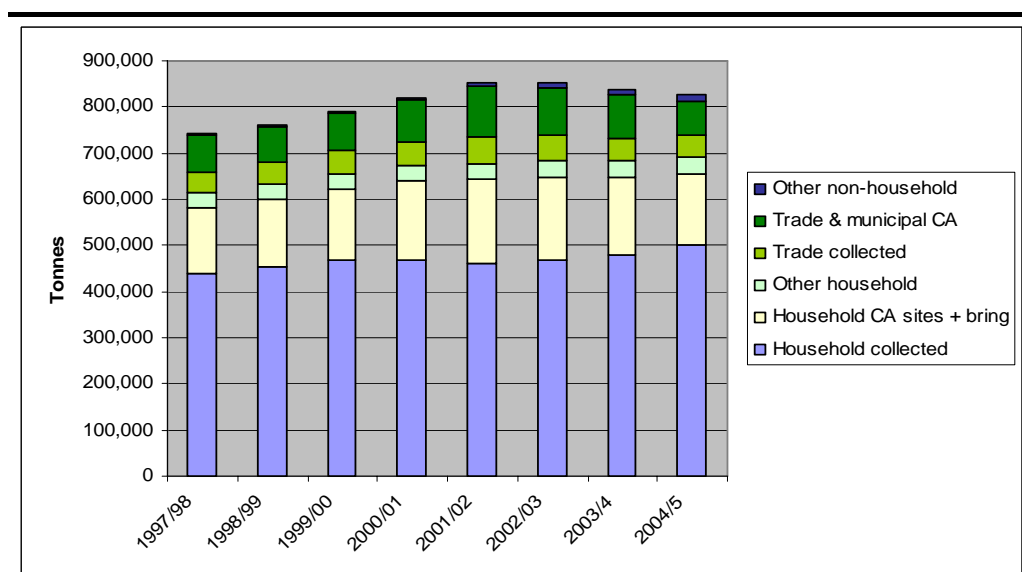


Figure 2.2 WLWA Municipal Waste Arisings in 1997/8 to 2004/05



(1) 'Other household' wastes include special (bulky) waste collections, street sweepings and litter and clinical waste. 'Other non-household' wastes include fly-tipped waste and other, uncategorised MSW.

There has been an overall decrease in municipal waste arisings across WLWA over the last three years, following a peak in 2001/02. This has resulted from a decrease in civic amenity (CA) site and non-household waste arisings and has occurred despite the increase in household waste collections that is evident in *Figure 2.2*.

The following sections will consider the major streams of household and non-household waste arisings within the WLWA. In addition to this analysis, detailed information regarding current arisings and waste collection services within WLWA can be found in:

- *Annex A* – tables showing the breakdown of all MSW by authority; and
- *Annex B* – a matrix detailing the current services that are provided by WLWA's constituent Boroughs.

B2.2 ANALYSIS OF WASTE ARISING

B2.2.1 Refuse Collection

Household refuse collections are by far the largest component in any authority's MSW arisings. In the West London area these accounted for just over 60% of total MSW in 2004/05 (see *Figure 2.1*).

Table 2.1 below outlines the collection system operated by each constituent Borough.

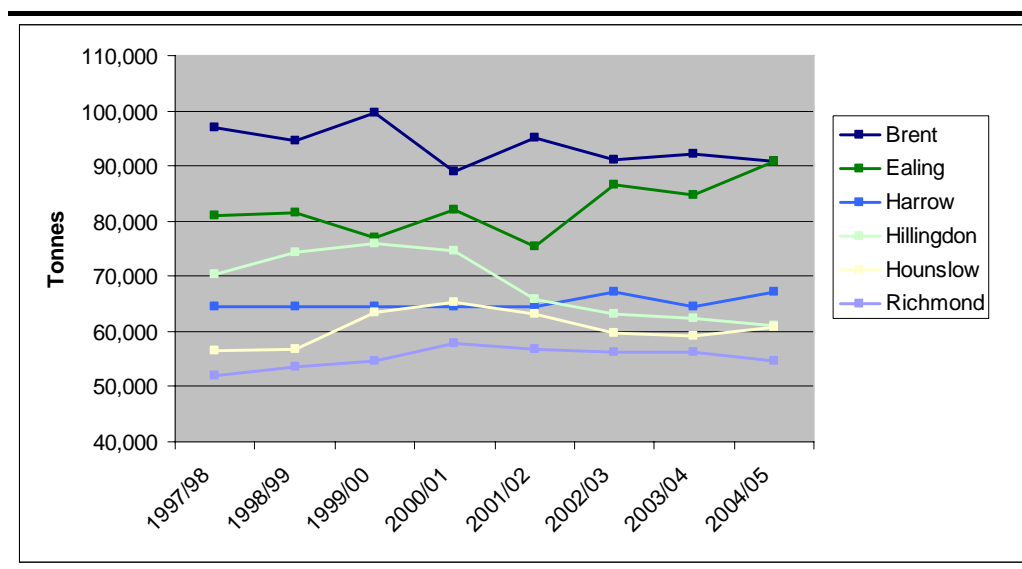
Table 2.1 Constituent Boroughs' Waste Collection Infrastructure

Borough	Details of Collections		
	Residual	Recyclables	Organic
Brent	Wheeled bin	Green Box	Wheeled Bin & degradable bags
	Weekly	Weekly	Fortnightly
Ealing	Black sack	Green box	Degradable bag
	Weekly	Weekly	Fortnightly (Seasonal)
Harrow	Wheeled bin	Green box	Wheeled bin
	Weekly	Fortnightly	Fortnightly
Hillingdon	Black sack	Clear plastic sack	Plastic sack
	Weekly	Fortnightly	Fortnightly
Hounslow	Black sack	Green box	Degradable bags
	Weekly	Weekly	Weekly (Seasonal)
Richmond	Black sack	Green box	Degradable bags
	Weekly	Fortnightly	By appointment

Refer to annexes for further information on each Borough's collection system.

Figure 2.3 shows that household collected waste in the London Boroughs of Ealing, Harrow, Hounslow and Richmond has risen since 1997/98. However, since 2000/01, only Ealing and Brent have shown increased refuse collections, and, across WLWA as a whole, there was a decrease in refuse collection arisings over this period.

Figure 2.3 Household Refuse Collections⁽¹⁾



The increases in waste collections for both Brent and Ealing since 2000/01 follow erratic trajectories. Such fluctuations can sometimes indicate inaccurate waste categorisation at the transfer station, meaning that waste from one stream shows up in the figures for a different stream. For example, it is common for commercial waste to be misclassified as household. This may help explain the fluctuation in the data for Ealing's collected household waste. However, Brent does not collect any commercial waste and a similar comparison cannot be made.

By comparison with Brent and Ealing, Harrow's refuse collections have remained remarkably stable since 2000/01 and collected tonnages have dropped in each of Richmond (a fall of 3,000 tonnes or 5.4% over the period), Hounslow (4,700 tonnes, or 7.2%) and Hillingdon (13,500 tonnes or 18.1%). The decrease is most notable in Hillingdon, where this is explained through reference to: new services for waste; improved system management of waste classification; and reporting and local economic difficulties ⁽²⁾.

The full reasons for a change in arisings are always complex. However, the most obvious common factor influencing household bin waste is the increased success of (and introduction of new) services for the collection of dry recyclables and compostable material. In general, across the whole of WLWA

(1) This refers only to waste collected for disposal and does not include the increasing amount of waste that is collected for recycling and composting.

(2) Telephone interview with Duncan Jones 23/3/03.

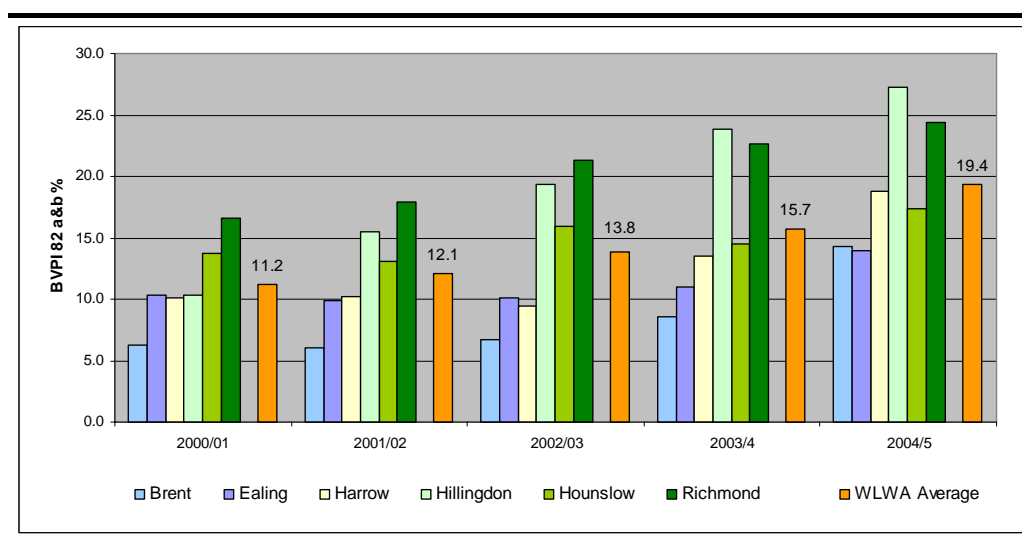
there has been a considerable increase in household materials collected for recycling and composting since 2000/01. This is consistent with the overall decrease in household refuse collections.

B2.2.2 *Recycling and Composting*

In 2004/05, approximately 132 000 tonnes of material were separated from WLWA's household waste stream for recycling or composting, reaching an average household recycling rate of 20.06%. This represents a year-on-year increase, as shown in *Figure 2.4*.

Figure 2.4 presents the performance of each of the individual Boroughs against Best Value Performance Indicator (BVPI) 82 A and B, for recycling and for composting respectively, since 2000/01. The graph shows a gradual improvement in the performance of most Boroughs against these performance indicators, with the exception of Hounslow, whose performance dropped slightly (from 15.9% in 2002/03 to 14.5% in 2003/04), but has increased again to 17.4% in 2004/05. Hillingdon, in particular, has shown considerable improvement, albeit from a relatively low starting point. This improvement has followed the recent introduction of a successful green waste collection scheme, as well as increased recycling and composting tonnages from other sources.

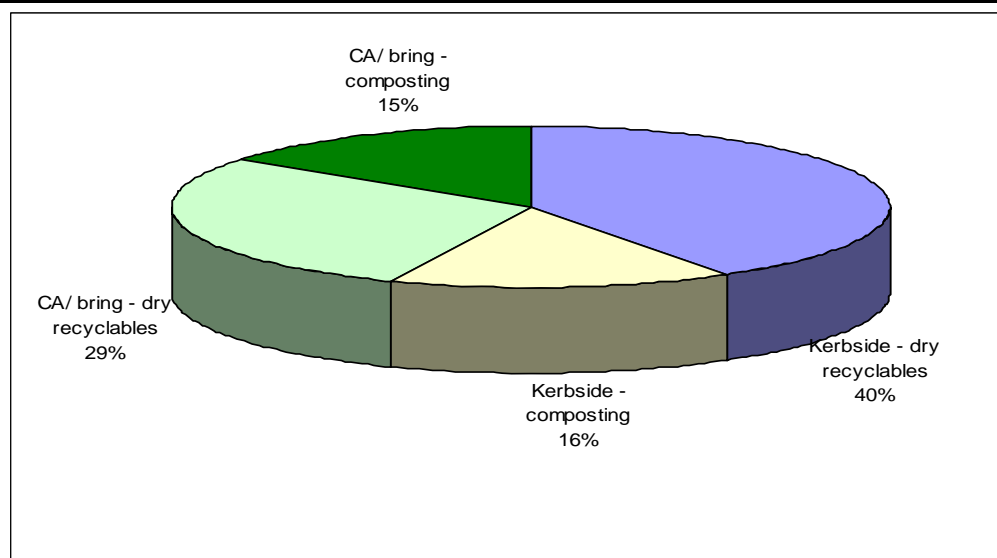
Figure 2.4 *Best Value Performance BVPI 82 A and B Recycling and Composting 2004/05*



Materials for recycling and composting are collected via a number of different routes, including kerbside collections, local bring banks and CA sites.

Figure 2.5 shows a breakdown of WLWA's recycling and composting arisings in 2004/05 and the following sections discuss these sources in more detail.

Figure 2.5 *Recycling and Composting Arisings 2004/05*



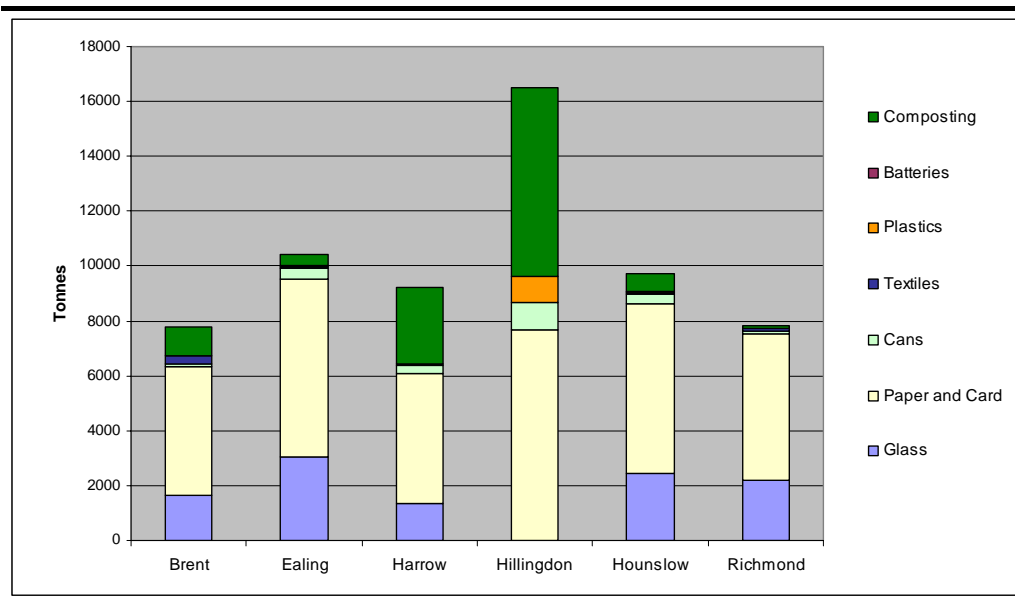
Kerbside Collections

Kerbside collections of recyclable and compostable materials accounted for 55% of household waste recycling and composting across WLWA in 2003/04. Since 1997/98, there has been an increase over 21 000 tonnes of collected materials in the WLWA area.

Services for the collection of a number of different materials are provided across WLWA (*Annex B*). *Figure 2.6* shows a breakdown of the materials collected within each constituent Borough in the financial year 2003/04 ⁽¹⁾.

Figure 2.6 *Materials Separated for Kerbside Collection 2003/04*

(1) Data have been taken from DEFRA Municipal Waste Management Survey 2003/04 returns. Please note that these may be incomplete.



The graph shows the pattern of collected materials to be relatively consistent across WLWA's constituent Boroughs, with the exception of composting. The major material streams that are collected via kerbside services are paper, card and glass.

Collections of compostable materials differ significantly between Boroughs. There is a split across the six Boroughs regarding the type of scheme that has been introduced with regard to green waste collections. Ealing, Hounslow and Richmond are keen to avoid attracting extra waste out of the system, or to discourage home-composting, and so have opted for a pay-per-collection system. Harrow and Brent are more closely following a scheme introduced recently by Hillingdon, whereby containers are provided and emptied free of charge. As a result, Hillingdon and Harrow, in particular, collect a large quantity of compostable waste.

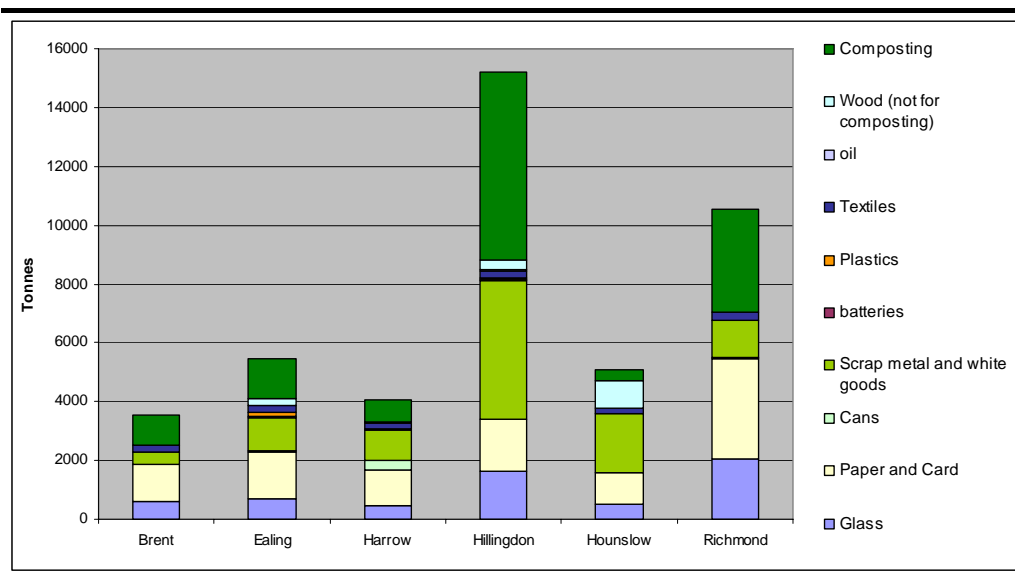
Recycling 'Bring' Sites

Residents in the West London area can bring recyclable or compostable materials to a number of bring banks and CA sites within the six constituent Boroughs. *Annex B* outlines the bring banks and CA site recycling facilities available in each Borough.

A breakdown of the materials recovered at bring banks and CA sites for recycling or composting within each constituent Borough in 2003/04 is shown in *Figure 2.7* ⁽¹⁾.

Figure 2.7 *Recovered Materials at CA and Bring Sites 2003/04*

(1) Data have been taken from DEFRA Municipal Waste Management Survey 2003/04 returns. Please note that these may be incomplete



The graph shows that the range of materials deposited at CA and bring sites across constituent Boroughs is broadly similar, although with some differences. Hillingdon recovered a particularly high tonnage of scrap metals, white goods and compostable materials, for example; whereas Hounslow recovered higher tonnages of wood, and Richmond recovered higher tonnages of paper and card.

It is notable that Hillingdon and Richmond report significantly higher tonnages of materials recycled or composted at CA and bring sites. This is reflected in their higher performance against BVPI 82 A and B (see *Figure 2.4*).

B2.2.3

Civic Amenity Sites

Waste deposited at CA sites comprises 21% of WLWA's total MSW. This is the second most significant stream in the Authority's area, following household collections. However, some borough collected waste is disposed of through CA sites, and so this percentage may include some double counting of waste. Annual totals across WLWA, and the split between household and commercial waste, are shown in *Figure 2.8* and

Table 2.2.

Figure 2.8 shows a peak in waste deposited at CA sites during 2001/02. On further analysis of arisings, it can be seen that this approximately 30 000 tonne increase was largely produced by Richmond (contributing an additional 14 900 tonnes) and Ealing (contributing an additional 9330 tonnes). However, each Borough showed increased CA arisings in 2001/02, and this consistency may suggest an effect caused by the weather.

Figure 2.8 WLWA Civic Amenity Waste

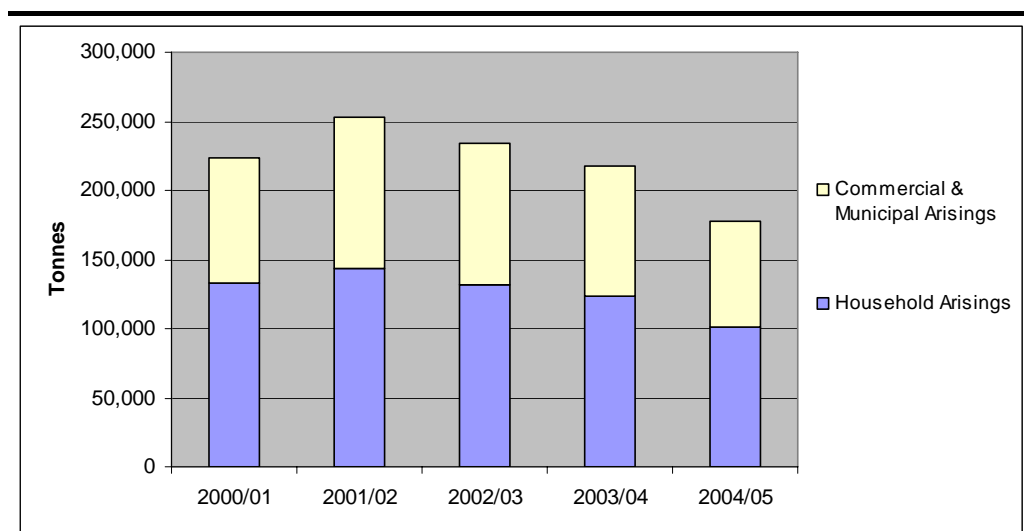


Table 2.2 *WLWA Civic Amenity Tonnages (household & commercial waste)*

	Tonnes 2000/01	Tonnes 2001/02	Tonnes 2002/03	Tonnes 2003/04	Tonnes 2004/05
Brent	12 000	12 000	17 000	15 676	7 358
Ealing	61 077	70 407	63 231	42 951	35 705
Harrow	27 424	28 510	24 817	23 453	25 500
Hillingdon	55 126	57 767	52 852	54 287	47 770
Hounslow	43 504	44 917	45 726	50 034	42 980
Richmond	24 455	39 324	30 502	32 000	18 154

Figure 2.8 shows household and commercial/municipal waste streams to move in the same pattern. This may be attributable to a 20% adjustment that is made for the purposes of BVPI definitions that are based on the tonnages of 'household waste' excluding construction and demolition waste, which is classified as 'industrial waste'. For the purposes of BVPI calculations, therefore, the tonnage of CA waste brought in by householders is reduced by 20% on the assumption that an estimated 20% of householders' waste is C & D waste. This does not mean the waste has been misdeclared or that it is reclassified as trade waste.

The most notable change in CA site arisings across the WLWA over 2003/04 has been the drop in waste experienced by Ealing. This was caused by the closure of the large Greenford Road site for refurbishment.

Other Boroughs within the Authority are at different stages in terms of CA site redevelopment. Plans include increasing capacity for a greater range of sub-streams to be separately deposited, which will lead to improved household recycling and higher landfill diversion rates. However, it is also possible that there will be some slight reduction in overall CA capacity. Indeed, the Greenford Road refurbishment in Ealing looks likely to lead to a capacity reduction at that site of at least 20 000 tonnes.

All Boroughs in 2004/05, with the exception of Harrow, have experienced a drop in waste, the most notable being in Richmond.

B2.2.4 *Other Household Waste*

'Other' household wastes include special (bulky) waste collections, street sweepings and litter and clinical waste. 35 269 tonnes of such wastes were generated within the WLWA area in 2004/05, representing a slight decrease from 37 560 tonnes in 2003/04.

A range of collections for these waste streams are organised by WLWA's constituent Boroughs. These are detailed in *Annex B*.

Hazardous Waste

Each constituent Borough offers a waste collection and disposal ⁽¹⁾ service. Hillingdon has made arrangements for this service with its own contractor; the other five Boroughs are members of the London-wide Hazardous Waste Collection and Disposal Service administered by the City of London.

Further details of hazardous materials collected within constituent Boroughs can be found in *Annex B*.

End-of-Life Vehicles

Constituent Boroughs have a duty to remove vehicles that appear to have been abandoned and deliver them to WLWA for storage or disposal. WLWA then undertakes storage and disposal through a contractor. This is currently Car Spares of West Drayton Ltd.

During recent years, a downturn in the scrap metal market has resulted in a substantial increase in the number of vehicles abandoned. Until seven years ago, only about 1000 vehicles were being received annually. Numbers then began to increase until reaching a peak in 2002/03 when over 19 000 vehicles were received, weighing in total more than 15 000 tonnes. However, an increase in scrap prices since then has caused numbers to begin to fall back again - to 11 418 in 2003/04, and last year to 7 572, weighing some 6 000 tonnes.

Electrical Goods

A number of the constituent Boroughs are currently exploring options for Waste Electrical and Electronic Equipment (WEEE) segregation. Others have some small-scale initiatives in place (see *Annex B*).

Separate disposal of fridges and freezers is organised by WLWA, in compliance with the Ozone Depleting Substance regulations. In 2004/05, 1,984 tonnes of fridges and freezers were separately collected for treatment.

B2.2.5 ***Summary of Management Routes***

A summary of what happens to all recyclable materials collected by each of the constituent Boroughs is provided at *Annex C*.

(1) Under delegated arrangements with WLWA.

B2.3

WASTE MINIMISATION

The need to decouple economic growth and its associated benefits, in terms of improving quality of life through wider availability of products and services, from waste production is widely recognised.

WLWA's constituent Borough's have, in particular, adopted the promotion of home composting initiatives as a means of reducing household waste generation. Across WLWA to date, more than 67 000 home composters have been distributed to residents at a subsidised price, and more than 10 000 tonnes of waste are estimated to have been diverted from the household waste stream as a result ⁽¹⁾. *Annex B* details the arrangements in place.

Other initiatives that constituent Boroughs have stipulated in their waste minimisation strategies include:

- offering half price discounts towards the purchase of Real Nappies, or towards a Nappy Washing Service;
- advising householders to contact the Mailing Preference Service, a service which helps them to reduce the amount of junk mail they receive;
- carrying waste minimisation awareness-raising visits and presentations in the community;
- developing educational material for use in schools and colleges; and
- promoting local waste exchanges, scrap shops and furniture re-use projects.

The National Resource and Waste Forum (NRWF) Household Waste Prevention Toolkit provides detailed information on how effective waste prevention schemes can be successfully run. This may be of further use in developing waste minimisation initiatives and can be found in the publications section of www.the-environment-council.org.uk.

B2.4

WASTE DISPOSAL ARRANGEMENTS

WLWA arranges facilities for the receipt and disposal of the waste that is collected by its six constituent Boroughs. In 2004/05, the Boroughs collected a total of around 626 000 tonnes of waste. The majority of this was collected from households, with the remainder a combination of waste from commercial premises and waste arising from the cleaning of streets and open spaces. The Boroughs individually arranged for the recycling of some 84 000 tonnes out of this total and the remaining 542 000 tonnes was managed by WLWA.

(1) This is based on the assumption that each home composter will divert 150kg of waste from the household waste stream

WLWA arranged for the management of this waste via a number of different routes, as described below.

- **76% (412 000 tonnes)** was delivered to two rail transfer stations which WLWA operate at Transport Avenue, Brentford, and Victoria Road, South Ruislip. At these two sites, the waste is compacted into containers, loaded on to the railway and is taken by WLWA's rail transport contractor, EWS Ltd, for final disposal to landfill sites operated by Waste Recycling Group PLC. Transport Avenue's waste is currently disposed of at Sutton Courtenay, Oxfordshire, and Victoria Road's waste is disposed of at Calvert, Buckinghamshire. Borough-collected garden waste is also sent to Transport Avenue, for eventual composting at Sutton Courtenay.
- **8% (43 000 tonnes)** was distributed between the Authority's Twyford transfer station and the Boroughs' CA sites. WLWA has contracts for these sites with private sector waste management companies to transport the waste away. The majority is transported by road directly to landfill or composting, and the remainder travels by road into the Authority's two rail transfer stations and from there by railway to landfill.
- **14% (76 000 tonnes)** was delivered to private sector operated transfer stations at which WLWA has arrangements. And just over 1% (7,000 tonnes) was delivered to West London Composting Ltd's newly opened facility at Harefield.

In addition to the waste delivered by the constituent Boroughs, WLWA's three transfer stations also received a total of 23 000 tonnes of commercial waste, which was delivered for disposal by the private sector.

B2.4.1 ***Waste Disposal Infrastructure***

There are ten CA sites in the WLWA area. At one of them, the function of arranging transport and disposal is carried out for WLWA by the Borough concerned, under agency arrangements. WLWA arranges transport and disposal for the other nine sites through its own contracts with the private sector.

Further details of WLWA's waste disposal infrastructure, including contractual arrangements and operational details, can be found in *Table 2.3*.

Table 2.3 *WLWA Waste Disposal Infrastructure*

Site	Site Details
McGovern - Claremont Way	Contractor's road transfer station in Willesden that WLWA use occasionally for Borough collected waste on an 'as and when required' basis. No formal contract.
Surrey County Council - Charlton Lane.	Surrey County Council CA site and transfer station which takes small amounts of Borough collected waste from Western parts of Hounslow and Richmond. Originally this was operated through an agency agreement with Surrey, but the contract is now directly with Surrey Waste Management (subsidiary of Sita), who run the site for Surrey. No formal contract.
Shanks - Hendon.	Rail transfer station operated by Shanks (now taken over by WRG) under an agreement with NLWA, which owns the site. Following the abolition of the GLC, WLWA was required until 1999 by Order to put 30 000 tonnes/year of Brent's waste into Hendon. Since the expiry of the Order, WLWA have continued to use this site for part of Brent's waste through an annual agreement with Shanks.
WRWA - Western Riverside.	Barge transfer station used for Richmond's evening trade waste collection service that operates at the eastern end of the Borough. Originally this was operated through an agency agreement with WRWA but the contract is now directly with Cory, who run the site for WRWA. No formal contract.
Onyx - Alperton Lane.	Contractor's road transfer station that has been used occasionally without a formal contract. Not being used currently.
Richmond - Townmead Road.	Borough owned CA site that also handles about 8000 tonnes of municipal waste and 13 000 tonnes of trade waste. WLWA combined road transport and disposal contract with McGovern, now in 6 months notice on either side roll-over phase.
Hounslow - Space Waye.	Borough owned CA site that also handles about 6000 tonnes of municipal waste and 20 000 tonnes of trade waste. WLWA combined road transport and disposal contract with Powerday, now in 6 months notice on either side roll-over phase.
Hillingdon - Rigby Lane.	Site whereby, under an annual roll-over contract with Hillingdon, a CA site is provided by Sita at their road transfer station. WLWA reimburses Hillingdon for the disposal costs element of the contract.
Hillingdon - New Years Green Lane, Harefield	CA site wholly owned and operated by Hillingdon, handling approximately 25 to 30 000 tonnes per annum of household and commercial waste. In 2003/04 the site recycled 24% of waste received. WLWA is responsible for disposing of residual waste from the site.
Harrow - Forward Drive.	Borough owned CA site that also handles about 8,000 tonnes of municipal waste and 6000 tonnes of trade waste. WLWA combined road transport and disposal contract (and also road transport only) with Ace Waste, now in 6 months notice on either side roll-over phase. Nearly all the residual waste is now being sent to a materials recycling facility (MRF) either at Watford or at Tumbledown in Willesden.
Ealing - Stirling Road.	Small Borough owned CA site. WLWA combined road transport and disposal contract with McGovern, now in 6 months notice on either side roll-over phase.
Ealing - Greenford Road.	Ealing's main CA site. Since a major revamp last year, handles very little municipal waste and only 3000 tonnes of trade. WLWA combined road transport and disposal contract with McGovern, now in 6 months notice on either side roll-over phase.

Site	Site Details
Ealing - Gordon Road.	Small Borough owned CA site. WLWA combined road transport and disposal contract with McGovern, now in 6 months notice on either side roll-over phase.
Brent - Generay.	Contractor's road transfer station that takes about 35 000 tonnes/year of Borough waste (Brent, Ealing and Harrow) - particularly heavy inerts and out of normal hours operations. Annual roll over contract.
WLWA - Victoria Road.	WLWA staffed and operated rail transfer station. Opened in 1980. Takes Borough collected waste from Hillingdon, Harrow, Ealing and Brent. Also provides CA site for Hillingdon. Takes 7000 tonnes/year trade waste from private sector. Land leased from EWS (the rail transport contractor) until 2074. 800 tonne bunker capacity, grab loading of 4 compactors. Waste is packed into containers and each day (Mon to Fri and occasional Sats) a 66 container train (850 tonnes) is taken to WRG's landfill site at Calvert, Bucks, under a contract that runs to December 2007 and which is subject to a minimum tonnage that reduces by 5,000 tonnes/year. This year's minimum tonnage is 220 000 tonnes. The EWS rail transport contract is coterminous with the landfill contract.
WLWA - Twyford.	WLWA staffed and operated road transfer station. WLWA owns freehold. Old fashioned open air shovel loading and compactor operation. Until 1998 it was used to handle 75 000 tonnes/year or more, but site licence difficulties thereafter (no putrescible waste allowed) reduced the tonnage to 20 000 - of which 10 000 tonnes is private sector trade. Since September 2004 it has opened, under an agency agreement, as Brent's CA site. WLWA combined road transport and disposal contract with McGovern, now in 3 months notice on either side roll-over phase.
WLWA - Transport Avenue.	WLWA staffed and operated rail transfer station. Opened in 1976. Takes Borough collected waste from Ealing, Hounslow and Richmond. Also provides green waste reception and shredding facility for Borough collected green waste and green waste from CA sites. Takes 7000 tonnes/year trade waste from private sector. Land leased from EWS (the rail transport contractor) until 24 Dec 2004 (an extension is currently being negotiated). Waste is packed through ten compactors into containers and each day a 66 container train (850 tonnes) is taken to WRG's landfill site at Sutton Courtenay, Oxon, under a contract that runs to March 2008, with WLWA's option to extend by up to 2 years. There is a minimum tonnage of 180 000. The contract also provides for WRG to compost green waste with a minimum tonnage of 5000. The EWS rail transport contract is coterminous with the landfill contract.

B3.1 NATIONAL LEGISLATION, POLICIES AND TARGETS

It is important to include and to review a wide range of legislative information in this Strategy, to ensure full understanding of statutory obligations, and to ensure that any impending legislation is not overlooked.

This section describes the main areas of national policy and legislation impacting on waste management. The current national controls on waste originate from the Control of Pollution Act 1974 and were greatly tightened with the introduction of the Environmental Protection Act 1990. Legislation initially focussed on the disposal of waste, but since the introduction of the EC Framework Directive on Waste control has extended to include the storage, treatment, recycling and transport of waste. Most UK legislation impacting on waste management is now implemented as a result of European Directives.

B3.1.1 Waste Regulation and Disposal (Authorities) Order 1985

The WLWA is established as a waste disposal authority by the Waste Regulation and Disposal (Authorities) Order 1985 (the 1985 Order) that was made under the Local Government Act 1985 s.10. The 1985 Order sets out financial and membership arrangements for WLWA, and also allocates various waste responsibilities between WLWA and the constituent Boroughs.

B3.1.2 Environmental Protection Act 1990

The Environmental Protection Act (EPA) 1990 is a regulatory regime that is designed to implement an integrated (air, land and water) approach to environmental regulation and protection. It is the primary act, along with the associated regulations, that controls how waste is managed.

Part II of the Act sets out the main legislation for dealing with duties and responsibilities in relation to waste management.

Duty of Care

Section 34 of the EPA 1990 introduces a statutory Duty of Care applicable to all those producing and handling waste. This places a general duty on anyone who has responsibility for controlled ⁽¹⁾ waste (waste producers, or anyone else who imports, carries, keeps, treats or disposes of it) to ensure it is managed properly and recovered or disposed of safely. This includes WLWA as a waste disposal authority, and its constituent waste collection authorities.

(1) 'Controlled Waste' is defined in section 75 of the EPA 1990. It includes: household waste; industrial waste; and commercial waste. Wastes handled by local authorities are controlled wastes and subject to regulation.

The Duty of Care Regulations 1991 provide the basis for a mandatory system of transfer notes, which must be completed when waste is transferred between parties. However, the Duty of Care is designed to be a self-regulating system, based on a code of good practice. In order to meet their duty, WLWA are required to:

- prevent the escape of waste in their control;
- transfer waste only to someone who is authorised to accept it;
- ensure that waste is handled lawfully by others; and
- upon transfer, provide details of the waste including a written description.

Local Authority Responsibilities

Sections 45-61 of the EPA 1990 set out the responsibilities of waste collection and disposal authorities. They state that, as a waste disposal authority, WLWA must:

- arrange for the disposal of controlled waste collected by waste collection authorities;
- provide one, or more, places where residents can deposit their household waste, free of charge (but see *Section 3.1.3* below); and
- pay waste collection authority recycling credits for all waste collected but not delivered for disposal.

B3.1.3 *Refuse Disposal (Amenity) Act 1978*

The Refuse Disposal (Amenity) Act 1978 as amended by the 1985 Order requires the constituent boroughs to remove abandoned vehicles and deliver them to the WLWA for storage or disposal.

It also gives the constituent Boroughs the duty to arrange the provision and operation of CA sites, whilst the WLWA is given the responsibility to remove and dispose of the waste. However, subsequently the EPA 1990 has also given to waste disposal authorities (including WLWA) the duty to arrange the provision and operation of civic amenity sites. EPA 1990 provided for the relevant section of the 1978 Act to be repealed but it has not yet been implemented. Currently therefore, there is the anomalous situation of the two statutes existing in parallel. In consequence, the WLWA has the duty to provide sites under the 1990 Act, whilst the boroughs are required to provide them under the 1978 Act. In practice, the Authority and the Boroughs have resolved this conflict by continuing to observe the 1978 Act provisions and by disregarding the 1990 Act provisions. It is expected that the Government will shortly be taking steps to remove this anomaly, but it remains to be seen whether provision of CA sites will remain a responsibility of the boroughs, or will pass to the WLWA.

The Landfill (England and Wales) Regulations 2002 came into force in 2002. They implement the requirements of the EU Landfill Directive (1999/31/EC).

The Landfill Directive aims to deal with the social, environmental and economic impacts of landfill over its whole life cycle. It contains a mix of strategic objectives for reducing the amount and nature of wastes going to landfill, together with strict provisions for the regulation and management of landfills.

Key Directive provisions for local authorities relate to the gradual reduction of biodegradable municipal waste (BMW) ⁽¹⁾ going to landfill and the promotion of alternatives such as recycling, composting and energy recovery from waste. To this effect, the Directive contains three targets at the national level aimed at reducing the amount of BMW disposed to landfill:

- by 2010: reduce the amount of BMW landfilled to 75 percent of that produced in 1995 ⁽²⁾ ;
- by 2013: reduce the amount of BMW landfilled to 50 percent of that produced in 1995; and
- by 2020: reduce the amount of BMW landfilled to 35 percent of that produced in 1995.

To ensure that the UK will meet these targets, the Government has set BMW disposal allowances for each waste disposal authority. These are controlled by provisions made under the Waste and Emissions Trading Act 2003 and have a direct impact on WLWA's Strategy for management of BMW (see *Section B3.1.6*)

The Directive has also brought other changes in waste management that have implications for WLWA, including:

- a complete ban on the landfill of liquid wastes, infectious clinical wastes and certain hazardous wastes;
- a complete ban on the landfill of tyres by 2006 (by July 2003 for whole tyres and July 2006 for shredded tyres);
- the requirement for separate landfills for hazardous, non-hazardous and inert wastes; and
- the introduction of a requirement for treatment of waste prior to landfill and the establishment of acceptance criteria for waste arriving at sites.

(1) The Directive defines BMW as that which is capable of undergoing anaerobic or aerobic digestion, such as food and garden waste, paper and cardboard.

(2) These dates include the four-year derogation available to the UK because of the proportion of MSW landfilled in the baseline year of 1995.

Meeting the requirements of the Landfill Regulations 2002 will increase the cost of using landfill as a means of disposal, which may have major implications for WLWA's budgets, particularly for the landfill of hazardous waste.

B3.1.5 *Landfill Tax Regulations 1996*

In addition to the increased costs of using landfill that will result from the Landfill Regulations 2002, the Landfill Tax Regulations 1996 impose a duty on using landfill, based on the weight of waste deposited. The rate of tax varies according to the type of waste disposed, with a lower rate set for inert waste than biodegradable wastes.

Since 1996, the Landfill Tax has been increasing for active wastes at a rate of £1 per tonne per year. However, from 2005/06 this will increase to a rate of £3 per tonne per year, on the way to a medium to long-term rate of £35 per tonne.

B3.1.6 *Waste and Emissions Trading (WET) Act 2003*

The Waste and Emissions Trading (WET) Act 2003 is intended to help the UK meet its national targets for reducing the amount of BMW disposed to landfill. It is implemented through the Landfill (Scheme Year and Maximum Landfill Amount) Regulations 2004, which came into force on 22 July 2004.

The Act provides a framework for the Landfill Allowance Trading Scheme (LATS), a system whereby tradable landfill allowances will be allocated to waste disposal authorities each year. Each waste disposal authority will be able to determine how to use its allocation of allowances in the most effective way. It enable allowances to be traded with other authorities, saved for future years (banked) or used in advance of future allowances (borrow).

Inter-year trading may be allowed, ie authorities can use allowances issued in one year for a different year. However, in each of the three 'target' years (2010, 2013 and 2020) authorities will only be able to use the allowances issued in that year so that the UK meets its European obligations.

A fixed penalty of £150 per tonne of excess BMW landfilled is likely to be enforced if local authorities do not have sufficient permits for the waste they landfill.

DEFRA has released a provisional allocation of landfill allowances to each waste disposal authority in England. Over the page, *Table 3.1* sets out the landfill allowances applicable to WLWA.

Table 3.1 *WLWA's Provisional BMW Allocation⁽¹⁾*

Financial Year	Provisional Allocation (tonnes BMW)
2005/06	509 521
2006/07	479 754
2007/08	440 064
2008/09	390 452
Target 2010 (BMW)	330 918
2010/11	294 083
2011/12	257 249
Target 2013 (BMW)	220 415
2013/14	210 960
2014/15	201 505
2015/16	192 050
2016/17	182 596
2017/18	173 141
2018/19	163 686
Target 2020 (BMW)	154 231

LATS will be launched in full on 1 April 2005 and has significant implications for WLWA's waste management Strategy. The Greater London Authority (GLA) has proposed that the Mayor acts as a broker for tradable allowances for the whole of London and this may be of consideration⁽²⁾.

B3.1.7 *Statutory Recycling and Composting Standards*

In order to comply with the Landfill Directive BMW diversion targets, the Government and National Assembly for Wales established a series of recovery targets for municipal waste in their *Waste Strategy 2000*. They recognise that an essential part of achieving these is the drive towards more household recycling and composting. The key national targets are:

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

(1) <http://www.defra.gov.uk/environment/waste/localauth/lats/pdf/allocationdata.pdf>

(2) GLA (2003). Rethinking Rubbish in London: The Mayor's Municipal Waste Management Strategy. http://www.london.gov.uk/mayor/strategies/waste/docs/wastestrat_all.pdf

In order to achieve the national recycling and composting level of 25% of household waste by 2005, statutory Best Value performance standards have been set for both waste collection and waste disposal authorities. The intention of these standards is to increase the national recycling rate to 25% in 2005/06, thereby making a significant contribution to the need to divert BMW from landfill in later years.

Performance standards were set for 2003/04 and 2005/06. WLWA did not reach its target of 18% recycling and composting in 2003/04 (17% was achieved). However, it still must aim to reach its 2005/06 target to recycle or compost 27% of household waste.

B3.1.8 Local Government Act 1999

All local authorities with responsibility for waste management, including WLWA, have been designated Best Value authorities under the Local Government Act 1999, and are subject to the duty of Best Value.

Under this duty, WLWA is required to deliver services to clearly defined standards, including cost and quality. This must be done by the most effective, efficient and economic means available, with a view to continuously improving services.

As part of this initiative, WLWA has been set a number of Best Value Performance Indicators (BVPI) for its waste management services (see *Table 3.2*). These provide measures that indicate improvement or otherwise. The BVPIs that WLWA must report against cover a wide range of services and include the statutory recycling and composting target detailed in *Section B3.1.7*.

Table 3.2 WLWA's Best Value Performance Indicators

Best Value (BV) Number	Description	Actual 2003/04	Target 2003/04	Target 2004/05	Target 2005/06	Target 2006/07
BV82a	Percentage of total tonnage of household waste: recycled.	13.35%	14.50%	18.13%	21.75%	23%
BV82b	Percentage of total tonnage of household waste: composted.	3.69%	3.50%	4.38%	5.25%	6%
BV82c	Percentage of total tonnage of household waste: used to recover heat, power and other energy source.	0.09%	0.10%	0.10%	0.10%	0.10%
BV82d	Percentage of total tonnage of household waste: landfilled.	82.86%	81.90%	77.40%	72.90%	70.90%
BV84	kg of household waste collected per head.	444kg	Not set	444kg	444kg	444kg

Best Value (BV) Number	Description	Actual 2003/04	Target 2003/04	Target 2004/05	Target 2005/06	Target 2006/07
BV87	Cost of waste disposal per tonne of municipal waste (£).	£34.70	Not set	£39.28	£42.28	£45.28

B3.1.9 *Household Waste Recycling Act 2003*

The Household Waste Recycling Act 2003 came into force on the 30th October 2003. It requires English waste collection authorities, including the WLWA Boroughs, to collect at least two recyclable materials from households separate from residual waste by 31st December 2010.

B3.1.10 *Waste Minimisation Act 1998*

The Waste Minimisation Act became law in November 1998. It gives a local authority the power to '*do or arrange for the doing of anything which in its opinion is necessary or expedient for the purpose of minimising the quantities of controlled waste, of any description, generated in its area*'.

WLWA are not obliged to carry out any initiatives relating to controlled waste minimisation. However, each of the constituent Boroughs embraces waste minimisation and is active in this area. Current measures include promoting home composting through the sale of subsidised composting bins.

B3.1.11 *Animal By-Products Regulations 2003*

The Animal By-Products Regulations (ABPR) 2003 came into force in England on 1 July 2003. This is the enforcing legislation for the EU Regulation on Animal By-Products (No. 1774/2002), laying down health rules concerning animal by-products not intended for human consumption.

These regulations impose a number of restrictions on the handling and treatment of waste that contains, or potentially contains, animal by-products. It is likely to affect all those who deal with animal by-products, including WLWA, as a waste disposal authority.

The ABPR divides animal by-products into three categories and stipulate the means of collection, transport, storage, handling processing and use or disposal for each category. The issuing of approvals is the responsibility of the State Veterinary Service.

The regulations are likely to have implications on recycling and composting through the different controls placed on composting processes (depending on the types of waste being composted). They have particular implications for composting kitchen waste. WLWA must take this into account when developing composting services.

B3.1.12

Hazardous Waste Regulations

The municipal waste stream contains waste that may have hazardous properties and therefore requires special handling and disposal arrangements as part of the waste collection service. There are increasing legislative requirements for the separate collection of specific hazardous household wastes that have implications for WLWA's Joint Municipal Waste Management Strategy.

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

The HWD defines hazardous waste as those wastes featuring on a list – the European Waste Catalogue (EWC) – drawn up by the European Commission, because they possess one or more of the hazardous properties set out in the HWD. The EWC is subject to periodic review, the most recent having been in 2002.

The EWC 2002 came into force on January 2002. Its introduction means that some waste streams previously defined as non-hazardous are now classified as hazardous. EWC 2002 has yet to be formally transposed into UK law but when it is, certain household items such as fridges and items with cathode ray tubes (television and computer monitors) will be classified as hazardous. DEFRA is considering how these items will be treated under proposed new regulations for hazardous waste. Two sets of regulations are currently being proposed and are subject to public consultation: the List of Wastes Regulations, which will transpose the EWC and; the Hazardous Waste Regulations, which will replace the Special Waste Regulations 1996.

The new Hazardous Waste List is likely to increase the tonnage of MSW classified as hazardous. It is essential that WLWA consider how to deal with the increased pressure that this will put on existing facilities. Hazardous materials need to be separated from other household and commercial waste and dealt with through separate collection arrangements.

B3.1.13

End of Life Vehicles Regulations 2003

The EU End of Life Vehicles (ELV) Directive 2000/53/EC aims to reduce, or prevent, the amount of waste produced from ELVs and increase the recovery and recycling of ELVs that do arise.

The Directive became European law on 21 October 2000 and Member States should have transposed it into national law by 21 April 2002, but none were able to do this. Instead, the End-of-Life Vehicles Regulations 2003 (SI 2003/2635) came into effect on 3 November 2003. These regulations transpose most of the Directive's provisions into national law. In particular they:

- require that certain components are marked to aid recovery and recycling, and that information is provided to facilitate dismantling;
- contain challenging targets for reuse and recycling of ELV components (by 2006 reuse or recycle at least 80% and recover at least 85% of ELVs; by 2015 reuse or recycle at least 85% and recover at least 95% of ELVs);
- require the establishment of adequate systems for the collection of ELVs, and specifies the site, storage and operating standards that must be met by businesses permitted to treat ELVs;
- require that ELVs can only be scrapped ('treated') by authorised facilities, which must meet specified environmental treatment standards; and
- introduce a Certificate of Destruction to improve vehicle agency records.

The remaining Directive provisions, articles 5 and 7 relating to producer responsibility, have not yet been transposed in to UK law, but will shortly be implemented through the End-of-Life Vehicles (Producer Responsibility) Regulations 2004. These state that:

- owners must be able to have their complete ELVs accepted by collection systems free of charge, even when they have a negative value, from 1st January 2007 at the latest; and
- producers (vehicle manufacturers or professional importers) must pay 'all or a significant part' of the costs of take back and treatment for complete ELVs.

London currently has an existing network of around 69 metal recycling sites that are authorised to manage waste. Some of these may be in a position to offer waste authorities ELV pre-treatment and vehicle collection services. However, as well as these two services, waste collection authorities within WLWA will need to plan how they will deal with the, almost certain, increase in the number of requests from their residents for the collection or disposal of ELVs.

B3.1.14 *Ozone Depleting Substances Regulation 2000 (2037/2000)*

The introduction of the Ozone Depleting Substances Regulation 2000 (2037/2000) brought about new requirements for the disposal of fridges and freezers. The regulations came into effect on the 1 January 2002 and require that CFCs are extracted from the insulation foam in domestic fridges and freezers prior to final disposal or recovery. This recovery is in addition to the 'degassing' of cooling circuits that WLWA has carried out for some time.

B3.1.15 *Waste Incineration Regulations 2002*

The Waste Incineration Regulations 2002 came into effect on 28 December 2002, in order to implement the EC Waste Incineration Directive (WID) (2000/76/EC).

The main aim of the WID is to '*prevent and limit negative environmental effects by emissions into air, soil, surface and ground-water, and the resulting risks to human health, from the incineration and co-incineration of waste*'. It seeks to achieve this by requiring the setting and maintaining of stringent operational conditions, technical requirements and emission limit values for plants incinerating and co-incinerating waste. As such, it is not directly concerned with the place of incineration in waste management strategies, but with ensuring that incinerators continue to be tightly regulated.

The requirements of the WID apply to virtually all waste incineration and co-incineration plants, going beyond the requirements of the 1989 Municipal Waste Incineration (MWI) Directives (89/429/EEC and 89/369/EEC). The WID also incorporates the Hazardous Waste Incineration Directive (94/67/EC) forming a single text on waste incineration. The WID will repeal these three Directives from 28 December 2005.

B3.1.16 *Producer Responsibility Obligations (Packaging Waste) Regulations 1997*

The Producer Responsibility Obligations (Packaging Waste) Regulations 1997 came into force in the UK in March 1997. They aim to achieve a more sustainable approach to packaging waste, to reduce the amount of packaging waste going to landfill and to implement the recovery and recycling targets set out in the EC Directive 91/62/EC on Packaging and Packaging Waste.

The Regulations place legal obligations on businesses with a turnover of more than £2 million and who handle more than 50 tonnes/year of packaging to recover and recycle certain tonnages of packaging waste each year. Companies can reduce their obligation by reducing the amount of packaging they handle.

Obligated producers need to obtain Packaging Recovery Notes (PRNs) from an accredited reprocessor as evidence that recycling or recovery has occurred. An accredited reprocessor is a company that performs a recognised reprocessing activity (for example, glass recycling or energy recovery), which has been accredited by the Environment Agency.

The Regulations have no direct obligations for WLWA. However, in order for the UK to meet proposed increased targets for packaging waste, more packaging waste will need to be extracted from the domestic waste stream. WLWA have a role to play in achieving this, by expanding kerbside recycling collection and promoting other recycling schemes and facilities.

By working with reprocessors and/or compliance schemes, WLWA can provide a reliable supply of recyclable feedstock, and gain from the sale of PRNs by the reprocessor. This also presents an opportunity for WLWA to work in partnership with the many businesses obligated under the regulations.

B3.1.17 *Forthcoming Legislation*

Waste Electrical and Electronic Equipment Directive (2002/96/EC)

The EU Directive on Waste Electrical and Electronic Equipment (WEEE) became European law in February 2003 and is required to be transposed into UK law by 13 August 2004. However, the Government has yet to transpose this Directive, with the DTI and DEFRA currently undergoing a second public consultation on this topic.

The Directive aims to minimise the impacts of a range of electrical and electronic equipment on the environment, during their life times and when they become waste. It encourages and sets criteria for the collection, treatment, recycling and recovery of WEEE and makes producers responsible for financing most of these activities. There is a requirement, relevant to constituent waste collection authorities, to introduce separate collection systems for household WEEE, enabling a minimum of 4kgs per person each year to be collected by the end of 2006. However, research by the Industry Council for Electronic Equipment Recycling (ICER) suggests that this is already achieved through bulky household collections and collections at civic amenity sites.

The further role of local authorities in the collection and storage of WEEE has not yet been decided. However, whilst they will not be financially responsible, they are likely to play a key role. The Government is currently proposing that retailers (who have collection obligations under the Directive) pay into a fund to help local authorities provide improved WEEE collection facilities at CA sites/Reuse and Recycling Centres.

WLWA can work with producers and the voluntary sector to help ensure the treatment, reuse and recycling targets for WEEE are met. Some voluntary partnership schemes between the private and public sector do currently exist, including take back schemes for mobile phones, lighting units and certain batteries. WLWA should take steps to encourage opportunities such as these.

Batteries Directive Proposals

Proposals for a new Directive on batteries and accumulators were issued by the European Commission on 24 November 2003. The reasons proposed for a new Directive are that existing legislation on batteries (Directive 91/157/EEC on Batteries and Accumulators Containing Dangerous Substances) only covers an estimated 7% of consumer batteries on the EU market. These are batteries with a certain mercury, lead and cadmium content. The new Directive will

apply to all types of batteries irrespective of their shape, weight, composition or use.

The main aspects of the legislation that are likely to affect WLWA are the following proposed collection and monitoring obligations:

- collection schemes for used consumer batteries are to be established. These are to be free of charge to the consumer;
- a collection target of 160 grams per inhabitant for spent consumer batteries is to be met within four years of the Directive being transposed into UK law;
- 80% of portable nickel cadmium batteries are to be collected within four years of the Directive being transposed; and
- the quantity of spent portable nickel cadmium batteries entering the municipal solid waste stream is to be monitored.

There are also recycling obligations, including a proposed 90% of collected consumer batteries to be recycled, with a 55% recycling efficiency.

Although it is undecided who is to finance the collection and recycling of batteries, WLWA are likely to see some increased costs through monitoring and reporting requirements.

DEFRA anticipate that, if adopted, the Directive would need to be transposed into national law by 2007. The collection, monitoring and recycling efficiency targets for all battery types would then need to be reached by 2011.

EC Working Document – Biological Treatment of Biowaste

The European Commission has published a discussion document on the biological treatment of biowaste, which is expected to be proposed as an EU Directive in late 2004. This will establish rules on the safe use, recovery, recycling and disposal of biowaste, in order to control potential land contamination and to encourage the use of certified compost. The Directive will focus on biodegradable municipal waste and complements the BMW diversion targets of the Landfill Directive.

The Commission is investigating whether an obligation to separately collect biowaste should be introduced across the EU. The separately collected biowaste would be subject to a defined composting process, encompassing time and temperature requirements, in order to produce compost meeting specified quality standards (including maximum tolerable levels of certain pollutants and pathogens).

The Biowaste Directive will also address the biological treatment of catering waste, which is currently controlled by the Animal By-Products Regulations

2003. Once the Directive is in force, its provisions will supersede the requirements of the Animal By-Products Regulation with regard to the composting of catering waste.

B3.2 REGIONAL POLICIES AND PROPOSALS

Regional policies and priorities are important in the development of a municipal waste management Strategy. Key policies, plans and other strategies that influence the development of WLWA's waste management Strategy are outlined below.

B3.2.1 Mayor of London's Municipal Waste Management Strategy

In his Municipal Waste Management Strategy ⁽¹⁾, the Mayor of London sets out a number of policies and proposals that he believes are needed to achieve the objectives of his Strategy for London's waste. WLWA must have regard to these in the development of their Joint Municipal Waste Management Strategy.

The Mayor is given a power to direct waste authorities in how they exercise their statutory functions, but only after consultation and full consideration of the circumstances within that authority. As such, the proposals laid out in the Mayor's Strategy are not prescriptive about the specific measures needed, but outline actions considered necessary to achieve policy objectives and meet targets. If a proposal is not implemented WLWA will need to demonstrate that, due to local circumstances, there is a better way to meet the policy objective.

The policy areas covered by the proposals include:

targets;	planning;	data provision;	landfill;
LATS;	contracts;	partnership;	trade waste;
bulky waste;	collection;	reduction & re use;	events;
recycling;	packaging;	end of life vehicles;	WEEE;
incentives;	composting;	fridges;	kitchen waste;
CA/RRC sites;	incineration;	hazardous waste;	clinical waste;
transport; and	new technologies.		

The timescales for implementing the proposals will vary, depending on the current situation in each authority. Each proposal is given a priority, 'high', 'medium' or 'low' ⁽²⁾. Authorities with lower starting recycling and composting performance than other Boroughs in London will be required to

(1) GLA (2003). Rethinking Rubbish in London: The Mayor's Municipal Waste Management Strategy.
http://www.london.gov.uk/mayor/strategies/waste/docs/wastestrat_all.pdf

(2) The Implementation Plan in Chapter 5 of the Mayor's Strategy sets out the level of priority of proposals.

implement the high priority proposals first to ensure that their targets are met. By comparison, authorities starting from a higher baseline level, are expected to have many of the high priority proposals in place and will need to implement proposals with a medium or low priority to meet their targets.

B3.3

SUMMARY OF MAJOR ISSUES

Many of the legislative controls and policies, as discussed above, have a fundamental impact on the way in which waste is managed in the WLWA. As well as statutory recycling and composting targets for household waste, recovery targets for municipal waste and Best Value Performance Indicators, more recent and emerging policy and legislation needs to be implemented within WLWA's Joint Municipal Waste Management Strategy.

In particular, recent developments in relation to the implementation of the Landfill Directive will have major implications to waste management in WLWA, requiring a dramatic reduction in the amount of biodegradable waste sent to landfill, as controlled by provisions under the Waste and Emissions Trading Act 2003.

Any biodegradable waste diverted to meet the statutory recycling and composting standards such as paper, green waste and textiles, will make a contribution to the Landfill Directive targets. However, more biodegradable waste will need to be diverted to achieve landfill allowances, either through increased recycling and composting, biological waste treatment, or thermal treatment.

The Strategy must also take account of requirements under the ABPR, which has implications on recycling and composting through the different controls placed on composting processes, as well as the WEEE Directive. Furthermore, the Strategy must retain a degree of flexibility in order that emerging legislation, such as the forthcoming batteries Directive proposals, can be accommodated.

The amount of MSW produced within the WLWA area has increased since 2000/01. However, in the last two years the growth rate has declined at a constant rate of 1% each year.

Forecasting the likely future change in waste arisings is a key underlying assumption for WLWA's Joint Municipal Waste Management Strategy. A number of growth scenarios have been examined for how MSW waste might change in the future. These are:

- a forecast of no growth in MSW arisings (static);
- a forecast of MSW arisings based on a constant 3% increase per annum, in line with the national rate quoted in *Waste Strategy 2000*;
- a forecast of MSW arisings based on the average growth rate experienced in WLWA between 2000/01 and 2003/04 (the historic 3-year growth rate);
- a forecast of MSW arisings based on the average growth rate experienced in WLWA between 2001/02 and 2003/04 (the historic 2-year growth rate);
- a forecast of MSW arisings based on assumptions in the Mayor of London's Municipal Waste Management Strategy (3.5% to 2006 then 2%);
- a forecast of MSW arisings based on the likely increase in households across WLWA ⁽¹⁾ and assuming non-household waste arisings remain static; and
- a forecast of MSW arisings based on the likely increase in population across WLWA ⁽²⁾ and assuming non-household waste arisings remain static.

Figure 4.1 demonstrates the effect of these alternative scenarios on future municipal waste production.

(1) Based on the most accurate current estimates of household growth projections, consistent with the London Housing Capacity Study (1999-00) and London Plan. An updated London Housing Capacity Study is due to be published in April/May 2005 (J. Hollis, personal communication, 17/12/04).

(2) Based on the Mayor's Spatial Development Strategy (2004) estimate of 10% growth in population in West London over the next ten years, and an additional assumption that this growth rate would continue until 2020.

Figure 4.1 Growth in MSW Arisings in WLWA

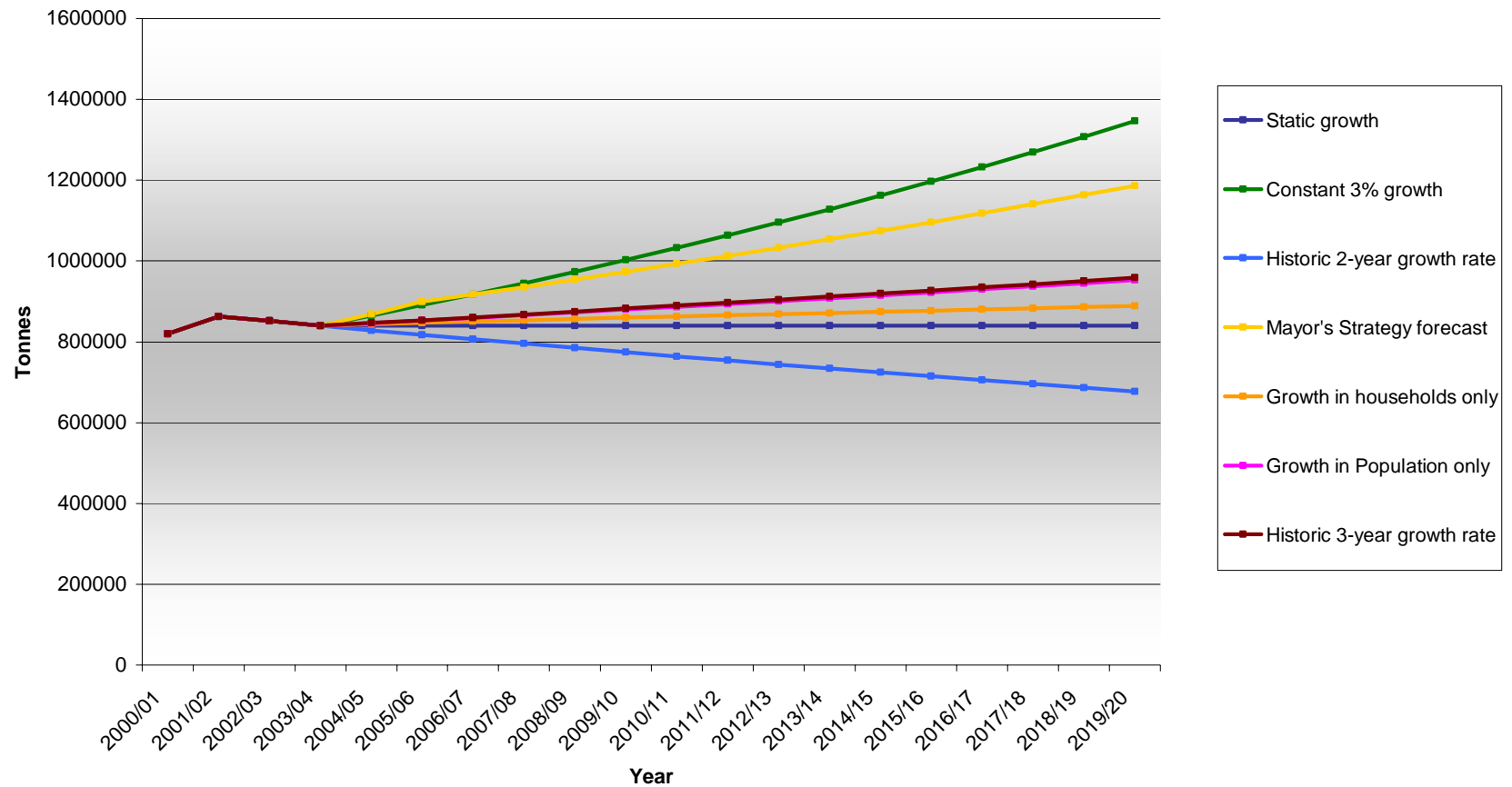


Table 4.1 presents a summary of the municipal waste arisings in WLWA under each waste growth scenario.

Table 4.1 *Forecasted MSW Arisings in WLWA*

Year	1) Static growth	2) Constant 3% growth	3) Historic 3-year growth rate	4) Historic 2-year growth rate	5) Mayor's Strategy forecast	6) Growth in households only	7) Growth in population only
2000/01	819 963	819 963	819 963	819 963	819 963	819 963	819 963
2001/02	862 263	862 263	862 263	862 263	862 263	862 263	862 263
2002/03	852 290	852 290	852 290	852 290	852 290	852 290	852 290
2003/04	839 431	839 431	839 431	839 431	839 431	839 431	839 431
2004/05	839 431	864 614	846 408	828 244	868 811	843 331	845 994
2005/06	839 431	890 552	853 443	817 206	899 219	847 231	852 619
2006/07	839 431	917 269	860 536	806 215	917 204	850 337	859 308
2007/08	839 431	944 787	867 688	795 570	935 548	853 443	866 061
2008/09	839 431	973 131	874 900	784 967	954 259	856 549	872 879
2009/10	839 431	1 002 325	882 171	774 506	973 344	859 655	879 762
2010/11	839 431	1 032 394	889 503	764 108	992 811	862 761	886 711
2011/12	839 431	1 063 366	896 896	754 000	1 012 667	865 628	893 727
2012/13	839 431	1 095 267	904 351	743 952	1 032 921	868 495	900 810
2013/14	839 431	1 128 125	911 867	734 037	1 053 579	871 362	907 960
2014/15	839 431	1 161 969	919 446	724 055	1 074 651	874 229	915 179
2015/16	839 431	1 196 828	927 088	714 063	1 096 144	877 096	922 467
2016/17	839 431	1 232 733	934 793	705 080	1 118 066	879 964	929 825
2017/18	839 431	1 269 715	942 562	695 683	1 140 428	882 831	937 254
2018/19	839 431	1 307 806	950 396	686 412	1 163 236	885 698	944 753
2019/20	839 431	1 347 040	958 296	677 264	1 186 501	888 565	952 324

B4.1 **WLWA STRATEGY GROWTH FORECAST**

For the purposes of WLWA's Joint Municipal Waste Management Strategy, the *historic 3-year growth rate scenario* has been chosen as the most likely forecast of future arisings.

This scenario takes into account the most accurate and complete time series data available for WLWA's MSW arisings (2000/01 to 2003/04). Over this period, a number of new policies and services have been introduced by constituent Boroughs to encourage waste minimisation and increase the quantities of materials recycled and composted. As such, the forecast is thought to reflect current and future practice across the Authority, and is consistent with the Strategy's focus on waste minimisation, recycling and

recovery. It is recognised that the past three years have seen very dry weather, which reduces waste tonnage. As such, this growth rate may slightly underestimate future waste production, nevertheless it is considered to be the most appropriate forecast.

It is considered appropriate that the *historic 3-year growth rate scenario* is slightly higher than that for growth in households only. Although the constituent Boroughs within WLWA have adopted waste minimisation initiatives, it is realistic to consider that there will be some growth in the amount of waste produced per household in the future, instead of growth in the number of households only. To date, and despite a number of instruments such as the Waste Minimisation Act 1998, there is no evidence that a significant reduction in waste production is being achieved.

Similarly, it is considered appropriate that the preferred forecast growth rate is lower than the 3% growth rate quoted in *Waste Strategy 2000*. As an historical rate, 3% is usually considered to be an over-estimate of future municipal waste arisings growth, and provides no reflection of the specific circumstances of the WLWA.

One growth rate scenario, the *Mayor's Strategy forecast*, has been based on the expectation of a 10% population increase for west London over the next ten years. Interestingly this scenario very much correlates with the *historic 3-year growth rate scenario*. However, population increases are not seen as an appropriate basis on which to predict future waste growth. They represent just one issue within waste management, and are subject to their own specific circumstances beyond the field of waste management. Nevertheless, this is an issue that will require some consideration throughout development of the Waste Strategy.

B5.1 **INTRODUCTION**

A good understanding of the available waste management collection and treatment technologies is essential in order to understand how wastes produced within the west London area can be managed most efficiently. This section of the report reviews a number of the collection systems and processing technologies currently available for the treatment of municipal solid waste.

In compiling this section, reference has been made to the Environment Agency's website, in particular the Waste Technology Data Centre ⁽¹⁾. This resource provides case studies and overviews of the three main methods of waste resource reclamation: biological, chemical and physical. Gaps in information available from the Agency's website have been filled using expert knowledge or other sources of information, referenced as appropriate.

B5.2 **COLLECTION**

B5.2.1 **Mixed Waste Collection**

All household waste is placed into one bin by the resident and this is then collected in one vehicle. No separation occurs and so the waste has to be sorted before any treatment can take place, and to remove biodegradable materials before the residual waste can be sent to landfill.

Treatment technologies that can be used with a mixed waste collection include:

- material recovery facility (MRF);
- in-vessel aerobic compost;
- mechanical biological treatment (MBT);
- gasification;
- pyrolysis; and
- incineration.

Several technologies can be used with a mixed waste collection, and the Borough may save on kerbside collection costs as only one receptacle needs to be provided for the householder, and only one vehicle is required to collect it. However, this system also has disadvantages. The recyclable materials still need to be sorted out from the rubbish, and this may not be possible for some materials such as paper. Furthermore, materials such as glass and plastic may not command as high a price when sold, because they will be of a poorer quality than those separated and cleaned by the householder. Each Borough

(1) www.environment-agency.gov.uk/wtd. 21 December 2004.

has high recycling targets to achieve, so an efficient collection service will assist in this.

B5.2.2 *Separated Waste Collection*

Residents are provided with a separate box or bag in which to place materials that can be recycled. As such, the householder has undertaken the first separation of waste to be recycled from the residual waste that would go straight to landfill. Collection of these recyclables can then occur in two ways.

The recyclables may be collected and sorted within a specialist collection vehicle with different compartments for each material. These recyclables are then generally taken to a depot or transfer station, where they are bulked up and transported directly to their markets.

Alternatively, the collection vehicle may pick up the recyclables as a mixed load, although green waste and dry recyclables are often separated. These mixed recyclables are then transported to a MRF for sorting, before being sent for treatment or bulking.

B5.2.3 *Bring Banks*

Bring banks are often found in public places, for example supermarkets and public car parks. Recyclables are placed into each relevant 'bank', these are collected and replaced with empty banks on a regular basis. The recyclables are taken to a transfer station where they are bulked up and transported to their market. Bring banks usually accept all glass, cans, paper, card and magazines, and can also take textiles and plastics depending on the service provided.

B5.2.4 *Civic Amenity Site (CA Site)*

Civic amenity (CA) site is a general term given to a facility that allows householders to deposit items of waste for recycling or disposal. The Environmental Protection Act 1990 (EPA) places a statutory requirement on Waste Disposal Authorities to make arrangements for:

'places to be provided at which persons resident in its area may deposit their household waste and for the disposal of wastes so deposited.' ⁽¹⁾

Recyclables are segregated into containers on site and then transported for treatment or disposal. CA sites tend to collect more bulky items such as disused furniture etc that cannot be collected at the kerbside. Some CA sites also accept waste from small businesses. However, whilst the service is often provided free of charge for householders, businesses are more normally charged to use the site.

(1) Environmental Protection Act 1990. Section 51(1)(b).

B5.2.5 *Transfer Station*

A transfer station may receive either separated or mixed recyclables, which are then sorted as necessary and bulked up prior to processing. Transportation is most often by road, but rail may also be used, or as in west London, river transport.

B5.2.6 *Materials Recovery Facility (MRF)*

MRFs can accept mixed waste or separated dry recyclables (not mixed with green waste). The waste is sorted to remove the recyclable materials either by hand, using machinery, or a combination of both. The sorted waste is then bulked up for recycling, treatment or disposal.

B5.3 *OPEN WINDROW COMPOSTING*

B5.3.1 *The Process*

Green waste is delivered to a reception area, is sorted to remove contaminants, and shredded. A small proportion of the shredded material may be taken away by farmers for use on their land; otherwise it is placed into windrows or tunnels. Windrows are typically triangular-shaped heaps of shredded material, measuring 4 metres width at their base and reaching 5 metres in height. They are turned regularly (approximately every 10 days) and the compost generally reaches maturation in approximately 12 weeks.

Recent designs involve compost tunnels of a three-sided concrete construction, typically 6.5 metres wide by 21 metres in length, and reaching 2 metres in height. Pitched roof and double front-opening tunnel doors are covered in a three-layered Gortex™ type membrane material which is both waterproof, but at the same time allows water vapour to pass through and to escape. The organic fraction is placed in the enclosed tunnels by a front-end loader. The membrane roof is closed and under floor aeration channels aerate the waste so as to maintain a pre-set temperature. Residence time in the composting tunnels is a minimum of 3-4 weeks. The raw compost is thereafter placed in external windrows to mature for an additional 5-6 weeks.

At maturation the compost is placed on a trommel or sieve to extract oversized pieces. These can be separated from the compost, shredded and fed back into the windrows or tunnels.

B5.3.2 *Waste Types Treated*

Table 5.1 indicates those wastes that are and are not accepted by open windrow composting plant.

Table 5.1 **Waste Types Treated by Open Windrow Composting**

Waste accepted by plant	Waste not accepted by plant
Green waste	Similar industrial
Paper/card	Clinical
MSW	Hazardous
Similar commercial	Kitchen waste
	Textiles
	Wood
	Ferrous
	Non-ferrous
	Glass
	Plastics

B5.3.3 **Technology Analysis**

<p>Strengths</p> <p>Open windrow composting is a proven technology, using relatively simple equipment. A range of compost grades can be produced and sold to appropriate markets. The process generally receives a high level of support from the general public, and this may be fostered by the ability to deliver green waste and collect compost at any particular facility.</p>	<p>Weaknesses</p> <p>Using a compost tunnel and sheeting imposes additional fill time requirements, and additional replacement costs (the membrane has an expected life of 7 - 10 years). If the compost is not turned or agitated regularly this can lead to anaerobic 'hot spots' where the waste does not break down satisfactorily. The Environment Agency requires a distance of 250 metres between any open compost facility and housing, to minimise risks from air borne bio-aerosols; this obviously has implications for site selection.</p>
<p>Opportunities</p> <p>The necessary modifications to plant design to facilitate compliance with the Animal By Products Regulations are understood to be reasonably straight forward.</p>	<p>Threats</p> <p>If markets do not exist for the compost then this material would have to be landfilled. More stringent standards on bio-respiration for waste landfilled are likely to be forthcoming.</p>

B5.3.4 Costs and Revenues

Table 5.2 provides indicative costs and benefits of the open windrow composting process. The figures below show variation, which depends on the particular process and technology provider.

Table 5.2 Indicative Costs and Benefits of Open Windrow Composting

Cost/Benefit	Description	Single cost/benefit (£ 000)	Cost/Benefit (£ per tonne)
Capital costs (including infrastructure and equipment)	1 ktpa	50	
	15 ktpa	4.5 or 500	
	30 ktpa	4.7	
	50 ktpa	3500	
	90 ktpa	14	
Operating costs	Depreciation, staff, maintenance etc		15.42 or 27 - 42 or 18.55 - 32.99
Revenue	Compost or		1.5 or
	Ferrous and non-ferrous		2.37

For a plant with a capacity of 26 000 tpa a land area of 0.47 ha would be necessary, or 2 ha for a 30 000 tpa plant, or 1 ha for a 48 000 tpa plant.

B5.4 IN-VESSEL AEROBIC COMPOSTING

B5.4.1 The Process

Waste is delivered to the reception area and oversized items are removed. Following a bag splitter, various sorting techniques are applied. The organic fraction is loaded into a composting drum, at which point sewage sludge may be added both to improve the quality of the resulting compost and accelerate the composting. The materials undergo a first rapid in-vessel stage of composting. Following unloading, the 'rough' compost is screened to remove large or unwanted inorganic materials. The rough compost is then transferred to the aeration hall.

In the aeration hall a magnet is used to remove ferrous material and the 'rough' compost is laid out in windrows. Air is circulated up through the aeration floor into the base of the compost. This second stage produces mature compost, but involves a slower maturation time of between 6 - 12 weeks, dependent upon a range of factors, including the proposed end-uses.

The process buildings are held under slight negative pressure to contain odours, with all process air being treated by bio-filters prior to release.

B5.4.2 Waste Types Treated

Table 5.3 presents those waste types that are and are not accepted by in-vessel composting plant.

Table 5.3 Waste Types Treated by In-vessel Composting

Waste accepted by plant	Waste not accepted by plant
Green waste	Clinical
Paper/card	Hazardous
MSW	Textiles
Similar commercial	Wood
Similar industrial	Ferrous
Kitchen waste	Non-ferrous
	Glass
	Plastics

B5.4.3 Technology Analysis

Strengths In-vessel composting technology is readily compliant with the Animal By Products Regulations, and the compost produced can exceed the quality requirements of proposed European standards. Virtually all organic material can be recycled back to land, which results in a high diversion of biodegradable waste from landfill.	Weaknesses The ability to recycle the compost back to the land, and so divert the compost from landfill, is reliant on a market for the compost.
Opportunities With the advent of the Animal By Products Regulations, in-vessel composting has the opportunity to dominate the composting field over open windrow technologies.	Threats The technology is not able to accept a significant proportion of waste types.

B5.4.4 *Costs and Revenues*

Table 5.4 provides indicative costs and benefits of the in-vessel composting process.

Table 5.4 *Indicative Costs and Benefits of In-vessel Composting*

Cost/Benefit	Description	Single cost/benefit (£ 000)	Cost/Benefit (£ per tonne)
Capital costs	50 ktpa plant	12.96	
	100 ktpa plant	21.60	
	200 ktpa plant	35.64	
Operating costs	Depreciation, staff, fuel etc		30.24 - 43.20
Revenue	Metal scrap, compost, etc		unknown
Total cost			48.66 - 70.00

Approximately 3 ha are required for a plant of 100 ktpa, or 5.4 ha for a plant of 200 ktpa capacity (no land take information was available for a plant of 50 ktpa).

B5.5 *MECHANICAL BIOLOGICAL TREATMENT*

B5.5.1 *The Process*

Mechanical biological treatments (MBT) are hybrid technologies with a great many configurations. They generally result in the production of refuse derived fuels (RDF). They involve the mechanical processing of household waste using screens, shredders and separators to recover recyclable materials and to produce a combustible product. The waste is then placed in enclosed bio-drying boxes for 7 days, during which time air is forced through the waste creating conditions for aerobic biological breakdown of organic matter. The warm humid air is extracted from the boxes and is passed over a heat exchanger where the condensate is captured, cleaned and recycled within the process.

The dried waste is then separated into a light (RDF) and heavy (metals, inert material and glass) fraction. The RDF can be incinerated in power stations, pyrolysis and gasification systems, co-incinerated in other industrial combustion processes or burnt in dedicated energy from waste plant.

Some plant may be configured to deliver a higher rate of biological activity and 'stabilisation' rather than drying and the production of an RDF.

B5.5.2 *Waste Types Treated*

Table 5.5 presents those waste types that are and are not accepted by MBT plant.

Table 5.5 *Waste Types Treated by MBT Plant*

Waste accepted by plant	Waste not accepted by plant
MSW	Clinical
Similar commercial	Hazardous
Similar industrial	Paper/card*
	Kitchen waste*
	Green waste*
	Textiles*
	Wood*
	Ferrous
	Non-ferrous
	Glass
	Plastics

* not treated at reference plants but feasible for technology

B5.5.3 *Technology Analysis*

Strengths MBT plants are used widely for the treatment of MSW throughout mainland Europe. However, there is no reference plant currently operating within the UK. Plant design can maximise water efficiency, effluent disposal and odour/dust control. All waste activities are generally fully contained within an enclosed building, which can make gaining planning permission easier.	Weaknesses Until recently, MBT has been seen as too expensive within the UK. However, with the advent of the Landfill Directive and increases in landfill tax, it may become more competitive. MBT processes result in a fibre that requires a market. If this market does not exist then this may lead to difficulties in delivering BMW diversion in latter years.
Opportunities The technology can be integrated with source segregated recycling and can recover additional value from the residual fraction.	Threats There is no established market for the RDF in the UK, and recent research suggests there is not a strong likelihood of this occurring.

B5.5.4 *Costs and Revenues*

Table 5.6 provides indicative costs and benefits of the MBT process.

Table 5.6 *Indicative Costs and Benefits of MBT*

Cost/Benefit	Description	Single cost/benefit (£ 000)	Cost/Benefit (£ per tonne)
Capital costs*	60 ktpa	8	
	75 ktpa	20	
	180 ktpa	25	
Operating costs	Depreciation, staff, fuel etc		25 or 33.38
Revenue	Ferrous and non-ferrous metals		2.60
	RDF		0 - 7.95
Total cost			50 - 70

*Plant design and prices are provided on a bespoke basis and are dependent on a number of factors including: ground conditions; recyclate and RDF end-use specification; architectural enhancement; contract period and financing package; recycling levels required by the contract; visitor facilities; and location.

For a 60 ktpa plant a land area of 15 ha is needed, and 35 ha for a 180 ktpa plant (42 ha where MRF is included). The 75 ktpa plant referenced has a total site area of approximately 3 ha including: plant, infrastructure and landscaping. The site has been designed to facilitate expansion to a capacity of 150 000 tpa in coming years.

B5.6 *ANAEROBIC DIGESTION*

B5.6.1 *The Process*

Waste is received at the reception area, which is often located within a building. Many plants are quite specific in the type of waste received, for example the Ludlow Biogas Plant is designed to handle source-separated household kitchen waste, which might include some garden waste. The waste is shredded before entering the digestion plant.

Anaerobic digestion plants can be constructed using different approaches, systems, temperatures etc. Plants can be constructed operating at mesophilic (35°C) and thermophilic (50°C) temperatures, as well as using dry (>15%, usually 25-35% DM) as wet (<15%, usually 5-10% DM) fermentation in the digester.

This process produces conditions that encourage the natural breakdown of organic matter by bacteria in the absence of air. The generated biogas can be used as a source of renewable energy to meet on-site power and process heat

requirements. The produced digestate may contain valuable nutrients, and after a process of aeration and maturation, it can often be used as compost. If it is not of a suitable standard, this will require disposal to landfill.

B5.6.2 Waste Types Treated

Table 5.7 presents those waste types that are and are not accepted by anaerobic digestion plant.

Table 5.7 Waste Types Treated by Anaerobic Digestion Plant

Waste accepted by plant	Waste not accepted by plant*
Green waste	Clinical
Kitchen waste	Hazardous
MSW	Textiles
Similar commercial	Wood
Similar industrial	Ferrous
Paper/card	Non-ferrous
	Glass
	Plastics

*all the following are not treated at reference plants but feasible for technology, with the exception clinical, hazardous and possibly textiles and wood

B5.6.3 Technology Analysis

<p>Strengths</p> <p>Due to the high temperatures involved in the process, anaerobic digestion allows food waste to be recycled and potentially used as an agricultural fertiliser. If dewatering is not required then the process is of relatively low capital intensity, and presents the ability for gas storage, enabling renewable energy on demand.</p>	<p>Weaknesses</p> <p>The technology is relatively under-developed in the UK for food waste, although very mature for sewage sludge stabilisation. It is highly sensitive to the input composition with organic waste leading to increased process efficiencies, greater product quality and higher revenue. The final liquid product will incur transport costs if the farm land is a significant distance from the plant. In the absence of a liquid fertiliser market, separation of solids and compost would be needed as well as permission to discharge liquid as an effluent.</p>
<p>Opportunities</p> <p>On a small-scale, ie up to 20 000 tpa, a biogas plant can be linked to community projects and community involvement. This would also bring benefits of local responsibility for waste produced. Food waste can be co-digested with sewage sludge, and other Category 3 wastes.</p>	<p>Threats</p> <p>Collection costs for pre-treatment separated organic waste, and post digestion connection to the electricity grid. Renewable Obligation legislation is geared towards large rather than small embedded generators and is directed at electricity suppliers, not electricity producers.</p>

B5.6.4 *Costs and Revenues*

Table 5.8 provides indicative costs and benefits of the anaerobic digestion process.

Table 5.8 *Indicative Costs and Benefits of Anaerobic Digestion*

Cost/Benefit	Description	Single cost/benefit (£ 000)	Cost/Benefit (£ per tonne)
Capital costs	20 ktpa	8.4	
	25 ktpa	10.5	
	40 ktpa	12.9	
	200 ktpa	25	
Operating costs	Depreciation, staff, fuel, etc		unknown
Revenue	Materials, nutrients, electricity, etc		unknown
Total cost	Incl. sale of electricity; excl. sale of compost and investment amortisation		17.5 – 24.5 or 56

For plants between 20 ktpa and 40 ktpa a land area of 1.1 ha is required. The reference plant of 25 ktpa capacity has a land take of 2 ha.

B5.7 *GASIFICATION*

B5.7.1 *The Process*

Waste is received pre-shredded to give an appropriate surface-to-volume ratio and metals are removed. The process is divided into a primary chamber, where the gasification of the solid fuel takes place, and a secondary gas combustion chamber. The primary chamber is fed with waste and primary air, and is heated by an oil-heated grate. The slag discharged from the end of the grate is cooled in a water-basin.

After the combustible gases have left the primary chamber, secondary air and re-circulated flue gas are added to obtain the desired combustion profile. Exhaust gases are cleaned prior to their release to atmosphere.

B5.7.2 *Waste Types Treated*

Table 5.9 presents those waste types that are and are not accepted by gasification plant.

Table 5.9 **Waste Types Treated by Gasification Plant**

Waste accepted by plant	Waste not accepted by plant*
MSW	Green waste
Similar commercial	Paper/ card
Clinical	Similar industrial
	Hazardous
	Kitchen waste
	Textiles
	Wood
	Ferrous
	Non-ferrous
	Glass
	Plastics

*all the following are not treated at reference plants but feasible for technology, with the exception hazardous

B5.7.3 **Technology Analysis**

<p>Strengths</p> <p>Plant can be small scale, bringing potential for local responsibility, and reduced traffic and visual impacts. Plant requires relatively small building footprint and low profile buildings.</p>	<p>Weaknesses</p> <p>The reference plant is not currently operating to expected standard.</p>
<p>Opportunities</p> <p>Small scale plants give opportunity for higher energy efficiencies through heat integration. The resultant slag has a low carbon value and may be sold as an aggregate material.</p>	<p>Threats</p> <p>Technology may be seen as incineration by another name, and so receive poor public support.</p>

B5.7.4 **Costs and Revenues**

Table 5.10 provides indicative costs and benefits of the gasification process. The figures below show variation, which depends on the particular process and technology provider.

Table 5.10 *Indicative Costs and Benefits of Gasification*

Cost/Benefit	Description	Single cost/benefit (£)	Cost/Benefit (£ per tonne)
Capital costs	64 ktpa	30 000	
	70 ktpa	14.5	
	130 ktpa	23.0	
Operating costs	64 ktpa		107.87
Revenue	Materials		5
	materials, nutrients, electricity and heat		23.56
Net cost			84.31

The 64 ktpa reference plant has a land area of 3 ha. It is estimated that 2 ha may be required for a 70 ktpa plant or 2.4 ha for a 130 ktpa plant.

B5.8 *PYROLYSIS*

B5.8.1 *The Process*

From the reception pit, waste is moved by grab crane to a shredder, after which the waste is delivered to a storage pit where it is typically mixed with sewage sludge to provide a homogenous feedstock. Blended waste is transferred to a feed hopper coupled to a charging unit supplying each rotary kiln. From the feed hoppers, a conveyor system transports the waste into the charging unit where quicklime is added. From this point, the feed system is effectively gas tight and a feed screw conveys the waste mixture into the pyrolysis kilns.

Each rotary kiln is operated at a slight negative pressure. Heat is provided indirectly to the kilns by flue gas at high temperature (c.1200°C). The flue gases raise the shell temperature, whilst radiated heat raises the temperature inside the kiln, in the absence of air/oxygen. In the first part of the kiln the waste is dried; in the following, the heat pyrolyses the organic matter. A pyrolysis gas and char (containing carbon, inert materials – including metals) are produced. The rotary kiln is positioned at a 15° downward gradient; residence time within the kiln can be regulated between 30 and 120 minutes, although it is claimed one hour is sufficient for pyrolysis.

Residues of the pyrolysis process are discharged via a wet slag remover onto a conveyor belt; the pyrolysis gas is sealed from the atmosphere by the water level in the slag remover. Ferrous metals are separated from the conveyor for recycling via an over-band magnet after which the char is transported to a landfill site adjacent to the plant.

The resulting pyrolysis gas is fed to the combustion unit. The resulting flue gases and the return from the pyrolysis kilns are fed to a boiler in which steam is generated and subsequently fed to a condensing turbine-generator. At exit from the boiler, the remaining dust from the flues gases is removed in a bag-house filter. At the same time, the remaining gaseous pollutants and mercury are absorbed prior to gas release to atmosphere. Odours are minimised by keeping the buildings under a slight negative pressure, with combustion air drawn from the buildings/process plant.

B5.8.2 Waste Types Treated

Table 5.11 presents those waste types that are and are not accepted by pyrolysis plant.

Table 5.11 Waste Types Treated by Pyrolysis Plant

Waste accepted by plant	Waste not accepted by plant
Green waste	Ferrous
Paper/card	Non-ferrous
MSW	Glass
Similar commercial	Plastics*
Similar industrial	
Clinical	
Hazardous (only if it has organic content)	
Kitchen waste	
Textiles	
Wood	

*not treated at reference plants but feasible for the technology to handle

B5.8.3

Technology Analysis

<p>Strengths</p> <p>The technology has the potential to produce recycled products such as activated carbon, carbon black from the char or lightweight aggregates from the ash. The reference plant is understood to be the first UK advanced thermal treatment plant eligible for ROCs. The plant accepts a wide range of waste and can be built at small scales, thus enabling local responsibility and fulfilling the proximity principle.</p>	<p>Weaknesses</p> <p>Medium to high costs associated with constructing and operating the plant. These are exacerbated by the perceived new technology risk. Plant capacity can be dramatically reduced if feed material gets wetter than plant is designed to accept. A use or market must be found for the char, which is potentially a special waste.</p>
<p>Opportunities</p> <p>Small scale and CHP gives opportunity for very high thermal efficiencies. Multiple waste capability gives opportunity for establishing a 'total local waste solution'.</p>	<p>Threats</p> <p>Could falsely be labelled as incineration in disguise.</p>

B5.8.4

Costs and Revenues

Table 5.12 provides indicative costs and benefits of the pyrolysis process. The figures below show variation, which depends on the particular process and technology provider.

Table 5.12 Indicative Costs and Benefits of Pyrolysis

Cost/Benefit	Description	Single cost/benefit (£)	Cost/Benefit (£ per tonne)
Capital costs	11.7 ktpa	2000	
	35 ktpa	17	
	60 ktpa	21.95	
Operating costs	Staff, raw materials, maintenance etc		37.00 or 61.29 or 75.90
Revenue	Electricity (incl. ROCs)		8.30 or 25.65 or 101.63
Net cost			40.74 or 50.25

A plant of 60 ktpa capacity is estimated to require just under 1 ha of land. Similarly, a plant of 30 ktpa capacity would require slightly less than 0.5 ha. The reference plant with a capacity of 35 ktpa would need 4 ha.

B5.9 *INCINERATION WITH ENERGY RECOVERY*

B5.9.1 *The Process*

Incineration or thermal treatment is a general term for heat-based waste treatment technologies. There are a number of energy from waste (EfW) technologies available. These methods include grate incineration, fluidised bed incineration, pyrolysis and gasification. All of these technologies are designed to generate power, and often heat, through the combustion of waste or a synthetic fuel. *'Incineration is the controlled burning of waste, either to reduce its volume, or its toxicity. Energy recovery from incineration can be made by utilising the calorific value of paper, plastic, etc to produce heat or power. Current flue-gas emission standards are very high. Ash residues still tend to be disposed of to landfill.'*⁽¹⁾

Incineration plant generally comprise a reception hall and furnace/boilers, - each with a gas cleaning plant, but sharing some common plant items. Electricity is generated on a single steam turbine generator set.

B5.9.2 *Waste Types Treated*

Table 5.13 presents those waste types that are and are not accepted by incineration plant.

Table 5.13 *Waste Types Treated by Incineration Plant*

Waste accepted by plant	Waste not accepted by plant*
MSW	Green waste
Similar commercial	Paper/card
Similar industrial	Clinical
	Hazardous
	Kitchen waste
	Textiles
	Wood
	Ferrous
	Non-ferrous
	Glass
	Plastics

*all wastes apart from ferrous, non-ferrous and glass are feasible for the technology to handle

(1) Waste Strategy 2000: Part 2. DETR. May 2000. Annex D. p.197.

B5.9.3

Technology Analysis

<p>Strengths</p> <p>The process is mechanically simple, can accept a wide variety of waste, and very well established within the UK. Emissions standards are very tightly controlled by legislation and the Environment Agency. There is the potential to recover energy, displacing the use of fossil fuels.</p>	<p>Weaknesses</p> <p>Incineration plant, particularly fluidised bed incineration, work better with a source separated waste stream, and a steady mix of waste to ensure a constant temperature. Process can struggle with large quantities of green wastes, eg grass cuttings. If feed material is too wet, then overall temperature may be reduced, resulting in low thermal efficiencies.</p>
<p>Opportunities</p> <p>Process has potential to burn a very broad range of wastes and to effectively manage a substantial quantity of waste – there is little residual material reliant on secondary markets. Incineration plant may be adapted to accept RDF from MBT facilities.</p>	<p>Threats</p> <p>Incineration has a poor public image.</p>

B5.9.4

Costs and Revenues

Table 5.14 provides indicative costs and benefits of incineration. The figures below show variation, which depends on the particular process and technology provider.

Table 5.14 Indicative Costs and Benefits of Incineration

Cost/Benefit	Description	Single cost/benefit (£000)	Cost/Benefit (£ per tonne)
Capital costs	136 ktpa*	34 - 35	
	265 ktpa plant**	51 000	
Operating costs	total cost/te input		41.19 or 53 - 58
Revenue	Various		25.81
Net cost			15.37 or 53 - 58

* Reference plant uses moving grate technology, **Reference plant is mass burn incinerator

The reference plant with a capacity of 136 ktpa has a land take requirement of 2 ha of which 0.9 ha are for the EfW plant footprint.

B5.10 **AUTOCLAVE**

B5.10.1 ***The Process*** ⁽¹⁾

Autoclaving is a process which uses steam technology to sterilise waste into clean items suitable for recycling, biomass fibre that may be put to different uses and residual waste for landfill. The process cleans metals and aids separation of plastics and heavy fractions to assist recycling. The fibre material may find use as a secondary material, particularly in building products and packaging, or may be used as a fuel for co-firing. The fibre could also be composted to use in remediation applications.

MSW is separated into approximately 60% recyclable homogenous organic fibre and 20% secondary recyclates (eg metals and plastics), leaving around 20% of residual waste for landfill.

B5.10.2 ***Waste Types Treated***

Table 5.15 presents those waste types that are and are not accepted by autoclave plant.

Table 5.15 ***Waste Types Treated by Autoclave Plant***

Waste accepted by plant	Waste not accepted by plant
Green waste	Hazardous
Paper/card	
MSW	
Similar commercial	
Similar industrial	
Kitchen waste	
Ferrous	
Non-ferrous	
Clinical (certain grades)	
Textiles	
Wood	
Glass	
Plastics	

(1) Information regarding the autoclave process has been sourced from information provided by Estech Europe Limited, and visits to their trial plant.

B5.10.3 *Technology Analysis*

<p>Strengths</p> <p>The autoclave plant can be accommodated within building generic to an urban industrial estate and does not require a significant stack to release gas emissions. As such, the process has minimal visual impacts.</p>	<p>Weaknesses</p> <p>Markets are not established for the fibre resulting from the autoclave process. If it is not reused or co-combusted, it would have to be landfilled and so fail to contribute usefully to BMW diversionary targets.</p>
<p>Opportunities</p> <p>Recent experience reveals that the autoclave process is more publicly acceptable than other waste management technologies. If markets can be found for the fibre, then the process can make a significant contribution to the recycling and landfill diversion targets; with the plant receiving public support there is a real opportunity to get a number of facilities actually built and operating.</p>	<p>Threats</p> <p>The necessary markets for the fibre may not materialise, and as such the autoclave technology may not achieve its potential in becoming the preferred technology for waste management.</p>

B5.10.4 *Costs and Revenues*

Table 5.14 provides indicative costs and benefits of autoclaving.

Table 5.14 *Indicative Costs and Benefits of Autoclaving*

Cost/Benefit	Description	Single cost/benefit (£000)	Cost/Benefit (£ per tonne)
Capital costs	0.5 ktpa	0.6	
	100 ktpa	10	
	500 ktpa	12	
Operating costs	Tota cost		17 - 45
Revenue	Various		unknown
Net cost			unknown

A reference 100 ktpa plant requires 3 ha of land (plus support roads, offices, etc).

This baseline assessment provides a background for the first phase of Strategy consultation with waste collection authority focus groups and community panels. The consultation seeks to inform the groups as to *'Where we are now'*, and to elicit input on the main elements of *'Where we want to be and when'*.

The groups will be asked to consider the background material presented and provide comment, so that amendments can be made prior to inclusion in the Strategy. The assessment will then be used to develop and evaluate a practicable series of waste management options that reflect the views and aspirations of the community and the needs of the Authority and its constituent Boroughs.

Annex A

Municipal Solid Waste Arisings

The following tables show a breakdown of municipal solid waste (MSW) arisings for each of WLWA's constituent Boroughs.

Table 1 *Brent MSW*

Source Type	2000/01	2001/02	2002/03	2003/04	2004/05	Change across whole period
Household Collect Waste	93,751	100,015	96,386	100,973	102,737	8,986
CA Sites and Bring	11,930	11,785	16,356	15,558	10,651	-1,279
Street Cleansing and Litter	7,223	4,577	4,578	5,800	4,019	-3,204
Special (bulky) Collections	7	0	462	0	0	-7
Clinical Waste	89	88	88	88	0	-89
Total Household Waste	113,000	116,465	117,870	122,419	117,407	4,407
	<i>% change</i>	3%	1%	4%	-4%	3.90%
Commercial Waste	2	0	0	0	0	-2
CA Weighed Trade Waste	0	0	0	0	0	0
CA 20% Trade Assumption	2,400	2,400	3,400	3,135	1,472	-928
Fly tips	0	0	3,361	3,850	4,327	4,327
Municipal Buildings	0	0	0	0	0	0
Other	4482	5416	7474	7005	7893	3,411
Total MSW	119,884	124,281	132,105	136,409	131,099	11,215
	<i>% change</i>	4%	6%	3%	-4%	9.35%

Table 2 *Ealing MSW*

Source Type	2000/01	2001/02	2002/03	2003/04	2004/05	Change across whole period
Household Collect Waste	91,087	84,293	95,930	105,060	102,506	11,419
CA Sites and Bring	45,289	51,762	47,012	36,900	31,718	-13,571
Street Cleansing and Litter	7,601	8,431	8,990	7,041	8,095	494
Special (bulky) Collections	1,708	1,767	2,444	2,444	1,781	73
Clinical Waste	288	230	250	250	0	-288
Total Household Waste	145,973	146,483	154,626	151,695	144,100	-1,873
	<i>% change</i>	0%	6%	-2%	-5%	-1.28%
Commercial Waste	12,955	18,206	11,781	5,544	6,981	-5,974
CA Weighed Trade Waste	10,094	10,342	10,247	3,137	3,029	-7,065
CA 20% Trade Assumption	9,823	11,519	10,197	7,860	5,793	-4,030
Fly tips	0	0	0	0	0	0
Municipal Buildings	1,870	2,471	1,997	513	3,713	1,843
Other	0	0	0	0	0	0
Total MSW	180,715	189,021	188,848	168,749	163,616	-17,099
	<i>% change</i>	5%	0%	-11%	-3%	-9.46%

Table 3 *Harrow MSW*

Source Type	2000/01	2001/02	2002/03	2003/04	2004/05	Change across whole period
Household Collect Waste	71,023	70,452	72,960	74,163	78,876	7,853
CA Sites and Bring	18,602	19,904	17,407	18,183	21,506	2,904
Street Cleansing and Litter	2,101	2,618	3,776	4,000	4,000	1,899
Special (bulky) Collections	666	920	930	930	1,000	334
Clinical Waste	70	70	67	70	100	30
Total Household Waste	92,462	93,964	95,140	97,346	105,482	13,020
	<i>% change</i>	2%	1%	2%	8%	14.08%
Commercial Waste	8,000	8,000	8,000	8,000	8,000	0
CA Weighed Trade Waste	6,310	6,659	6,189	6,386	4,509	-1,801
CA 20% Trade Assumption	3,951	4,370	3,726	3,413	4,198	247
Fly tips	0	0	0	100	0	0
Municipal Buildings	1,360	0	0	0	0	-1,360
Other	0	0	507	0	0	0
Total MSW	112,083	112,993	113,562	115,245	122,189	10,106
	<i>% change</i>	1%	1%	1%	6%	9.02%

Table 4 *Hillingdon MSW*

Source Type	2000/01	2001/02	2002/03	2003/04	2004/05	Change across whole period
Household Collect Waste	76,740	71,161	70,490	78,855	80,270	3,530
CA Sites and Bring	47,671	52,486	50,922	48,433	44,706	-2,965
Street Cleansing and Litter	5,800	5,800	5,800	5,800	5,800	0
Special (bulky) Collections	0	0	0	0	0	0
Clinical Waste	0	0	0	0	0	0
Total Household Waste	130,211	129,447	127,212	133,088	130,776	565
	<i>% change</i>	-1%	-2%	5%	-2%	0.43%
Commercial Waste	7,166	6,784	6,484	6,423	6,300	-866
CA Weighed Trade Waste	9,744	10,643	10,738	12,811	12,610	2,866
CA 20% Trade Assumption	9,076	9,425	8,423	8,295	7,032	-2,044
Fly tips	0	0	0	0	0	0
Municipal Buildings	0	0	0	0	0	0
Other	0	0	0	0	0	0
Total MSW	156,197	156,263	152,857	160,617	156,718	521
	<i>% change</i>	0%	-2%	5%	-2%	0.33%

Table 5 *Hounslow MSW*

Source Type	2000/01	2001/02	2002/03	2003/04	2004/05	Change across whole period
Household Collect Waste	73,311	71,561	69,440	68,557	72,099	-1,212
CA Sites and Bring	29,384	26,467	27,392	29,914	27,957	-1,427
Street Cleansing and Litter	5,399	5,225	5,855	6,149	6,491	1,092
Special (bulky) Collections	0	0	0	0	0	0
Clinical Waste	92	72	75	36	30	-62
Total Household Waste	108,186	103,325	102,762	104,656	106,577	-1,609
	<i>% change</i>	-4%	-1%	2%	2%	-1.49%
Commercial Waste	8,672	12,770	14,280	14,495	11,165	2,493
CA Weighed Trade Waste	9,693	15,684	19,730	19,754	16,897	7,204
CA 20% Trade Assumption	5,601	5,352	5,161	6,045	5,202	-399
Fly tips	0	0	0	0	0	0
Municipal Buildings	5,805	2,473	190	53	74	-5,731
Other	0	0	0	0	0	0
Total MSW	137,957	139,604	142,123	145,003	139,915	1,958
	<i>% change</i>	1%	2%	2%	-4%	1.42%

Table 6 *Richmond MSW*

Source Type	2000/01	2001/02	2002/03	2003/04	2004/05	Change across whole period
Household Collect Waste	62,392	62,649	62,739	64,092	63,631	1,239
CA Sites and Bring	18,665	20,705	20,581	21,117	18,753	88
Street Cleansing and Litter	3,172	3,871	4,125	4,125	3,853	681
Special (bulky) Collections	0	0	0	0	0	0
Clinical Waste	100	100	0	0	100	0
Total Household Waste	84,329	87,325	87,445	89,334	86,337	2,008
	<i>% change</i>	4%	0%	2%	-3%	2.38%
Commercial Waste	13,576	13,703	13,339	13,339	14,449	873
CA Weighed Trade Waste	10,868	12,086	12,000	12,000	1,650	-9,218
CA 20% Trade Assumption	2,308	2,727	2,123	2,200	1,650	-658
Fly tips	0	0	0	0	0	0
Municipal Buildings	2,046	13,602	7,888	9,000	8,252	6,206
Other	0	0	0	0	0	0
Total MSW	113,127	129,443	122,795	125,873	112,338	-789
	<i>% change</i>	14%	-5%	3%	-11%	-0.70%

Table 7

WLWA Total MSW

Source Type	2000/01	2001/02	2002/03	2003/04	2004/05	Change across whole period
Household Collect Waste	468,304	460,131	467,945	491,700	500,119	31,815
CA Sites and Bring	171,541	183,109	179,670	170,104	155,291	-16,250
Street Cleansing and Litter	31,296	30,522	33,124	32,915	32,258	962
Special (bulky) Collections	2,381	2,687	3,836	3,374	2,781	400
Clinical Waste	639	560	480	444	230	-409
Total Household Waste	674,161	677,009	685,055	698,537	690,679	16,518
	<i>% change</i>	0%	1%	2%	-1%	2.45%
Commercial Waste	50,371	59,427	53,884	47,801	46,895	-3,476
CA Weighed Trade Waste	46,709	55,414	58,904	54,088	38,695	-8,014
Fly tips	0	0	3,361	3,950	4,327	4,327
Municipal Buildings	11,081	18,546	10,075	9,566	12,039	958
Other	4,482	16,074	7,981	7,005	7,893	3,411
Total MSW	819,963	851,605	852,290	851,896	825,875	5,912
	<i>% change</i>	4%	0%	0%	-3%	0.72%

Annex B

Waste Management Services

WLWA AND CONSTITUENT BOROUGH WASTE MANAGEMENT SERVICES

The following table show the existing policies and services adopted by the six constituent Boroughs of the WLWA.

Developments that are not funded or officially adopted are shown in italics.

Domestic Refuse

	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Current Methods and Policies	Weekly Collection	Weekly Collection	Weekly Collection	Weekly Collection	Weekly Collection	Weekly Collection
	Wheeled Bins	Black sacks supplied to residents. 52 sacks per year (104 for larger families)	Wheeled Bins	Residents supply own bags	Residents supply own bags	Residents supply own bags
	Garden waste collected provided it is in the wheeled bin.	Garden waste is collected through a seasonal service – no longer allowed in black sack.	Garden waste currently collected provided it is in the wheeled bin. This policy is discontinued in areas served by the organic waste collection scheme.	Garden waste not collected	Garden waste is collected through a separate seasonal service. April to Nov. weekly. Sacks 5@ £2.50	Garden waste not collected
	Excess waste is taken	Any amount of waste collected	No excess waste	Excess waste – not applicable	Excess waste – not applicable	Excess waste – not applicable
	Assisted collections (location exemptions) given where appropriate	Assisted collections available	Assisted collections provided to people who cannot manage the system		Assisted collections available	Assisted collections available
Possible Changes			<i>Proposes to adopt weekly collections of organic waste and switch frequency for residual collections to fortnightly – possibly once kitchen waste is added to organic waste collection scheme. Autumn 2004</i>			
			<i>Will consider separate service to collect disposable nappies if it switches collection frequencies</i>			
			<i>Will seek separate treatment plant to treat nappies in collaboration with nappy industry</i>			

Organic Waste

	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Organic Waste Kerbside Collection	Separate collection of garden waste from "traditional" housing. Based on use of additional wheeled bin collection service. Currently 30,000 properties. Fortnightly service	Seasonal fortnightly borough wide green garden waste collection from biodegradable bags from June 2003. Winter appointment based collections start in December 2003.	Separate collection of kitchen vegetable, garden waste and card/cardboard etc. from "traditional" housing. Based on use of additional wheeled bin collection service. Fortnightly service	Borough wide kerbside recycling service for compostable garden waste to all applicable households in the Borough, using polypropylene sacks.	Borough-wide garden waste collection service started in June – Nov 2001. April-Nov 2002. Mid-may to mid-Nov 2003. Mid April-Mid-Nov 2004. Residents purchase special biodegradable sacks.	Borough-wide garden waste collection service started in Oct 2002.
	Expansion to 60,000 properties in April 2005. Collections to revert to weekly and to include kitchen waste and cardboard.	Fortnightly collections resume April 2003.	Residents may opt out if they compost at home but cannot use normal wheeled bin to dispose of garden waste	Fortnightly service	Weekly collection	Fortnightly service using either sacks or wheeled bins.
Cost to resident	Free Service	50 pence per bag	Free Service	Free Service	£2.50 for 5 sacks	£1 per bag
Capital Cost/hhld	£16	£xx.xx	£29.83	£2.30	£0.00	£0
Net Revenue/hhld/year	£8.60	£xx.xx	£6.67	£4.77	£0.98	£1.58
Net Revenue/tonne	£28.90	£xx.xx	£40.00	£52.50	£296.14	£411
Kg/hhld/year	300	xxx	200	91	3.31	£0.4kg
Funding/No of households	LRF funding of £600K to introduce fortnightly wheeled-bin collection and supplementary by-appointment system to 60,000 households.	<i>Part funded this year by LRF.</i> <i>Opportunities for further organic waste collections under a new integrated multi-streamed collection contract from 2005/06.</i>	LRF funding for Phase 1 (10,000 hhlds). Scheme introduced in June 2003. Further funding for Phase 2 (12,000) received in Round 7. <i>Full implementation (to 70,000 hhlds) subject to funding.</i>	88,000 households No further funding necessary	72,000 households. Part funded this year by LRF with £41k of revenue for sacks and promotions Anticipate continuance in 2004/5 on similar basis.	LRF funding for opt-in collection received and used from Oct 2002. <i>Expansion of OWL collection to 6000 households as part of LRF bid.</i> <i>Garden collection to go fortnightly, with addition of leased wheeled bin collections. (£30pa)</i>

	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Kitchen Waste	Part of WLWA trial for weekly collection of kitchen waste. (OWL Project)	Part of WLWA trial for weekly collection of kitchen waste (OWL Project)	<i>Proposes to adopt weekly collections of organic waste and switch frequency for residual collections to fortnightly – possibly once kitchen waste is added to scheme</i>	No plans to include kitchen waste.	Part of WLWA trial for weekly collection of kitchen waste (OWL Project)	Initial OWL trial for weekly collection of kitchen waste continued for 500+ h/hlds. Expansion planned to take the scheme borough wide by end Nov 2005
OWL Project	Collects Kitchen waste Weekly collection Outdoor bin/indoor kitchen caddy Free collections 4000 households 3 tonnes a week	Collects Kitchen waste Weekly collection Outdoor bin/indoor kitchen caddy Free collections 4000 households 3 tonnes a week	Collects Kitchen waste Weekly collection Outdoor bin/indoor kitchen caddy Free collections 4000 households 3 tonnes a week	Collects Kitchen waste Weekly collection Outdoor bin/indoor kitchen caddy Free collections 4000 households 3 tonnes a week	Collects Kitchen waste Weekly collection Outdoor bin/indoor kitchen caddy Free collections 4000 households 3 tonnes a week	Collects Kitchen waste Weekly collection Outdoor bin/indoor kitchen caddy Free collections 4000 households 3 tonnes a week
Compostable Parks Waste	Compostable parks waste composted at centralised parks sites for use as mulch in parks. Arisings do not enter WLWA system		Compostable parks waste is delivered to the Waste Reuse and Recycling Centre and added to the green waste stream. (Note: this does not include most grass cuttings).	Borough's parks serviced by private contractor who makes own arrangements for disposal of green waste. Arisings do not enter the WLWA system.	Compostable parks waste composted at centralised parks sites for use as mulch in parks. Arisings do not enter WLWA system	Some waste is currently composted at a site in the borough; the remainder is taken elsewhere for composting
Fruit and Vegetable Markets	All markets are mixed. Fruit and Vegetable waste not separated.		<i>No fruit and vegetable markets in the Borough.</i>	No proposals currently. Would not be looking to take on additional organic tonnage already serviced by private sector.	All markets are mixed. Fruit and Vegetable waste not separated.	No fruit and vegetable markets in the Borough
Home Composting	13,000 home composters distributed to date. Subsidised price.	7,800 home composters distributed to date. Subsidised price	12,350 home composters distributed to date. Subsidised price.	9,000 home composters distributed to date. Subsidised price.	11,368 home composters distributed to date. Subsidised price.	13,865 home composters distributed to date. Subsidised price.

Current target is 15,500 composters distributed by end of 2004/2005	A home composter sales promotion is envisaged every year	Free home composter provided to residents who would prefer to home compost when organic waste collection scheme is introduced. <i>Target to distribute home composters to 40% of hhlds with gardens by 2005=24,000.</i>	No intention to distribute any more units at this time.	Target 20% hhlds with gardens by 2005 = 14,700	Target of 55% home composting rate by 2006 – WRAP funding received Dec 04 – new scheme to commence Jan 05
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Centralised Composting

	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond	WLWA
Centralised Composting of Collected Waste	Contract with West London Composting Ltd at Harefield for the receipt and reprocessing of 12,000 tonnes of mixed organic waste per annum.	Joint WLWA contract with a private sector provider is already in place for composting of green garden waste.	Joint WLWA contract with a private sector provider is already in place for composting of green garden waste.	Joint WLWA contract with a private sector provider is already in place for composting of green garden waste.	Joint WLWA contract with a private sector provider is already in place for composting of green garden waste.	Joint WLWA contract with a private sector provider is already in place for composting of green garden waste.	<i>Green waste transfer facility provided at Transport Avenue as part of joint bid to LRF for composting of green garden waste. Waste transferred via train to WRG site at Sutton Courtenay.</i>
	Will seek to utilise WLWA transfer facilities at Transport Avenue for onward processing at WRG, Sutton Courtenay.	Keen to participate in joint green waste windrow composting contract with other authorities.	As part of Round 4 bid to LRF WLWA to tender for provision of transfer station/in-vessel system by end of 2003/4	Will be looking to this contract to meet the Borough's central composting needs to meet national and local targets.	Contract with private sector is already in place but keen to support joint green waste contract with other boroughs.	Wants to work with other WCA's and WLWA to investigate options for centralised composting	
	Wants to work with other WCA's and WLWA to investigate options for centralised composting ASAP	In vessel – pending full options appraisal by WLWA	Currently involved in negotiations, led by LB Hillingdon, for contract with new service provider for a 30,000 tonne in-vessel system to be based in Hillingdon. Wants facility to receive kitchen waste and green garden waste.	Currently negotiating new contract with new service provider for a 30,000 tonne in-vessel system to be based in the Borough. Garden waste only	In vessel – pending full options appraisal by WLWA Currently seeking additional locations for collection and reprocessing	Supports negotiations, led by LB Hillingdon, for contract with new service provider for a 30,000 tonne in-vessel system to be based in Hillingdon. Wants facility to receive kitchen waste and green garden waste.	
Sale of Waste Compost to Residents	40L compost bags sold to residents for £2.50 at Re-use and Recycling Centre		<i>Will seek to provide space within CA Site for the sale of bagged waste-derived compost to residents.</i>	Small trial previously conducted at Victoria Road. <i>Will seek to provide space at all CA Sites for the sale of bagged waste-derived compost to residents</i>		Bagged waste-derived compost sold at Reuse and Recycling Centre	Provides space at CA Site for the sale of bagged waste-derived compost to residents

Bring Systems

	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Bring Systems	60 Paperbank sites 90 Bottlebank sites 72 Textile bank sites 48 Can banks 12 Plastic banks 20 Shoe banks	38 Paperbank sites 51 Bottlebank sites 17 Textilebank sites 50 Can banks 8 Plastic banks 30 Shoe banks	38 Paperbank sites 38 Bottlebank sites 10 Textilebank sites 15 Can banks 0 Plastic banks 4 Shoe banks	59 Paperbank sites 49 Bottlebank sites 20 Textilebank sites 28 Can banks 0 Plastic banks 0 Shoe banks	33 Paperbank sites 44 Bottlebank sites 14 Textilebank sites 14 Can banks 1 Plastic banks 1 Shoe banks	95 Paperbank sites 110 Bottlebank sites 37 Textile bank sites 90 Can banks 40 Card banks 0 Plastic banks 0 Shoe banks (inc with textiles)
	Expansion of traditional paperbank system planned for March 2005.	No major expansion of traditional Bring systems envisaged.	No major expansion of traditional Bring systems envisaged.	No major expansion of traditional Bring systems envisaged.	Review of Bring systems 2004/5 to include possibility of adding plastics.	Expansion of Bring systems via 25 small metro paper banks.
Flats/Estates	Expansion to Flats/Estates commenced October 2003. 87 estates currently included. 200 estates planned by April 2005. Materials: Paper Glass (3 colours) Cans	Expansion of mini recycling centres into Flats/Estates and schools	Expansion into Flats/Estates. Trial scheme programmed for 2003/4. Based on Green Boxes and Recycling "Lockers" in communal waste areas. Funded by London Remade. Materials: Paper Glass (3 colours) Cans <i>Will consider the provision of mini recycling centres, based on 240 litre bank systems to flats.</i>	Separate proposals for Flats/Estates to be considered.	224 near entrance estate frames installed since April 2003. Further 74 to be installed by April 2004. With LRF funding "Drawer System" for low-rise Flats. 103 sites identified, to be installed by April 2005 Materials (Estate Frames): Paper Glass (3 colours) Cans, aerosols Foil Materials ("Drawer System"): Paper Glass (3 colours)	200 estates sites <i>Further expansion dependent on LRF bid Round 8</i>

Cans, aerosols

Foil

Card

Yellow Pages

Household batteries

textiles

Kerbside Systems

	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Multi-material Kerbside Collections (MMKC)	Green Box scheme serves 78,000 hhlds	Green Box scheme serves 93,500 hhlds	Green Box scheme serves 72,000 hhlds	Clear sack scheme serves 80,000 hhlds.	Green Box scheme serves 73,663 hhlds	Black Box scheme serves 60,000 hhlds
	Weekly collection	Weekly collection	Fortnightly collection	Fortnightly collection	Weekly collection	Weekly collection
	Sorted at Kerbside	Sorted at Kerbside	Sorted at Kerbside	Sorted at materials recycling facility (MRF)	Sorted at Kerbside	Sorted at Kerbside
	No further major expansion planned	No further major expansion planned	No further major expansion planned	Expansion of MMKC to 100,000 properties. (i.e. flats and estates)	Expansion to all suitable areas planned	Possible expansion to include other materials in 2006 (depending on costs)
	News and Pamphlets Glass Cans Aluminium Foil Clothes/Textiles Yellow Pages All batteries	News and Pamphlets Glass Cans Aluminium Foil Clothes/Textiles Yellow Pages All batteries	News and Pamphlets Glass Cans Aluminium Foil Clothes/Textiles Small WEEE	News and Pamphlets Cardboard Plastic bottles Cans Aluminium Foil	News and Pamphlets Glass Cans/Aerosols Aluminium Foil Clothes/Textiles Yellow Pages Cardboard Engine Oil H'hold & car batteries Textiles, shoes	News and Pamphlets Glass Cans Aluminium Foil Clothes/Textiles Yellow Pages
MMKC developments	Two additional officers recruited to increase the performance of the existing scheme.	Current contract expires late 2004.	No proposals to collect other materials Two Community recycling Officers employed to Increase the performance of the existing scheme (LTCS funded)	<i>Will not be implementing any incentive scheme for kerbside recycling. Hillingdon sees this as sending out the wrong message and runs contrary to the change in thinking that is needed from the general public. This point has been made in all Borough responses to the Mayor's draft strategies.</i>	Increase performance of existing scheme through participation campaigns. LRF funding enabled door stepping of 48,000 h'holds. £20k spent with Waste Watch to develop Communication Strategy.	Have introduced "Lucky box scheme to encourage participation, in partnership with Alcan

	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
MMKC developments	No incentive scheme planned.	Increase the performance of the existing scheme	<i>Will consider introducing incentive schemes to encourage participation.</i> <i>Will introduce barcode reading for Green Boxes put out for collection.</i> <i>Will investigate a weekly draw for people participating in the scheme, with a £50 prize.</i>		Further funding sought to canvass 73,000 and for community recycling Officer to access hard to reach communities. LRF funded hybrid system roll out for small blocks across borough. 103 sites, 2500 properties, to be serviced by existing MMKC vehicle	

Civic Amenity Sites

	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Civic Amenity Sites - Current Position	<p>New Twyford Re-use and Recycling Centre opened July 2004</p> <p>Facilities to recycle:- News and Pamphlets Glass Cans Aluminium Foil Clothes/Textiles Green garden WEEE Cardboard Engine Oil Car Batteries. Timber Scrap Metal. Fluorescent Tubes Fridges</p> <p>Improve facilities at WARCs and 3 additional staff employed in 2003 to assist public to segregate waste. Site Manager for Greenford WARC planned.</p> <p>Retail of: Compost bins Compost</p>	<p>Facilities to recycle:- News and Pamphlets Glass Cans Aluminium Foil Clothes/Textiles Green garden WEEE Cardboard Engine Oil Car Batteries. Timber Scrap Metal. Fluorescent Tubes Fridges</p> <p>Successful bid submitted to LRF to remodel site as Waste Reuse and Recycling Centre. Garden waste and cardboard added in 2003/4.</p> <p>Divert un-segregated waste to a dirty MRF to recover C&D waste and extract additional materials for recycling and composting. (W/I W/A contract) Aim to achieve overall recycling and composting rate of 50% by 2005.</p>	<p>Facilities to recycle:- News and Pamphlets Glass Cans Aluminium Foil Clothes/Textiles Green garden WEEE Cardboard Engine Oil Car Batteries. Timber Scrap Metal. Fluorescent Tubes Fridges</p> <p>Successful bid submitted to LRF to remodel site as Waste Reuse and Recycling Centre. Garden waste and cardboard added in 2003/4.</p> <p>Divert un-segregated waste to a dirty MRF to recover C&D waste and extract additional materials for recycling and composting. (W/I W/A contract) Aim to achieve overall recycling and composting rate of 50% by 2005.</p>	<p>Facilities to recycle:- News and Pamphlets Glass Cans Clothes/Textiles Green garden WEEE Cardboard Engine Oil Car Batteries. Timber Scrap Metal. Fluorescent Tubes Fridges</p> <p>Development of all CA sites in the Borough in line with Hillingdon's Waste Strategy.</p> <p><i>Looking for future LRF-type funding to undertake a complete re-build of the New Years Green Lane site in Harefield.</i></p>	<p>Facilities to recycle:- News and Pamphlets Glass Cans Aluminium Foil Clothes/Textiles Green garden WEEE Cardboard Engine Oil Car Batteries Timber Scrap Metal. Fluorescent Tubes Fridges Books</p> <p>Site recently rebuilt and redeveloped to encourage recycling.</p> <p>Trade and residents now tip separately.</p> <p>With support from LRF, Site being redeveloped further to assist separation, reuse, recycling of both household and trade</p>	<p>Facilities to recycle:- News and Pamphlets Glass Cans Aluminium Foil Clothes/Textiles Green garden WEEE Cardboard Engine Oil Car Batteries. Timber Scrap Metal. Fluorescent Tubes Rubble Fridges</p> <p>Re-launched as a Reuse and Recycling Centre</p> <p>Current CA recycling rate 26%</p>

	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Sale of Waste Derived Compost to Residents	40L compost bags sold to residents for £2.50 at R-use and Recycling Centre		<p><i>Will seek to provide space within CA Site for the sale of bagged waste-derived compost to residents.</i></p> <p><i>Will promote sale of waste-derived compost at Garden centres etc.</i></p> <p><i>Will consider delivery of waste-derived compost to residents</i></p>	Small trial previously conducted at Victoria Road.	Compost from WRG sold at CA sites at £1.50 for 70 litres	Provides space at CA Site for the sale of bagged waste-derived compost to residents
Admission Policy	<p>Free access for residents, residents from other WLWA authorities or out of WLWA areas for household waste.</p> <p>Vans not admitted.</p>	<p>Free access for residents, residents from other WLWA authorities or out of WLWA areas for household waste.</p> <p>Height Barrier.</p> <p>All vans must go over weighbridge and have contents checked</p> <p>Special free access account available to Ealing residents using a commercial vehicle to transport household waste with a 1.5 tonne annual limit.</p>	<p>Free access for residents, residents from other WLWA authorities or out of WLWA areas for household waste.</p> <p>Height Barrier.</p> <p>All vans must go over weighbridge and have contents checked</p>	<p>Free access for residents, residents from other WLWA authorities or out of WLWA areas for household waste.</p> <p>Height Barrier.</p> <p>All vans must go over weighbridge and have contents checked</p> <p>Looking to test automatic barrier to “catch” Out of WLWA area people.</p>	<p>Free access for residents, residents from other WLWA authorities or out of WLWA areas for household waste.</p> <p>Height Barrier.</p> <p>All vans and vehicles with trailers must go over weighbridge and have contents checked</p>	<p>Free access for residents, residents from other WLWA authorities or out of WLWA areas for household waste.</p> <p>All vans must go over weighbridge and have contents checked</p>

	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Trade Waste	Do not accept trade waste.	<p><i>Charge for 2004/5:</i> <i>Non-recyclable</i> <i>£70 /tonne</i> <i>£15 minimum</i> <i>Recyclable:</i> <i>£50 /tonne</i></p> <p><i>Charge for 2005/6:</i> <i>Non-recyclable</i> <i>£80 /tonne</i> <i>£20 minimum</i> <i>Recyclable:</i> <i>£50 /tonne</i> <i>£10 minimum</i></p> <p>Commercial waste consisting of 100% recyclable material attracts a discount equivalent to landfill tax.</p>	<p><i>Charge for 2004/5:</i> <i>Non-recyclable</i> <i>£70 /tonne</i> <i>£15 minimum</i> <i>Recyclable:</i> <i>£50 /tonne</i></p> <p><i>Charge for 2005/6:</i> <i>Non-recyclable</i> <i>£80 /tonne</i> <i>£20 minimum</i> <i>Recyclable:</i> <i>£50 /tonne</i> <i>£10 minimum</i></p> <p>Commercial waste consisting of 100% scrap metal is accepted free of charge. No other discounts apply.</p>	<p><i>Charge for 2004/5:</i> <i>Non-recyclable</i> <i>£70 /tonne</i> <i>£15 minimum</i> <i>Recyclable: No discounts.</i></p> <p><i>Charge for 2005/6:</i> <i>Non-recyclable</i> <i>£80 /tonne</i> <i>£20 minimum</i> <i>Recyclable: No discounts.</i></p> <p><i>Commercial waste consisting of 100% recyclable material : No discounts.</i></p>	<p><i>Charge for 2004/5:</i> <i>Non-recyclable</i> <i>£70 /tonne</i> <i>£15 minimum</i> <i>Recyclable:</i> <i>£50 /tonne</i></p> <p><i>Charge for 2005/6:</i> <i>Non-recyclable</i> <i>£80 /tonne</i> <i>£20 minimum</i> <i>Recyclable:</i> <i>£50 /tonne</i> <i>£10 minimum</i></p> <p><i>Commercial waste consisting of 100% recyclable material attracts a discount equivalent to landfill tax.</i></p>	<p><i>Charge for 2004/5:</i> <i>Non-recyclable</i> <i>£70 /tonne</i> <i>£15 minimum</i> <i>Recyclable:</i> <i>£50 /tonne</i></p> <p><i>Charge for 2005/6:</i> <i>Non-recyclable</i> <i>£80 /tonne</i> <i>£20 minimum</i> <i>Recyclable:</i> <i>£50 /tonne</i> <i>£10 minimum</i></p> <p>Commercial waste consisting of 100% recyclable material attracts a discount equivalent to landfill tax.</p>
		Does not reimburse WLWA for disposal costs.	<p>Does not reimburse WLWA for disposal costs.</p> <p><i>Undertakes to fully recharge waste disposal costs to commercial customers using its disposal services</i></p> <p><i>Willing to consider reimbursement of disposal costs to WLWA</i></p>	<p>Does not reimburse WLWA for disposal costs.</p> <p><i>Looking to terminate all trade waste acceptance at borough sites as part of moves to comply with the Landfill Directive.</i> <i>(Subject to cross-WLWA support and action by all other Boroughs).</i></p>	Does not reimburse WLWA for disposal costs.	Does not reimburse WLWA for disposal costs.

Special Collections

	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Charging Policy	Each household is allowed up to 3 free collections per annum. Each collection can comprise up to 5 items	£5 charge for up to 8 items. Quotes available for larger amounts	Minimum charge £52 (per 10 mins) £20 charge for recyclables (including fridges and freezers)	£12 charge for up to four items or 12 bags. Garden waste no longer accepted for special collections due to new kerbside recycling service	Minimum charge £23.70 (per 15 mins)	£25 charge for up to five items. Additional items £3.00 each
Free Collections	N/A	Free collections of fridges and freezers	Free collections of infested carpets	Free collections of fridges and freezers	Free collection of white goods	£20 charge for fridge freezer
Comcession Policy	N/A	The £5 for 8 items charge is a subsidised rate for all residents	No official policy	Free service to OAPs and disabled – 4 items or 6 bags	Most indoor items collected free from OAP or Registered Disabled	OAPs free collection up to four times a year
Contractor/In House	Contractor	Contractor	In house	In house	In house	In house
Collection Vehicle	RCV/Flatbed	Flatbed	Caged Tipper	Caged Tipper	RCV/Flatbed	RCV/Flatbed
Response Time	7 days	10 calendar days	7 days	2.5 weeks	2 weeks	2 weeks
Annual Number of Collections	10,000	xx,000	3,6000	10,000	2,300	9,500
Change Being Considered to Charging Policy	No changes proposed	No changes proposed		No changes proposed	Service subject to review 2004/05	No changes proposed
Other Changes?			Wants to investigate recycling or reuse scheme for bulky items – working with LCRN			Working with contractors, Cleanaway, to investigate recycling and re-use of bulky items

Household Hazardous Waste/Clinical Waste/Waste Electronic and Electrical Equipment (WEEE)

	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Household Hazardous Waste	Part of London Wide scheme (administered by City of London) for collections from residents	Part of London Wide scheme (administered by City of London) for collections from residents	Part of London Wide scheme (administered by City of London) for collections from residents	Uses Grundons for ad hoc collections of clinical and other hazardous waste from households.	Part of London Wide scheme (administered by City of London) for collections from residents	Part of London Wide scheme (administered by City of London) for collections from residents
	Currently has facilities for the recovery of engine oil, car batteries and fluorescent tubes at its CA Site	Currently has facilities for the recovery of paint, oil and some batteries at its Waste Reuse and Recycling Centres.	Currently has facilities for the recovery of oil and car batteries at its Waste Reuse and Recycling Centre	CA Sites provide facilities for car batteries, oil and asbestos (Victoria Rd. only).	Currently has facilities for the recovery of oil and car batteries at its CA Site.	Currently has facilities for the recovery of paint, engine oil, car batteries and fluorescent tubes at its CA Site
	MMKC collects all batteries from households on the scheme	MMKC collects all batteries from households on the scheme	No proposals for additional facilities at present	No proposals for additional facilities at present	Proposed to add paint to scheme.	
	Also has a facility for the recovery of engine oil via the Green Box Scheme.		<i>Will consider adding fluorescent tube facility at CA Site.</i>			
Clinical Waste	Free clinical waste collections from households and commercial collections from nursing homes etc.	Free clinical waste collections from households and commercial collections from surgeries and small businesses etc.	Free clinical waste collections from households and commercial collections from nursing homes etc.	Free clinical waste collections from households and commercial collections from nursing homes etc.	Free clinical waste collections from households and commercial collections from nursing homes etc.	
	Waste taken to Edmonton Incinerator	Waste taken to Northwick Park hospital	Waste taken to Grundons at Colnbrook.	Waste taken to Grundons at Colnbrook.	Waste taken to Grundons at Colnbrook	

[illegible]

Abandoned Vehicles

[illegible]

Annex C

Management routes for recyclable materials

Table 1 *Management routes for recycled materials collected by Borough*

Recyclable Materials	Richmond upon Thames
Aluminium Cans	Alcan in Warrington
Aluminium Foil	Alcan in Warrington
Batteries (cell and car)	EWM, London
Cardboard	Severnside Recycling, Maidenhead
Construction Waste	Day's Aggregates
Electrical Items	EWM, London
Glass Colour mixed	British Glass, Harlow or Faversham
Green Waste	EQ in St Albans and WRG in Oxfordshire
Oil	OSS Group
Paper	Cheshire Recycling Ltd.
Scrap Metal	EWM, London
Steel Cans	Corus at Canning Town, East London
Textiles	LM Barry, London
White Goods	WLWA, Brentford
Wood	Wood Waste Services, St Albans

Appendix C

Review of Regional and Local Policies

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The West London Waste Authorities must have regard to the Mayor's Municipal Waste Management Strategy in preparing their waste strategy. *Table C1.1* sets out how West London's Strategy addresses these proposals.

Table C1.1 *Summary of West London's Response to The Mayor's Policies and Proposals*

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Framework for policies and proposals							
1	To exceed the recycling & composting targets for households waste as set out by the Government in the Best Value Performance Standards for waste authorities in London and, as far as is possible, achieve the recovery targets for municipal waste through waste reduction, reuse, recycling and composting.	Brent have services in place and plan to hit/exceed 2005/06 targets	Ealing will not hit/exceed 2005/06 targets (15.5% currently, 20% target)	Harrow have services in place and plan to hit/exceed 2005/06 targets	Hillingdon has already hit 2005/06 targets	Hounslow will not hit/exceed 2005/06 targets (17% currently, 30% target)	Richmond is hoping to expand its services to try best to meet their 30% target. Looking for funding from Council imminently to meet this.
2	The Mayor supports the proposal in the Government's Strategy Unit Report to increase the recycling targets for households waste and will seek to persuade the government to put in place the legislative changes, fiscal framework and other measures necessary, to enable the achievement of and setting of targets for rates of recycling and composting of 50% by 2010 and 60% by 2015. The Mayor fully supports the House of Commons Select committee on the Environment, Transport and Regional Affairs recommendations on household recycling targets.	Brent is working towards a target of 40% by 2010, and 50% by 2020	Ealing is working towards a target of 40% by 2010, and 50% by 2020	Harrow is working towards a target of 40% by 2010, and 50% by 2020.	Hillingdon is working towards a target of 40% by 2010, and 50% by 2020	Hounslow is working towards a target of 40% by 2010, and 50% by 2020	Richmond is working towards a target of 40% by 2010, and 50% by 2020
		The WLWA Joint Strategy has been formulated on the basis of the existing legislative and fiscal framework. As this is changed by the Government in line with the recommendations of the Strategy Unit and the Select Committee, the seven authorities will revise and amend their Strategy to increase the proposed levels of recycling and composting					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
3	The Mayor will only accept household recycling and composting rates based on the relevant guidance for calculating the statutory Best Value Performance Indicators BVPI 82a and 82b.	WLWA and constituent Boroughs have a thorough data management system in place, which complies with Audit Commission guidance.					
4	Waste authorities should return annual data on waste to the Mayor to collate for London.	WLWA and the six constituent authorities will continue to submit annual data returns to the Mayor					
5	The Mayor will continue to work with DEFRA, CIPFA and other authorities towards the joint development of an electronic survey format for the return of data, to reduce delays, data entry errors, and repetition in the collection of information	WLWA and the constituent authorities would welcome the development of a user-friendly electronic survey format, which would meet the Mayor's aims					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
6,7 & 8	<p>The Mayor will investigate, with London Waste Authorities, the key factors influencing variations in waste arisings, across different parts of London.</p> <p>The Mayor will work with the Environment agency and other partners to undertake a detailed study of the composition of London's municipal waste, applying the same methodology as the National Household Waste Analysis Programme to enable comparison.</p> <p>When a reliable estimate of London's Waste composition exists, further work will be undertaken to establish the influencing factors on composition and recyclability. This will enable the projection of changes to composition and recyclability in the future, for the strategic planning of sustainable waste management</p>	<p>WLWA and the constituent authorities have waste composition data, which they can contribute to the Mayor's study. They will also cooperate with any detailed study proposed by the Mayor.</p>					
9	Where appropriate the Mayor will use the power of direction in relation to waste contracts to enforce the consideration of Best Practicable Environmental Option.	<p>WLWA and the constituent authorities fully support the use of Best Practicable Environmental Option in the development of waste contracts and will support the Mayor's intention to enforce the consideration of Best Practicable Environmental Option, where appropriate.</p>					
10	The Mayor will work with London's waste authorities on new contracts, to ensure options as high up the waste hierarchy as possible are implemented	<p>WLWA and the constituent authorities will prioritise options as high up the waste hierarchy as practicable and economically possible and will work with the Mayor to achieve this</p>					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
11	The Mayor will require waste authorities to thoroughly explore all partnership and co-operative working opportunities to ensure that the Government's guidelines on Best Value are adopted.	WLWA and constituent authorities have a strong partnership. There are also strong relationships with contractors and stakeholders. All the authorities work within Government guidelines on Best Value					
12	The Mayor will initially seek to get a voluntary change from the default basis to a tonnage-based levy for the joint statutory waste disposal authorities to recover the cost of disposal from the constituent local authorities in London, including any transitional arrangements to alleviate problems, which may occur because of the changeover. However, if no agreement can be reached, the Mayor will seek to persuade the Government for a change in legislation to change the default system to a per tonne basis.	WLWA and the constituent authorities recognise that the existing default basis for meeting the costs of waste disposal does not reflect fairly the cost of disposing the waste delivered for disposal by each authority. The authorities fully support a change from the current levy system to one based on tonnage delivered. This objective will be pursued in any future discussion with DEFRA or the Mayor. The authorities recognise that any change will impose significant additional costs on some Boroughs and therefore will seek transitional arrangements.					
13	The Mayor will seek to persuade the Government to ensure that effective fiscal instruments are in place for the achievement of waste and high levels of recycling in London	WLWA and the six authorities support the Mayor in these endeavours. As shown in their response to Policy 2, these changes would be necessary to achieve higher recycling levels					
14	Mayor will develop a 'Waste Reduction and Reuse Programme for London', in partnership with relevant stakeholders, to co-ordinate, facilitate or undertake to:	WLWA and constituent authorities have a waste reduction and reuse strategy and will cooperate fully with the Mayor in developing his proposals					
14(a)	<ul style="list-style-type: none"> Produce a plan outlining the detail of the Waste Reduction and Reuse programme 	The Joint Strategy sets out the proposed actions					
14(b)	<ul style="list-style-type: none"> Research waste growth through the identification of the key influencing factors and hence identification of solutions. 	WLWA and the six authorities support the Mayor in these endeavours					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
14(c)	<ul style="list-style-type: none"> Endorse high profile “pilots” of new techniques for waste reduction 	WLWA and the six authorities support the Mayor in these endeavours					
14(d)	<ul style="list-style-type: none"> Seek to persuade the government to consider regulatory measures such as extended producer responsibility and economic instruments such as Ecotaxes 	WLWA and the six authorities support the Mayor in these endeavours					
14(e)	<ul style="list-style-type: none"> Create an environment for change through communication with consumers, retailers and manufacturers to encourage design for waste reduction 	WLWA and the six authorities support the Mayor in these endeavours					
14(f)	<ul style="list-style-type: none"> Promote waste reduction and reuse as part of a wider waste awareness campaign for London. This should link to and complement local promotion activity and educate consumers on their powers to reduce waste and influence retailers 	The six constituent authorities will promote waste reduction and reuse within their local promotion activity.					
14(g)	<ul style="list-style-type: none"> Encourage the London Development Agency to work with businesses, entrepreneurs, education and design sectors to investigate opportunities for sustainable product design. This should incorporate the concepts of using minimal resources, design for repair, reuse, upgrading, longevity and incorporating design for recycling. 	WLWA and the six authorities support the Mayor in these endeavours					
14(h)	<ul style="list-style-type: none"> Investigate opportunities to encourage repair facilities 	WLWA and the six authorities support the Mayor in these endeavours					
14(i)	<ul style="list-style-type: none"> Support the development of re-manufacturing workshops and centres for brown and white 	WLWA and the six authorities support the Mayor in these endeavours					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
	goods						
14(j)	<ul style="list-style-type: none"> Ensure effective co-ordination between the private and community sector of furniture reuse, including the establishment of a database, to match supply and demand for surplus office furniture and equipment 	WLWA and the six authorities support the Mayor in these endeavours					
14(k)	<ul style="list-style-type: none"> Develop, with partners, a London-wide scheme for the refurbishment of computer equipment to ensure affordable equipment for the voluntary and education sectors 	WLWA and the six authorities support the Mayor in these endeavours					
14(k)	<ul style="list-style-type: none"> Develop ways to measure waste reduction and reuse and look to develop targets in the future 	WLWA and the six authorities support the Mayor in these endeavours					
15	Waste authorities should undertake certain actions to impact on the production of municipal waste including:						
15(a)	<ul style="list-style-type: none"> Consideration of the provision of waste collection services in relation to potential influence on the production of waste by householders and to ensure services for reduction, reuse and recycling are as high profile as waste collection services 	Advertise repair in same way as recycling		Harrow will ensure that waste reduction, reuse and recycling is positively promoted in its publicity and education programmes and on its website.		No direct action, but on local waste action groups' agendas	Not yet discussed
15(b)	<ul style="list-style-type: none"> Vigorous promotion of waste reduction and reuse to raise awareness locally of the need and actions to be taken in order to restrain the growth of in the quantity of waste arising 			Harrow will ensure that waste reduction and reuse is promoted locally.			

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
15(c)	<ul style="list-style-type: none"> Increase the awareness of Londoners regarding waste and the impact their behaviour has, including how individual decisions affect the amount of waste, costs of waste management and hence Council Tax bills, and the actions they can take to reduce waste and increase recycling 			Harrow will use its Slash Trash campaign to ensure that its residents are aware of the issue and understand the effects of increased waste management costs on Council Tax bills			
15(d)	<ul style="list-style-type: none"> Promotion of home composting through the provision of appropriate information on how to compost, and make the benefits for the environment and making low cost compost bins and wormeries available to all households with gardens by September 2004 	Subsidise home composting. Promote with fliers, council literature etc	Subsidise home composting. Promote each year	Will continue to promote home composting by the provision of subsidised composters to residents.	Provide subsidised home composters	Hounslow focusing heavily on home composting. Provide free home composters with training. Quarterly newsletter	Provide subsidised home composters (funding from WRAP). Can also purchase from RRC
15(e)	<ul style="list-style-type: none"> Facilitation of community composting schemes, through the provision of advice, potential sharing of resources such as shredders, and the provision of space on allotments or in parks. 	No community composting initiatives have been proposed to date. Constituent authorities would support such initiatives if proposed by community groups.					
15(f)	<ul style="list-style-type: none"> Consider the reuse of wood, rubble and other materials, and promote furniture reuse. This should be done either through the direct provision of a scheme or provision of contact details of other organisations, prior to collecting bulky waste or sending it for disposal from Reuse and Recycling Centres (Civic Amenity Sites) 	Bulky collections sent to CA sites where separated for recycling	Bulky collections sent to CA sites where separated for recycling	Bulky collections sent to CA sites where separated for recycling	Will be developing schemes as part of wider CA site refurbishment	Bulky collections sent to CA sites where separated for recycling	Minimal recycling of bulky waste, but looking into developing this via a new contract
		WLWA plan to expand the recovery of material, using dirty MRFs, to all CA Site operations within the WLWA area					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
15(g)	<ul style="list-style-type: none"> Promote reusable nappies and consider supporting schemes financially through a rebate related to disposal costs 	No support for reusable nappy schemes	Statement supporting reusable nappies on Ealing's website. Nappy give away during 'real nappy week'	<p>Currently provides grants of up to £100 to support families who opt for reusable nappies.</p> <p>Supports the provision of a team to operate within the WLWA area to promote the use of reusable nappies amongst childcare professionals and within the NHS</p>	Currently no promotion of reusable nappies, as they are not considered cost effective. To be reviewed with LATS.	<p>Currently appointing a nappy outreach worker who will help to promote schemes (by setting up communication links with surgeries, hospitals etc.)</p> <p>Hounslow will be subsidising a certain number of real nappies, depending on budget</p>	<p>Working in partnership with Hounslow – WRAP appointing a nappy outreach worker who will help to promote schemes (by setting up communication links with surgeries, hospitals etc.)</p> <p>No subsidies planned</p>
15(h)	<ul style="list-style-type: none"> Promote the Mailing Preference Service to reduce junk mail 	Mailing preference service accessible via web link	Mailing preference service promoted through door-knocking campaign, and via web	Mailing preference service will be promoted via council website and other promotional activities, service leaflets etc.	Mailing preference service promoted and accessible via web link	Mailing preference service promoted during borough-wide promotional door stepping campaign	Mailing preference service promoted via web and 'Bin Blitz' programme

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Recycling							
16	<p>Waste authorities must provide all households with recycling collections of at least three materials, one of which should be paper, by September 2004, except where impracticable.</p> <p>Consideration must be given to include access to the service for disabled people, children and the elderly</p>	<p>Green Box scheme serves 78,000 hhlds</p> <p>Weekly collection</p> <p>Sorted at Kerbside</p> <p>No further major expansion planned</p> <p>News and Pams Glass Cans Aluminium Foil Clothes/Textiles Yellow Pages All batteries</p>	<p>Green Box scheme serves 93,500 hhlds</p> <p>Weekly collection</p> <p>Sorted at Kerbside</p> <p>No further major expansion planned</p> <p>News and Pams Glass Cans Aluminium Foil Clothes/Textiles Yellow Pages All batteries</p> <p>Current contract expires late 2004.</p>	<p>Green Box scheme serves 72,000 hhlds</p> <p>Fortnightly collection</p> <p>Sorted at Kerbside</p> <p>No further major expansion planned</p> <p>News and Pams Glass Cans/ Aerosols Aluminium Foil Clothes/Textiles Yellow Pages Small WEEE <i>Plastic bottles (from September 2005)</i></p>	<p>Clear sack scheme serves 80,000 hhlds.</p> <p>Fortnightly collection</p> <p>Sorted at MRF</p> <p>Expansion of MMKC to 100,000 properties. (i.e. flats and estates)</p> <p>News and Pams Cardboard Plastic bottles Cans Aluminium Foil</p>	<p>Green Box scheme serves 73,633 hhlds</p> <p>Weekly collection</p> <p>Sorted at Kerbside</p> <p>Covers all suitable areas</p> <p>News and Pams Glass Cans, Aerosols Aluminium Foil Clothes/Textiles Yellow Pages Cardboard Engine Oil H'hold & car batteries Textiles, shoes</p> <p>LRF funded hybrid system roll out for small blocks across borough. 103 sites, 2500 properties, to be serviced by existing MMKC vehicle</p>	<p>Black Box scheme serves 55,000 hhlds</p> <p>Weekly collection</p> <p>Sorted at Kerbside</p> <p><i>No further major expansion planned</i></p> <p>News and Pams Glass Cans Aluminium Foil Clothes/Textiles Small WEEE</p>

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
16	Consideration must be given to include access to the service for disabled people, children and the elderly			Harrow Provides an assisted collection service to people who are unable to use the collection system			
17	On estates or in multi occupancy properties where recycling collection from homes may not be practicable, alternative arrangements of easily accessible recycling must be introduced. This should consist of no less than one recycling site per 500 households collecting at least three materials, one of which should be paper, by September 2005.	<p>Aim to meet this. Will succeed if increase as planned (40 more paperbank sites and 4 more plastics sites to be added in 2005).</p> <p>Mini recycling centres (5 wheelie bins, glass cans, newspaper) at 152 estates. 200 planned by 2006. Still scope for more.</p>	<p>Mini recycling centres provided at 15-20% of estates (approximately 100) – same as Hounslow system. LRF funding for further 160 by April 2006. Unsure whether this will cover all estates.</p>	<p>Will introduce mini recycling centre based on 2401 bank system to flats – collecting paper, glass, cans, and plastic bottles (3 bins).</p> <p>To begin in Autumn 2005. Plan for all flats to be serviced by 2007</p>	All households, including flats now served with kerbside collection.	<p>All households, including flats now served by kerbside collection. Frames installed at 260+ estates (number increasing with development of new estates). Collect glass, mixed paper and cans. Drawer system installed at smaller blocks. Hybrid system employing containers with small drawers – allows more flexibility – up to 10 materials can be collected.</p>	<p>Aim to meet this (although priority is to provide kerbside service to all householders).</p> <p>170 mini recycling facilities in place (for newspapers, magazines, 3 types of glass, cans). Funding to expand to all estates by end March 2006.</p>

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
18	The Mayor will look to identify “best practice” in recycling composting and promotion to assist waste authorities to develop consistent schemes and to save time and resources on investigating options independently.	WLWA and the six authorities will cooperate with the Mayor in identifying Best Practice.					
19	Waste collection authorities should ensure an extensive, well-distributed and full range of recycling banks for all wards within their area and look to provide best practice arrangements for their recycling sites,	85 bring banks across the Borough. Priority in 2005 to add 40 more paperbank sites and 4 more plastics sites.	Have over 120 bring banks across the Borough and have recently introduced 6 plastics bring sites. Funding agreed for new locations.	Have over 100 bring banks across the Borough. Plans to revamp bring sites from igloos to wheeled bins from autumn 2005. This may include the introduction of some smaller sites.	Have over 120 bring banks across the Borough and have plans to review and consolidate locations following impact of weekly kerbside service	Have over 100 bring banks across the Borough and have plans to introduce 7 plastics bring sites and have recently added metro bins	Have over 200 bring banks across the Borough and have plans to expand materials collected in some of the existing sites (e.g. introducing plastics bank at main RRC in Kew, and at one Sainsbury’s site)
	including where suitable the encouragement of “adopt a bank” schemes.	No schemes in place. Best practice methods – sites in easily accessible, convenient locations, kept clean	No schemes in place. Best practice methods – sites in easily accessible, convenient locations, kept clean	No schemes in place. Best practice methods – sites in easily accessible, convenient locations, kept clean	No schemes in place. Best practice methods – sites in easily accessible, convenient locations, kept clean	No schemes in place. Best practice methods – sites in easily accessible, convenient locations, kept clean	Adopt a bank scheme for approximately 20 high-profile sites

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
20	Waste authorities should fully explore opportunities for the recycling of street cleansing and trade waste, including trade waste recycling collections.	<p>No trade waste collections.</p> <p>Street cleansing contract up for renewal in 2007, after which would like integrated contract, to include recycling street cleansings</p>	<p>Trade waste recycling offered to all businesses. Need to review in light of GLA best practice report and LATS (particularly in terms of increasing recycling).</p> <p>Street cleansing recycling includes leaf composting. Plans for can recycling</p>	<p>Trade waste recycling offered to all businesses, including free paper and glass collections.</p> <p>Already separate green waste arising from street maintenance operations and divert to composting.</p> <p>Will provide for the further segregation and recycling of street cleansing waste as part of the normal street cleansing arrangements.</p> <p>Small separated recycling banks and litter bins will be provided in major shopping areas to allow the public to separate at source</p>	<p>Hillingdon offer their dry recyclables collection to schools and businesses.</p> <p>Planning a new vehicle fleet for street cleansing with separate compartments to enable materials to be separated for recycling</p>	<p>Options for recycling trade waste are currently being reviewed with consultants</p> <p>Street cleansing contract up for renewal. May move to integrated contract, to include recycling street cleansings</p>	<p>RRC facilities and trade waste recycling collection being planned.</p> <p>Begun to change to compartmentalised vehicles to separate more street cleansing materials. Also using clear sacks for collection of cans by street operators</p>

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
21	The Mayor with waste authorities and their contractors will investigate further the potential impact of incentives to recycle and the “polluter pays principle” for waste. This is to help increase the levels of participation and recycling from householders but only to be implemented after the development of full borough-wide recycling collections from homes	No incentive scheme planned		<p>Will introduce incentive schemes to encourage participation.</p> <p>Will investigate a weekly prize draw for people participating in the scheme, with a £50 prize.</p> <p>Will measure participation by the introduction of barcode reading for Green Boxes, and chip readers for Brown Bins.</p>	<p>Will not be implementing any incentive scheme for kerbside recycling. Hillingdon sees this as sending out the wrong message and runs contrary to the change in thinking that is needed from the general public. This point has been made in all Borough responses to the Mayor’s draft strategies.</p>		
22	The Mayor believes that rebates are the best way in which to increase recycling participation rates. Waste collection authorities should consider introducing schemes to help meet their targets once full borough-wide recycling collections from homes have been developed. Rebate schemes such as these would only be expected to operate for two or three years to increase participation in recycling schemes and should not constitute a permanent charge/rebate. Any extra revenue raised should be ring-fenced for improvements to the street environment.	No incentive scheme planned	WIP funding for incentivisation project – includes compulsory recycling, cash prizes, fortnightly collections.	<p>Considering barcode reading for green boxes, weekly draw with £50 prize for green box and brown bins.</p> <p>May consider compulsory recycling scheme in the future if current programme of education and persuasion etc. proves to be ineffective</p>	No incentive scheme planned	LRF waste watch communications strategy	Lucky box scheme run in the past. Applied for Defra funding to extend

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Composting							
23	The Mayor will work with the Environment agency to alleviate current problems with licensing, particularly of small-scale community composting sites. Central composting schemes need to be developed to complement home composting and community composting schemes. The Mayor requests that all waste is composted in accordance with regulators requirements and the Animal By-Products regulations, and will seek the provision of space for facilities through Unitary Development Plans.			Will seek to identify site within the Borough for construction of closed-vessel composter in Local Waste Plan.			
24	All Reuse and Recycling Centres (Civic Amenity sites) should be adapted and operated, so that green waste can be received and segregated on site for composting by the end of 2004.	All CA sites in West London already segregate green waste					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
25	All waste collection authorities must prepare a fully costed feasibility study for the borough-wide collection of separated kitchen vegetable waste and green garden waste: in the case of green garden waste this may be on a seasonal basis. This feasibility study must be presented to the Mayor for consideration by September 2004.	<p>Separate collection of garden waste from "traditional" housing. Based on use of additional 240 l wheeled bin collection service. 60,000 properties. As of June 2005 kitchen and cardboard waste will be in the same wheelie bin</p> <p>Free Service</p>	Introducing a borough-wide weekly kitchen caddy from October 2005. (95,000 households will be included. Estates will not be included) and a weekly green box and refuse	<p>Fortnightly collection of kitchen, garden and cardboard waste, collected in 240 l Brown Bins. 73,000 households (not flats) have been provided with this service since the end of June 2005</p> <p>Free service</p> <p>Plans to change to a weekly collection of the Brown Bin by Autumn 2006. This will be accompanied by a reduction in frequency of collection of residual waste. To once a fortnight</p>	<p>All appropriate households with garden waste collection are currently served. Aiming for weekly garden (wheelie bin) and kitchen (caddy) waste collections by 2007/08.</p> <p>Free Service</p>	<p>Hounslow currently has garden waste collections and all appropriate households are served. Year-round service from 2005.</p> <p>It is a buy-in system where each sack costs 50p. Garden waste collections are being extended this year to be a</p>	<p>Opt-in garden waste scheme offered borough-wide. Introducing a borough-wide (excluding flats) . Weekly kitchen waste collection in Autumn 2005</p> <p>Fortnightly service using either sacks or wheeled bins</p>
26	The London boroughs should make arrangements for the composting of compostable park waste, waste from the maintenance of cemeteries, and waste from local authority-run nature reserves	Composting from parks. Arisings do not enter WLWA system and do not count towards BVPI	Waste from parks is composted	<p>The amount of green material from parks is reduced by mulching and grass cycling.</p> <p>All other green waste from parks goes to CA site and is sent to be composted.</p>	Provide a service on a case by case basis	Minimise amount of material from parks by mulching and grass cycling. Any excess is taken to CA site and sent for composting	Separated parks waste is taken to composting plant.

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
27	Waste collection authorities should, where practicable, work in partnership with local fruit and vegetable markets to introduce arrangements for non contaminated fruit and vegetable waste to be segregated to facilitate composting.	Composting from markets. Arisings do not enter WLWA system and do not count towards BVPI		Harrow has no street markets	Provide a service on a case by case basis		
28	Waste authorities should encourage London residents to use waste-derived compost by providing opportunities for them to purchase waste-derived compost. The Mayor will look to work with London Remade and WRAP, to investigate further the development of consumer markets for composted waste in London.	Residents can purchase waste derived compost	Plans to enable residents to purchase waste derived compost once kitchen collection has begun (probably within the financial year)	Residents should be able to purchase sacks of waste-derived compost by the end of the summer 2005.	This has been carried out at one Hillingdon CA site. A dedicated area for purchasing waste derived compost is part of the brief for CA redevelopment	Residents can purchase waste derived compost from CA site	Residents can purchase waste derived compost at Townmead RRC

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Recovery and Residual Waste Treatment							
29	The Mayor will support proposals for and work with key stakeholders to introduce new and emerging advanced conversion technologies for waste (for example, anaerobic digestion, gasification or pyrolysis) which satisfy the requirements of the Renewables Obligation Order 2002, supplying electric power and wherever possible also heat, and minimise the quantity of hazardous solid residues.	The joint strategy is consistent with this aspect of the Mayor's Strategy.					
30	The Mayor will support proposals for and work with key stakeholders to introduce new waste treatment methods such as Mechanical Biological Treatment and the production of biofuels to be used in London.	The joint strategy is consistent with this aspect of the Mayor's Strategy.					
31	The Mayor will encourage the development of anaerobic digestion plants, which treat segregated biodegradable waste and produce a digestate suitable for agricultural and horticultural use.	The joint strategy is consistent with this aspect of the Mayor's Strategy.					
32	The Mayor will continue to press the Government to classify anaerobic digestion plants, which treat segregated biodegradable waste and produce a digestate used for agricultural and horticultural use, as "recycling" as measured by the Best Value Performance Indicators	WLWA and the six authorities support the Mayor's actions.					
33	The Mayor will support the use of waste wood as a fuel, or for producing a fuel. This will contribute to meeting the Landfill Directive to	The joint strategy is consistent with this aspect of the Mayor's Strategy.					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
	reduce biodegradable waste sent to landfill and will also help London contribute its share to meeting the national renewable energy targets						
34	The Mayor will work with London Waste Ltd and SELCHP, the waste authorities and local industry to explore the opportunities to develop heat distribution networks to supply heat from existing incineration plants to housing, commercial and public buildings in the vicinity.	WLWA and the six authorities support the Mayor's actions.					
35	The Mayor will keep developments in emissions control, monitoring and health impacts under review and, where appropriate, press the organisations responsible to adopt new techniques	WLWA and the six authorities support the Mayor's actions.					
36	Having regard to existing incineration capacity in London, and with a view to encouraging an increase in waste reduction, reuse, recycling and composting and the development of new and emerging advanced conversion technologies for waste and new waste treatment methods such as Mechanical Biological Treatment, the Mayor will support and encourage these waste management methods in preference to any increase in conventional incineration capacity. Each case, however, will be treated on its individual merits, having regard to the Best Practicable Environmental Option and whether it meets the requirements of the Renewables Obligation Order 2002. The aim is	WLWA and the constituent authorities will support in the joint strategy, waste reduction , reuse, recycling and, composting ahead of new technologies and incineration. When deciding between new technologies and incineration it will have due regard to BPEO and the requirements of the Renewable Obligation Order 2002..					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
	that existing incinerator capacity will over the lifetime of the plan, become orientated towards non-recyclable residual waste.						

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Landfill							
37	The Mayor will work with the South East of England and the East of England regional assemblies to co-ordinate strategic waste planning in order that London moves towards regional self-sufficiency for waste treatment and a subsequent reduction in landfill exports.	WLWA is working to become more self-sufficient in waste management methods and to reduce landfill exports					
38	The Mayor will work closely with London's waste authorities to ensure the tradable allowance scheme works effectively in diverting London's waste from landfill. Waste disposal authorities should seek to trade landfill allowances within London in the first instance so that London meets its allocation, without requiring allowances from outside of London.	WLWA will trade with authorities that provide the best value for money in terms of permits					
39	The Mayor will consult with London's waste authorities about arrangements for the co-ordination of trading landfill allowances through the Mayor acting as broker.	WLWA will co-operate fully with the Mayor.					
40	Any contract that includes the landfilling of municipal waste should encourage the use of landfill gas as a renewable energy source (heating or electricity).	WLWA contracts will include the use of landfill gas as an energy resource where landfill is used					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Reuse and Recycling Centres (Civic Amenity Sites)							
41	The Mayor will seek to persuade the Government to announce the date on which Section 1 of the Refuse Disposal (Amenity) Act 1978 is to be repealed	WLWA and the six authorities support the Mayor in this endeavour					
42	The Mayor will work with key stakeholders to develop[a “best practice” brief. This will provide the template of features to be incorporated into refurbished sites, resulting in facilities that provide a high standard of service and local environmental quality, couples with a wide choice of reuse and recycling opportunities.	WLWA and the six authorities support the Mayor in this endeavour					
43	The Mayor will promote a feasibility study, to be undertaken jointly with key stakeholders, including the Environmental Services Association and waste authorities, to explore the possibility of expanding the existing network of Reuse and Recycling Centres (Civic Amenity sites) in London. This study will explore the possibility of utilising the existing private waste transfer stations operating in London, as well as identifying land and premises for new sites	WLWA will co-operate fully with the Mayor.					
44	The Mayor will encourage all Reuse and Recycling Centres (Civic Amenity sites) where practicable to have arrangements for the separation of reusable items and to provide sites that allow convenient and safe pedestrian access.	Area for reuse at CA sites	Area for reuse at CA sites	No area for reuse at CA site due to lack of space	Area for reuse will be included as part of CA site reorganisation	Area for reuse at CA sites	Salvage contractors at RRC sites to pull out bric a brac, wood, rubble etc.

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
45	Authorities operating Reuse and Recycling Centres (Civic Amenity sites) should not bar the use of or make a charge for the use of their sites by residents of other London Boroughs for the deposit of household waste. To this end, such authorities should enter into discussions with other waste authorities whose residents use their sites, with a view to establish reciprocal arrangements whereby costs may be recovered.	<p>All the Reuse and Recycling Centres (Civic Amenity sites), within the WLWA area have free access for residents delivering household waste. This applies to residents from other London Boroughs and residents from outside the London.</p> <p>WLWA and the six authorities will develop a joint approach for dealing with the deposit of household waste by people using vans to ensure that trade waste and construction and demolition waste is discouraged.</p> <p>WLWA and the six constituent authorities will investigate ways of ensuring that people delivering commercial waste do not deposit the waste into the household waste stream and avoid paying for disposal</p>					
46	In order to protect Reuse and Recycling Centres and provide a uniform quality of service across London, the Mayor will, as part of his wider consultation on a single waste disposal authority, consult on options for the management and operation of Reuse and Recycling Centres	WLWA and the six authorities will fully co-operate with any consultation on a single waste disposal authority across London, with particular regard to the management and operation of Reuse and Recycling Centres.					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Street Cleansing and Litter							
47	The Mayor will work with his partners in the "Capital Standards" Programme to raise the standard of London's street environment. This will be a high profile initiative involving the public and private sectors and will reward success.	Borough is part of Capital Standards scheme and is working positively to raise the standard of its street environment.	Borough is part of Capital Standards scheme and is working positively to raise the standard of its street environment.	Borough is part of Capital Standards scheme and is working positively to raise the standard of its street environment.	Borough is part of Capital Standards scheme and is working positively to raise the standard of its street environment.	Borough is part of Capital Standards scheme and is working positively to raise the standard of its street environment.	Borough is part of Capital Standards scheme and is working positively to raise the standard of its street environment.
48	The Mayor will work with the partners in the "Capital Standards" Programme to set standards and targets to guide local authorities, for litter collection and street cleansing and to combat fly-tipping, reduce litter production, and increase recycling of certain types of litter (e.g. cans and newspapers).	The council will work proactively with the Mayor through the Capital Standards programme to improve standards. It aims to increase the recycling of cans and newspaper litter.	The council will work proactively with the Mayor through the Capital Standards programme to improve standards. It aims to increase the recycling of cans and newspaper litter.	The council will work proactively with the Mayor through the Capital Standards programme to improve standards. It aims to increase the recycling of cans and newspaper litter.	The council will work proactively with the Mayor through the Capital Standards programme to improve standards. It aims to increase the recycling of cans and newspaper litter.	The council will work proactively with the Mayor through the Capital Standards programme to improve standards. It aims to increase the recycling of cans and newspaper litter.	The council will work proactively with the Mayor through the Capital Standards programme to improve standards. It aims to increase the recycling of cans and newspaper litter.
49	The Mayor is working with partners in "Capital Standards" to produce a London wide advertising campaign, highlighting the Government's message of "war on litter".	WLWA and the constituent authorities support the Mayors initiative in this area.					
50	The Mayor will require all London waste authorities to minimise the amount of unpaid commercial waste contaminating the household waste stream	WLWA authorities will develop, as part of its waste minimisation programme, enforcement methods ensure that contamination of the household waste stream by commercial waste is minimised					
51	The Mayor will support changes that enable local authorities to retain the revenue from fines and penalty tickets.	WLWA and the constituent authorities support the Mayors initiative in this area.					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
52	The Mayor supports, where suitable, colour-coded systems or designated containers for commercial waste collections and waste authorities should consider these when developing new commercial waste contracts or revising existing contracts. The Mayor will also request that existing contracts should examine the feasibility of changing to a system that allows clearer identification of waste	WLWA and the constituent authorities will co-operate with any new London-wide system.					
53	The Mayor will require waste collection authorities to have a well advertised bulky waste service to minimise the number of items dumped on the streets. The provision of a free service (for a limited number of items) must be considered where an authority has an issue with the dumping of bulky household waste. All services must maximise opportunities for recycling and reuse and collect such items free of charge.	Free bulky waste service (5 items 3 times a year), advertised via web and literature	Charge for bulky waste service, advertised via web	<p>Harrow charges for its bulky waste service and has no plans to provide free services . Charges include reduced charges for the collection of recyclable goods to promote responsible and sustainable waste management practices by the public.</p> <p>Concessions are available for those on low income. Service and charges are advertised in service leaflets and on the website</p>	Charge for bulky waste service. Not advertised	Charge for bulky waste service, advertised in council literature. Free service to elderly and registered disabled	Charge for bulky waste service, advertised via web in line with 'polluter pays' policy. Free service to elderly and those on low income

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
54	The Mayor will seek an effective regulatory framework in England, for End of Life Vehicles, including incentives to encourage the owner to ensure their vehicle is delivered to an authorised treatment plant and effective powers and funding to allow waste authorities to enforce the regulations where they apply	Vehicles for disposal to be de-polluted in compliance with ELV Directive					
55	The Mayor will work with waste authorities and other key stakeholders, including the British Metal Recycling Association, so that London can respond effectively at the planning and implementation stages of the End of Life Vehicles Directive.	WLWA and the constituent authorities support the Mayor's initiative.					
56	The Mayor will work with waste authorities and other key stakeholders, to develop a common system of data gathering about abandoned vehicles, their removal, storage and disposal and the costs associated with this issue	WLWA and the constituent authorities support the Mayor's initiative.					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
57	As a requirement of the licence, for a special event or where crowds are likely to gather in the vicinity of stadiums and arenas, all organisers should develop their own waste management plan. This should consider the waste that will be produced and look to place requirements for traders to use appropriate materials, and to minimise waste and maximise recycling. Boroughs should provide the Mayor with a list of their special outdoor events, and their plans for the management of waste at the event.	Wembley – events strategy involving recycling	No major events – some small events for which 1100 litre recycling bins are provided	Pinner fair – operational plan in place. Recycling facilities provided for major community events such as summer shows and fetes.	Middlesex show – operational plan in place, including separate refuse and recycling bin	No major events	Summer fetes and fairs – considering providing recycling facilities Rugby – considering recycling glass

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harlow	Hillingdon	Hounslow	Richmond
Producer Responsibility – packaging, electrical and electronic equipment							
58	The Mayor will request all waste authorities investigate the development of their recycling collections (including packaging) through partnerships with re-processors, obligated businesses and compliance schemes.	No direct liaison with packaging industry. Plan to lobby packaging and retail industry this year	No direct liaison with packaging industry	Harlow will support any initiatives taken by the Mayor to promote compliance schemes. It has no plans for separate liaison with the packaging industry	No direct liaison with packaging industry	No direct liaison with packaging industry	Trading standards follow up excess packaging complaints with industry where applicable
59	The Mayor will encourage waste authorities to work in partnership with the producers of electrical and electronic equipment, private waste contractors and the voluntary sector, to meet the requirements of the (WEEE) Directive.	Area for WEEE provided at CA sites	Area for WEEE provided at CA sites	Area for WEEE provided at CA sites Collection of small WEEE through kerbside Green Box system.	Area for WEEE will be included as part of CA site reorganisation. Salvage contractor reuses and recycles what is economically viable at the CA site	Area for WEEE provided at CA sites Salvage contractor reuses and recycles what is economically viable at the CA site	Salvage contractor reuses and recycles what is economically viable at the CA site. Richmond will co-operate with the legally-responsible producers to set up a scheme, which complies with new EU regulations
60	The Mayor will investigate opportunities for recycling and establishing markets for waste electrical and electronic goods and their components.	WLWA and the constituent authorities support the Mayor's initiative.					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
61	All waste collection authorities should look to work in partnership with neighbouring authorities or their waste disposal authority and those with technology available to deal with refrigerators. This should include working with London Remade, which is already developing partnerships in relation to fridge recycling and other appropriate refurbishes.	WLWA works in partnership with the six constituent authorities to recycle fridges and freezers in accordance with the Ozone-depleting substances regulations					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Hazardous Waste							
62	A London-wide Hazardous Household Waste collection service should be delivered through consistent contract arrangements in all London Boroughs so that all Londoners have an equal opportunity to use the service. The current service entitlement to householders should be provided free of charge and should also be available to Businesses in London upon payments of a charge to recover costs.	Part of London-wide Hazardous Waste Collection Disposal Service (administered by City of London) for collections from residents	Part of London-wide Hazardous Waste Collection Disposal Service (administered by City of London) for collections from residents	Part of London-wide Hazardous Waste Collection Disposal Service (administered by City of London) for collections from residents	Uses Grundons for ad hoc collections of clinical and other hazardous waste from households.	Part of London-wide Hazardous Waste Collection Disposal Service (administered by City of London) for collections from residents	Part of London-wide Hazardous Waste Collection Disposal Service (administered by City of London) for collections from residents
63	The Mayor will work with the Corporation of London as the lead authority for the Household Hazardous Waste Collection service and the waste authorities to investigate the existing usage and potential future usage of the service, including the costs of expansion, funding options and providing a high level of publicity, so that all Londoners become aware of the service.	WLWA and the constituent authorities will co-operate with the Mayor and other London authorities to review the existing service and determine future options.					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
64	Reuse and Recycling Centres (Civic Amenity sites) should also provide facilities where local residents have the opportunity to deposit items of hazardous household waste at a supervised and secure storage point	Currently has facilities for the recovery of engine oil, car batteries and fluorescent tubes at its CA Site	Currently has facilities for the recovery of paint, oil and some batteries at its Waste Reuse and Recycling Centres.	Currently has facilities for the recovery of oil and car batteries at its Waste Reuse and Recycling Centre Will consider adding fluorescent tube facility at CA Site	CA Sites provide facilities for car batteries, oil and asbestos (Vic. Rd. only).	Currently has facilities for the recovery of oil and car batteries at its CA Site	Currently has facilities for the recovery of paint, engine oil, car batteries and fluorescent tubes at its CA Site.
65	All waste authorities should lead by example, segregating old fluorescent lighting tubes from general waste and engaging specialist contractors to recycle the mercury and dispose of the remaining contents legally. This service should be promoted to all companies within the local authority area.			The council will ensure that the disposal of hazardous waste – such as fluorescent tubes, from its own premises comply with the relevant regulations and will seek to ensure that waste is recovered for recycling wherever possible – in accordance with BPEO			

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Clinical Waste							
66	The Mayor will request all waste collection authorities to provide a free household clinical waste collection service to a high standard. This will include working with relevant stakeholders to reduce the occurrence of, impacts from and risks associated with discarded waste, including syringe needles and dog mess in public places and to widely publicise the availability of the collection service to all			<p>Harrow provides a free clinical waste collection service to households in partnership with the Health Service.</p> <p>Waste is collected in yellow clinical waste sacks and stored, awaiting collection, in colour-coded wheeled bins.</p> <p>Waste is delivered to Grundons Ltd for incineration .</p>			
67	The Mayor, along with all waste authorities, and other stakeholders such as the strategic health authorities, primary care trusts, other NHS bodies and the waste industry will seek to identify and implement best practice in clinical waste collection. This will include exploring potential partnerships opportunities, which may provide economies of scale, such as a London-wide clinical waste service	WLWA and the constituent authorities support the Mayor's initiative.					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
68	The Mayor will encourage health authorities to make plans to accommodate any changes resulting from the review of the Special Waste Regulations and the introduction of Hazardous Waste Regulations.	WLWA and the constituent authorities support the Mayor's initiative					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Education and Promotion							
69	The Mayor is leading the first phase of a campaign, bringing together the waste authorities and other key stakeholders, to develop London wide promotion on recycling and sustainable waste management. The Mayor will explore further funding opportunities to enable campaigns in future years.	WLWA and the constituent authorities support the Mayor's initiative and have signed up to this programme					
70	The Mayor will seek to ensure that waste reduction, reuse and recycling is convenient and simple, to aid the communication of London wide messages.	WLWA and the constituent authorities agree with the Mayor's aims but recognise the difficulty in providing services, which are uniform across London. The aim of the authorities is to provide convenient and easily understood services to their residents.					
71	The provision of waste services by an authority should include an amount to be spent on education and promotion. This could either be incorporated into waste and recycling contracts or provided directly by the waste authority			Harrow has an annual budget of £185k for the promotion of sustainable waste management			
		WLWA agree with this policy in principle and would be looking to make appropriate arrangements, either as part of contract or directly by the Authority					
72	The Mayor will work with local education authorities, schools and waste collection authorities to ensure all schools, where practicable, have a mini-recycling centre within their grounds to create an understanding of the environmental importance of waste management and recycling.	33% schools have mini recycling centres. Plan to cover every school	All schools have opportunity, but not all requested	All schools have opportunity, but not all requested	Not all schools have mini recycling centres, but all have access to a free recycling service (same as kerbside)	All secondary schools have mini recycling centres. All schools have opportunity to request a site	Not all schools have mini recycling centres. Richmond is looking to expand this service. Schools can put out up to 5 recycling boxes as part of current kerbside service, but this is currently being reviewed.

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Developing Markets							
73	The Mayor, through the London development agency, will continue to examine and address the business support needs of the waste reprocessing sector including skills requirements, business advice, finance and land premises.	Noted					
74	The Mayor, through the London Development Agency, is the major public sector funder of the London Remade programme, with funding in place until 2004, and will continue to support London remade as it becomes successful in its role of providing leadership and developing partnerships. Through the London Development agency, the Mayor will also examine requirements for additional support mechanisms for the sector.	Noted					
75	The Mayor and the London Development agency will help to stimulate demand for recycled products	Noted					
76	The Mayor will work with the London Development Agency, London Remade and WRAP to continue to develop reprocessing capacity for recyclables and new markets for recycled materials and products. This will include the investigation of the benefits of London-wide consortia for recyclable materials.			Harrow has signed the Mayor's Green Procurement Code and will actively seek to increase the proportion of recycled goods it purchases			

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
77	The Mayor will support and encourage the development of new plastics recycling facilities and related industries in London.	6 bring sites for plastics. Plan for 4 more. Too costly to extend kerbside collection to include plastics	Introduced mixed plastics to CA sites in last 6 months. Looking to expand bring site plastics. Early stage of considering plastics in kerbside collection	Plastic bottles to be included in Green Box service, recycling banks and the CA Site from Autumn 2005	Collect plastic bottles	7 bring sites for plastics planned for July. No current plans to extend kerbside collection to include plastics	Trial scheme being considered to include plastics to a couple of rounds
78	The Mayor will work with the waste authorities and their contractors, material reproprocessors, London Remade, WRAP and other relevant organisations to help to set standards for recycled materials which are sustainable and realistic.	WLWA and the constituent authorities support the Mayor's initiative.					
79	The Mayor, with key stakeholders including the London Development Agency, will bring together a markets taskforce to: <ul style="list-style-type: none"> Consider current and future markets Consider current and future reprocessing capacity requirements Consider London's needs, including timeframes and locations 	WLWA and the constituent authorities support the Mayor's initiative.					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Leading by Example							
80	The Mayor and the London Development agency, in partnership with London Remade, will continue to work on the Mayor's Green Procurement Code to encourage organisations to explore opportunities for buying recycled products.			Harrow has signed the Mayor's Green Procurement Code and will actively seek to increase the proportion of recycled goods it purchases			
		WLWA and the constituent boroughs are signed up to the Mayor's green procurement code					
81	The Mayor, through the London Development Agency, will work with key stakeholders to develop a strategic approach to promoting business efficiency through efficient resource use, including encouraging green procurement and sustainable waste management	WLWA and the constituent authorities support the Mayor's initiative.					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Planning the waste infrastructure in London							
82	When preparing or revising their Unitary Development Plans and Local Development Documents, Boroughs must ensure that land resources are available to implement the Mayor's Municipal Waste Management Strategy, Waste Strategy 2000, the Landfill Directive and other EU Directives on waste. They should identify the sites needed for waste management and disposal facilities over the period of the plan and in conformity with the London Plan, including facilities for the management of waste with specific requirements, such as hazardous waste.			Will seek to identify site within the Borough for construction of new waste management facilities in local waste plan.			
83	When preparing or revising their Unitary Development Plans and Local Development Documents, Boroughs must ensure they conform with the strategic policy framework on planning for waste within the London Plan.			Will ensure that UDP and LDD comply with the London Plan			
84	The Mayor will work in partnership with the Boroughs and relevant stakeholders to produce detailed waste policy guidance for each Sub-Regional Development Framework, developed under the London Plan, outlining the number, types, and, where appropriate, locations of facilities needed to manage waste and recyclables in their area.			Will work in partnership with the Mayor and WLA to ensure that the SRDF meets the requirements of the London Plan and the joint waste Strategy			

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
85	The Mayor will work with the South East England and East England regional assemblies to co-ordinate strategic waste management across the three regions	Noted					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Longer term Structural changes – a single waste disposal authority							
86	The Mayor believes the best way to achieve sustainable waste management in London is for waste disposal to be under the control of a single authority. The Mayor will develop an environmental and business case and consider the views of London waste authorities. In the light of London's progress towards the 2005/6 targets, the Mayor's position will be presented to Government, to consider appropriate changes to existing legislation.	WLWA and the six boroughs will co-operate fully with the Mayor in any consultation process he undertakes as part of the development of a business and environmental case for a single waste disposal authority.					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Transport of Waste							
87	The Mayor will ensure, in his review of contracts, municipal waste management strategies and planning applications for waste facilities, that waste authorities have considered transport implications and, where appropriate, undertaken a full transport assessment of the impacts of the transportation of their waste. Waste authorities should demonstrate that meaningful and full consideration has been given to the use of water and rail transport	The joint waste strategy has considered transport implications					
88	The Mayor will encourage the use of sustainable modes of transport (particularly, rail, river and canal). Where materials cannot be managed locally, wharves and rail transfer stations that are, or can be made viable, for the movement of recyclables and residual waste should be protected through the London Plan	WLWA uses rail transport					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
89	The Mayor will seek to ensure that all waste authorities encourage fuel management programmes, and that when waste contracts are reviewed, emissions criteria are specified for the vehicles used. Emissions criteria should comply with the currently applicable Euro standard, or the previous standard with suitable after-treatment as a minimum, i.e Euro II with Reduced Pollution Certificate until 2005. Waste authorities should consider all vehicle options, including those which can achieve more stringent emissions standards for air quality, and which may also bring other benefits to the environment such as reduced noise or carbon dioxide emissions.	Recently purchased fleet for organics service. All conform to Euro 1. Will be part of requirement when tender for rest of fleet in 2007	Fuel friendly vehicles will be one of key considerations in new procurement process	<p>All in-house vehicles are, wherever possible Euro 3/4 compliant and fitted with CRTs to minimise emissions.</p> <p>All contractor vehicles employed on waste contracts will also be required to provide similarly specified vehicles.</p> <p>Supervisors vans are dual use petrol/LPG fuel and fuel purchases will be monitored to ensure that LPG is used as the main fuel</p>	Vehicles not currently fuel friendly but this is being considered	New fleet of dustcarts with Euro 3 engines. Run on diesel and satisfy European standards for emissions	All diesel vehicles. Where possible have / will fit CRTs
		<p>WLWA will ensure that its own vehicles are specified with clean emissions technology where possible.</p> <p>WLWA will specify in all future waste contracts involving road haulage that contractors vehicles are required to be fitted with clean emission technology</p>					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
90	The Mayor will encourage waste authorities to consider the potential to clean the exhaust emissions from their vehicle fleets, by retrofitting after treatment technologies (such as particulate traps), using cleaner fuels or purchasing the cleanest new vehicles. The Mayor encourages waste authorities to contact the Energy savings Trust with regard to relevant grant funding.			<p>Harrow will ensure that all future vehicles use appropriate clean emissions technologies.</p> <p>Retrofitting is not required as the existing fleet is already compliant.</p> <p>Harrow receives the reduced VED costs associated with clean emission technology</p>			
91	The Mayor will encourage waste authorities to minimise the environmental impact of waste transportation, including air pollution, noise (especially night time or early morning collections), energy use and traffic impacts by appropriate vehicle specifications, routing and operating practices			Harrow will continue to ensure that its waste collection and transport operations are undertaken in such a way as to minimise environmental impacts.			
		WLWA will ensure that its waste transport operations (whether in-house or by contractor) are undertaken in such a way as to minimise environmental impacts.					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Funding							
92	The Mayor will seek to persuade the Government to provide London with its fair share of funding and also will aim to enable waste authorities to develop partnerships and identify external sources of funds and provide a mechanism for significant leverage of other funding sources.	WLWA and the six constituent authorities fully support the Mayor's initiative.					
93	The Mayor will work with the association of London Government and London's waste authorities to determine the required investment to achieve sustainable waste management. A joint case will then be presented to the Government for further investment and funding	WLWA and the six constituent authorities will co-operate fully with the Mayor's initiative.					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Municipal Waste Contracts							
94	<p>The Mayor will require waste authorities to include contract conditions and specifications in waste or associated contracts, which:</p> <ul style="list-style-type: none"> • Reflect appropriate proposals and targets as set out in the Mayor's Municipal Waste Management Strategy for London. The Mayor's targets should be seen as the minimum contract performance requirements. • Enable future flexibility for the waste authority to continue to develop sustainable waste management. • Maintain and increase the use of rail and water transport. • Reflect best practice, through the tailoring of contract conditions and specifications to the specific requirements of the waste authority. • Consider equal opportunity for all. 	<p>WLWA and the constituent authorities will liaise closely with the Mayor to ensure that their contracts comply with the Mayor's Strategy</p>					
95	<p>The Mayor will develop best practice guidelines to assist waste authorities in the tailoring of contract conditions. The guidelines will be regularly reviewed and updated</p>	<p>WLWA and the six authorities will co-operate fully with the Mayor in the development of best practice guidelines</p>					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
96	<p>If considering any proposed new contracts involving the conventional incineration of municipal waste the Mayor would seek to ensure that as a minimum:</p> <ul style="list-style-type: none"> Waste is subjected to pre-treatment to remove as much recyclable materials as is practicable before the residual waste is incinerated; To ensure flexibility is maintained in order to allow movement up the waste hierarchy there should be no guaranteed minimum tonnage contracts; State of the art emission limiting equipment; and monitoring systems are used to reduce any potential health impacts; Combined heat and power technologies are used. 	<p>The joint strategy is a recycling and composting led strategy which will ensure that the maximum practicable diversion of waste is achieved before further treatment by alternative technologies or incineration is considered. Any treatment of residual waste will meet the relevant EU and National standards on emissions etc and comply with the requirements of the Environment agency. Where appropriate combined heat and power technologies will be used</p>					
97	The Mayor will look to co-operate and seek to work jointly with waste authorities undertaking Best Value reviews of their waste services			The borough will work with the Mayor, as a stakeholder, in any future Best Value review of its waste service.			
		WLWA will work with the Mayor, as a stakeholder, in any future Best Value review of its waste service.					
98	The Mayor will require that waste contracts are flexible enough to enable the incorporation of changes resulting from Best Value reviews and that the Best Value principle of continuous improvement has been addressed.	The joint strategy complies with the principles of Best Value. WLWA and the constituent authorities will ensure that these principles are carried forward into any contracts					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
99	The Mayor requests waste authorities to fully consider the social, environmental and economic benefits when undertaking Best Value reviews of waste management services			The borough will work with the Mayor, as a stakeholder, in any future Best Value review of its waste service to ensure that social, environmental and economic benefits are fully considered.			
		WLWA will work with the Mayor, as a stakeholder, in any future Best Value review of its waste service to ensure that social, environmental and economic benefits are fully considered.					
100	In order that waste disposal authorities can fully deliver Best Value in waste disposal contracts, the Mayor will encourage the Government to repeal, as soon as possible, Section 51(1){a} - Schedule 2 of the Environmental Protection Act 1990.	Noted					

Policy	The Mayor's Municipal Waste Management Strategy	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
Municipal Waste Management Strategies							
101	The four statutory joint waste disposal authorities should each have a joint strategy that covers their own area. Joint strategies or 'implementation programmes' should be presented to the Mayor for consideration within 12 months of the final publication of the Mayor's Municipal Waste Management Strategy.	WLWA producing a strategy					

The Waste Strategy should fit with existing strategies, policies and plans within each of the six London Boroughs within West London. Some of these plans and policies will need to be updated following the production of a joint strategy for West London. This section provides a review of these plans.

The six collection authorities each have a similar vision to build communities in which all can take part and all can take pride. To help achieve this vision they have established strategic objectives, which include investing in the environment, and specifically focusing on municipal waste management. These waste management objectives have been developed as part of this strategy.

C2.1 BRENT

C2.1.1 *Brent's Vision* ⁽¹⁾

To be a borough where all its communities enjoy a high quality of life and are able to fully participate in society.

C2.1.2 *Strategic Aims and Objectives*

One of Brent Council's key aims is to promote the social, economic and environmental well-being of all residents ⁽²⁾. Brent Council is committed to environmental sustainability for the benefit of future generations.

A priority action is improving the quality of the local environment, and improving the council's performance in recycling and waste management.

With this in mind, Brent is extending doorstep and local recycling and opening a new recycling centre with improved facilities.

Brent Council's Unitary Development Plan ⁽³⁾ specifies that in considering every application for waste management, the aim is to use the best practical environmental option (BPEO) in choosing the best method of waste management. For example, landfill will not be the best practical environmental option for most types of waste.

Different waste management options can be ranked in a hierarchy that gives some idea of the relative sustainability of each. The waste hierarchy proposed by the Mayor's Municipal Waste Management Strategy is considered appropriate for Brent.

Whilst the waste management hierarchy represents the overall priorities for waste, it will not remain true for all types where it conflicts with BPEO. For example, incineration may well be the only option for some forms of waste (such as clinical and sewage sludge, which cannot be dumped at sea from 1998), whilst disposal is still the only practical option for some forms of hazardous waste. The hierarchy provides a checklist: Can the waste be reduced? Can it be re-used? Can it be recycled? It helps find the best place in the hierarchy for each type of waste.

The proximity principle promotes the concept that any waste which is created, should aim to be disposed of, or otherwise managed, in close proximity to the point that it is generated. The policy will be applied flexibly where it conflicts with BPEO. To satisfy the principle of regional self-sufficiency may require provision for the management of a proportion of waste from outside the Borough.

(1) Brent Council Performance Plan 2004-2005.

(2) Brent Council Performance Plan 2004-2005.

(3) Brent Unitary Development Plan 2004.

C2.1.3 Local Targets

Figure 1 shows Brent recycling to date and future waste targets ⁽¹⁾

Figure 2.1 Brent Recycling to date and Future Waste Targets

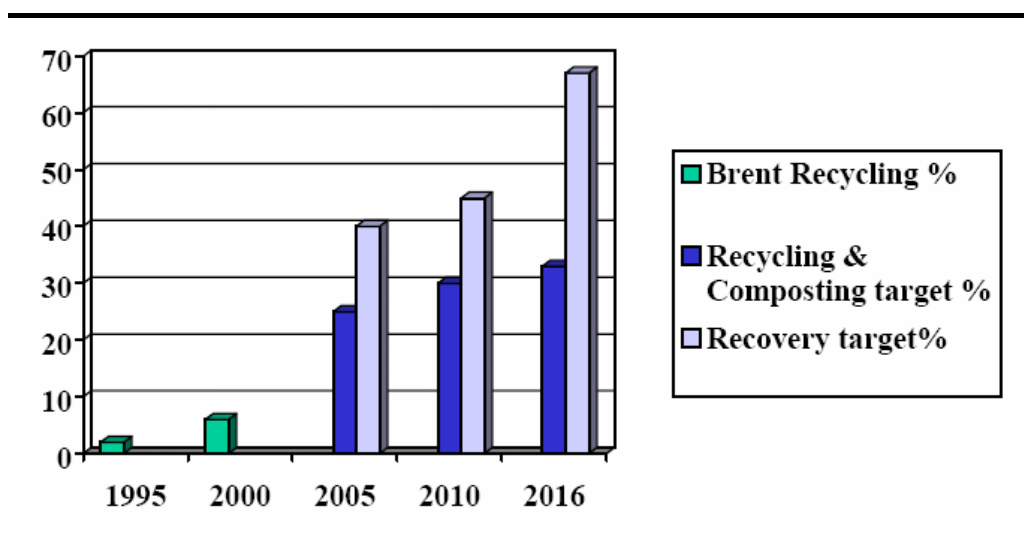


Table C2.1 Best Value Performance Indicators ⁽²⁾

Code	Description	Contents/format	Target 2003/04	2003/04	Target 2004/05	Target 2005/06	Target 2006/07
ENVIRONMENT							
199	Cleanliness of relevant land and highways	%	N/A	45.0%	45%PSA 28% 03 06+4S 06+4SQI	28% 03 06+4S 06+4SQI	28%
82a	Recycling	% household waste	8.0%	7.6%	11.0%	11.5%	12.4%
82b	Composting	% household waste	0.5%	0.9%	3.0%	6.7%	7.7%
82c	Recovery heat & power	% household waste	0.0%	0.0%	0.0%	0.0%	0.0%
82d	Landfill	% household waste	0.0%	0.0%	0.0%	0.0%	0.0%
84	Household waste collected	Kgs per capita	487.0	424.0	441.0	460.0	460.0
86	Cost waste collection	£ per household	£57.00	£61.7	68.0	70.0	72.0
87	Cost waste disposal	£ per tonne municipal waste	N/A	N/A	N/A	N/A	N/A
91	Pop served by a kerbside collection of recyclables	%	76.0%	75.4%	100.0%	100.0%	100.0%

(1) Waste Strategy 2000 – Implications for Brent.

(2) http://www.bvpi.gov.uk/pages/KeyFacts_BVPI.asp?map=2&aid=20

C2.2 *EALING*

C2.2.1 *Ealing's Vision*

Making a world of difference, to our customers by ensuring that everything we do is focused on supporting and enhancing the lives of people in our community.

C2.2.2 *Strategic Aims and Objectives*

Ealing Council has 6 key strategic objectives, including to protect and enhance their environment ⁽¹⁾. Ultimately directing all plans is Ealing's Community Strategy, which is the over-arching strategic plan for the Borough into which all strategic objectives link.

The Community Strategy sets out how Ealing Council aims to improve the quality of life for people in the Borough and contribute to sustainable development over the next three years and beyond. Its focus is on achieving improvement through partnership working, and the strategy is the Local Strategic Partnership's outline for the future of the whole Borough. Its objectives include creating cleaner and greener streets.

A specific focus is to deliver a new Clean and Green Waste Contract, as waste management and procurement have both been identified as areas of weakness. Refuse collection and street cleansing services are also key drivers of customer and stakeholder satisfaction. This will be a key contract for the Council over a number of years, and a significant financial investment for the organisation.

C2.2.3 *Unitary Development Plan*

Section 2.10 of Ealing's Unitary Development Plan sets out the following Waste Minimisation and Management policies:

1. In order to achieve more sustainable waste management in accordance with the hierarchy set out in the Government's Waste Strategy 2000: England and Wales, the Council will support and seek the inclusion of the following in development:
 - i) the use of locally available and second-hand building materials;
 - ii) provision within the layout of new development, for sorting, recycling and processing waste materials likely to arise from the future use of a site for both reuse or recovery;
 - iii) alterations to existing property so that waste materials arising from activity within the property can be sorted on site for reuse or recycling;
 - iv) alterations to industrial, commercial or institutional premises, which would enable a reduction or more efficient use of the resources processed on site, and a consequent reduction in the waste generated;

(1) Making a World of Difference – Ealing Council's Performance Plan 2004/2005.

- v) The development of local neighbourhood facilities for waste recovery or transfer, including recycling of material, and composting and other green waste recovery facilities; particularly as part of regeneration projects and in areas with flats and institutional accommodation;
 - vi) The development of businesses associated with the reuse and recovery of materials e.g. repair workshops, second-hand shops, the processing of paper, fabric, metals and glass, the production of compost, and firms involved in the technology of recycling;
 - vii) The inclusion of facilities for the kerb-side collection of materials for reuse and recycling;
 - viii) The promotion of waste management good practice in major commercial developments and town centre improvement projects, in cooperation with traders and the occupiers of flats above business premises, and building on the 'Greening the High Street' initiative;
 - ix) Facilities for the transport of waste by canal and rail, and the safeguarding of railways. Facilities should be designed and operated in a way that does not harm the environment; and railheads will be safeguarded sidings, wharves and jetties will not be constructed in areas which are most valuable to wildlife, and the operation of barges must ensure that the risk of waste finding its way into waterways is minimised;
 - x) Backyard composting, with closed composters for organic waste.
2. The Council will permit proposals for waste management installations including installations for the handling and treatment of special waste, provided that they do not create undue adverse environmental effects or nuisance.
 3. New waste incineration facilities will only be permitted if they would not;
 - i) create undue adverse environmental effects or nuisance,
 - ii) divert a significant amount of waste which could be re-used or recycled, or
 - iii) make it materially more difficult to achieve agreed minimum recycling targets.

Development proposals should be mindful of the nationally recognised 'waste hierarchy'. This prioritises waste management methods designed to minimise waste generation (e.g. sharing of materials, composting); those which re-use and recycle waste (e.g. established schemes for glass and paper); followed by those which avoid landfill - Non incineration alternatives to landfill (e.g. pyrolysis and anaerobic digestion); Incineration with Energy Recovery; and landfill with possible methane recovery.

The Council views positively efforts to manage waste more sustainably, particularly initiatives, which contribute to achieving minimum generation of

waste, and increases waste reduction targets, reuse, recycling and composting. These can range from physical changes to property, local areas and waste management installations.

C2.2.4 *Local Targets*

Table C2.2 ⁽¹⁾ shows Ealing's waste targets.

Table C2.2 *Ealing's Waste Targets*

Code	Performance Indicator - Environment	Ealing 02/03	02/03 London Top 25%	03/04 Target	Ealing 03/04	04/05 Target	05/06 Target	06/07 Target
BV082a	% of the total tonnage of household waste arising which have been recycled	9.26%	11.00%	16.00%	10.95%	20.00%	20.00%	20.00%
BV082b	% of the total tonnage of household waste arising which have been composted	1.46%	2.30%	4.00%	1.21%	5.00%	10.00%	10.00%
BV084	Number of kilograms of household waste collected per head	465.0	441.0	450.0	424.6	450.0	450.0	450.0
BV086	Cost of waste collection per household	£38.57	£30.46	£37.75	£38.61*	£39.44	£45.44	£45.44
BV089	% satisfied with the cleanliness standard in their area	N/R	-	51%	42%	N/R	N/R	N/R
BV090a	% satisfied with: Refuse	N/R	-	67%	57%	N/R	N/R	N/R
BV090b	% satisfied with: Recycling	N/R	-	60%	52%	N/R	N/R	N/R
BV090c	% satisfied with: Civic Amenities Sites	N/R	-	60%	61%	N/R	N/R	N/R
BV091	% of population resident in the authority's area served by a kerbside collection of recyclables	77.0%	88.0%	80.0%	77.8%	85.0%	90.0%	90.0%

(1) Ealing 2004 05 (3).xls.

C2.3 HARROW

C2.3.1 Harrow's Vision

A borough that is safe, clean, healthy and prosperous with equal life opportunities for all - a friendly place to be

C2.3.2 Corporate Priorities

- Strengthening Harrow's Communities
- Putting Harrow on the Map
- Valuing Harrow's Customers
- Impact through Harrow's Partnerships
- Harrow – a true learning community
- A More Business like Organisation

C2.3.3 Local Targets (Valuing Harrow's Customers)

Performance Objectives for Residents' Priorities

- Enable at least 25.2% of household waste to be recycled or composted in 2005/6, with further improvements by 2008.
- Improve resident satisfaction with household waste collection to be in the top 25% of London Councils

Priority Actions for Residents' Priorities

- Significantly increase recycling through collecting and composting organic waste by rolling out the garden waste Brown Bin scheme across Harrow
- Increase the scope of Brown Bins to include kitchen waste and cardboard and change Brown compost waste bins to weekly collection and green (residual waste) bins to fortnightly (subject to Cabinet approval).

C1.3.4 Planned Improvements in 2005/6

- Introduce Brown Bins across the Borough
- Include kitchen waste and cardboard in Brown Bin
- Re-launch Green Box to non-participating households
- Introduce plastic bottles into the Green Box scheme
- Revamp Bring Sites to include Plastic bottles
- Introduce mini recycling centres into flats
- Start Slash Trash publicity campaign
- Introduce incentive schemes
- Introduce segregated litterbins in town centres

Planned Improvements for 2006/7

- Complete roll-out of plastic bottles in Green Box scheme
- Continue roll-out of mini recycling centres to flats
- Continue roll-out of segregated litterbins in town centres
- Continue Slash Trash campaign

- Change frequency of collections to weekly, Brown Bin, and fortnightly, Waste Bin.

Possible changes for Future Consideration

- Increase in range of materials collected?
- Weekly collections of recyclables (Green Box)?
- Provision of MRF?
- Change to third wheeled bin?
- Compulsory Recycling?
- Charging for waste collection?

To be a modern, well managed Council, retaining and improving the character of the Borough and engaging with our communities, customers and partners to provide higher standards of health, education, community safety and 'value for money' services for the people of Hillingdon.

Strategic Objectives and Priorities for Improvement

In the longer term the Council aims to maintain and improve the Borough's built environment and its open space by gradually increasing the level of investment in roads, buildings and green spaces. Key milestones will include making a difference to the Borough's environment that residents recognise.

In the medium term the Council aims to invest an additional £2 million in improving the condition of roads; improve street cleansing so that 75% of highways inspected reach national targets; improve the timescale for the removal of graffiti; fully implement the green waste collection scheme to all households; introduce estate based recycling and further expand the kerbside scheme to all homes with restricted access, enabling the Council to improve its recycling target ; improve the Borough's transport network and accessibility for all through the Borough Transport Strategy; begin work on the Local Development Framework (which replaces the UDP review) using the outcome of the Urban Capacity Study to maximise development opportunities on brownfield sites; continue the programme to provide 10 Universal Superloos across the Borough; introduce the 'Hillingdon on the Move' initiative to alleviate traffic congestion at hotspots across the Borough and respond to public concerns about pedestrian crossings.

Below are Hillingdon's short term 2004/05 targets for a cleaner and more pleasant Borough, set against the council's strategic waste management objectives:

- Increase the percentage of Hillingdon's waste, which is either recycled or composted to 24.5%. This target has already been met and the Borough's 2004/05 recycling rate is 27.3%;
- Expand estate based recycling to cover more households in the Borough. This target has already been achieved, such that all households in the Borough are now served;
- Continue to remove graffiti at no charge to residents within an average of 3 days of it being reported;
- Introduce an "Anti-Litter Campaign" aimed at improving cleanliness across the Borough;

- Deploy 3 new covert CCTV cameras by March 2005 to secure prosecutions against illegal fly tippers; and
- Introduce a series of measures to protect and enhance Green Spaces.

C2.4.2 *Local Targets*

Table C2.3 *Hillingdon's Performance Indicators for waste management (2003/04 Outturns and targets for 2004/05-2006/07) ⁽¹⁾*

Code	Performance Indicator	Actual 2003/04	Target 2003/04	Reasons for variance	Future Targets 2004/05	Future Targets 2005/06	Future Targets 2006/07
BV 84	Kgs of waste collected per head of population	540	510		530	520	515
BV 86	Cost of waste collection per household	£36.22	£29.00	Net increase in costs beyond the council's control.	£38.50	£40.50	£41.00
BV 90a	Household waste collection Base No.	81% 1,175	79%		no survey	no survey	85%
	Confidence Interval	2%					
BV 90b	Recycling facilities overall	63%	55%	Introduction of kerbside collection	no survey	no survey	67%
	Base No.	1,069					
	Confidence interval	3%					
BV 90c	Civic Amenity Sites Base No.	78% 862	73%		no survey	no survey	
	Confidence interval	3%					
BV 82a	Percentage of household waste recycled	13.89%	14.5%		14.5%	16%	18%
BV 82b	Percentage of household waste composted	9.96%	9%		10%	11%	12%
BV 91	Percentage of population resident in the authority's area, served by a kerbside collection of recyclables.	89%	100%		100%	100%	100%

C2.4.3 *Major Plans*

The council has a number of strategies for its services and also for programmes with partners. The objectives and performance proposals in the Best Value Plan are compatible with these other strategies which include the following:

Environmental Services

- Green Spaces Strategy
- Allotments Strategy
- Borough Transport Strategy
- Local Agenda 21 Strategy
- Car Parking, Transport and Land Use Strategy

- Contaminated Land Strategy
- Air Quality Strategy
- Unitary Development Plan

C2.5 HOUNSLOW

C2.5.1 Hounslow's Vision

To improve the quality of life and opportunities for the people of the Borough, and to celebrate diversity and build cohesion amongst our diverse communities.

C2.5.2 Strategic Aims and Objectives

Hounslow's strategic vision is supported through ten Executive priorities, including enhancing the environment.

Hounslow Council aims to maintain its commitment to recycling and waste minimisation and to continue to improve its performance in these areas.

C2.5.3 Local Targets

Recycling targets include:

- Carry out another 'Hounslow Recycling Champions' campaign to increase participation in the Council's recycling schemes;
- Further expansion of recycling facilities in housing estates from April 2004;
- Distribution of a further 1500 free home composters with training for residents and hotline support.

Business Critical Performance Indicators (to be monitored quarterly) include:

- BV82a % of household waste recycled
- BV82b % of household waste composted

Table C2.4 Best Value Performance Indicators ⁽¹⁾

Code	Description	Contents/format	Target 2003/04	2003/04	Target 2004/05	Target 2005/06	Target 2006/07
ENVIRONMENT							
199	Cleanliness of relevant land and highways	%	N/A	42.0%	35.0%	25.0%	23.0%
82a	Recycling	% household waste	14.5%	14.2%	17.8%	21.0%	23.0%
82b	Composting	% household waste	3.0%	1.5%	3.5%	4.0%	4.50%
82c	Recovery heat & power	% household waste	N/A	N/A	N/A	N/A	N/A
82d	Landfill	% household waste	N/A	N/A	N/A	N/A	N/A
84	Household waste collected	Kgs per capita	500.0	465.0	450.0	490.0	480.0
86	Cost waste collection	£ per household	£35.51	£37.28	£47.35	£48.72	£49.70
87	Cost waste disposal	£ per tonne municipal waste	N/A	N/A	N/A	N/A	N/A
91	Pop served by a kerbside collection of recyclables	%	100%	97.3%	100%	100%	100%

(1) http://www.bvpi.gov.uk/pages/KeyFacts_BVPI.asp?map=2&aid=29

C2.6 RICHMOND

C2.6.1 *Richmond's Vision* ⁽¹⁾

The Council and its partners want Richmond upon Thames to be a borough where people:

- take pride in the Borough;
- feel safe;
- live in a clean and pleasant environment; and
- enjoy good quality well managed services that are value for money.

C2.6.2 *Strategic Aims and Objectives*

Richmond has key strategic objectives to help achieve this vision, including investing in the environment and encouraging civic pride.

Richmond also has a number of key aims that relate to waste management and link to corporate priorities ⁽²⁾. These are:

- to provide cost effective environmentally acceptable and sustainable collection and disposal facilities for approximately 100,000 tonnes of domestic, commercial and special waste in partnership with the West London Waste Authority (WLWA).
- To support a more strategic and co-ordinated framework for waste management in London via the Greater London Authority and participate in appropriate regional programmes.
- To provide a Borough waste and recycling centre (Civic Amenity Site) available seven days per week for the use of residents and commercial waste producers, with the emphasis on material recovery.
- To expand the recycling of the Borough's waste stream to a new 30% target by 2005 where markets exist for the collected materials and investigate alternative recovery methods to landfill.
- To provide a public education and community action programme to reduce litter and waste, encourage re-use, recycling, environmental awareness and via the LA21 process, promote more sustainable lifestyles.
- To encourage the business community to incorporate waste reduction, recycling and environmental management into their mainstream business activities.
- To ensure issues of Best Value and sustainable development underpin service delivery.

(1) Best Value Performance Plan 2004-2005

(2) Service Plan for Waste and Recycling

- To offer advice and data to other Council departments on waste reduction and recycling and encourage purchase of recycled products wherever possible.

A Waste Recycling Strategy which outlines the Council's policies and plans for sustainable waste management over the next seven years was agreed in March 1999 and is currently being reviewed and updated. The strategy supports the service mission statement, which is as follows;

"to give priority to avoiding waste, reusing as much as possible, recycling and composting, and only when all these means have been exhausted, recovering energy from waste, and lastly, landfilling".

Richmond's Unitary Development Plan¹ (UDP) sets out the Council's proposals for the development and other use of land including measures for the improvement of the physical environment for the next 10 years or so. The policy reflects the Mayor's Vision for London, and the Government's objectives to encourage a pattern of land use which minimises harm to the environment and reduces the need to travel especially by car and to seek to improve air quality, to reduce waste, pollution and the use of energy, and to encourage recycling. More specifically, the Plan will provide a network of recycling facilities throughout the Borough and within major development schemes.

The UDP First Review was adopted on 1 March 2005.

C2.7 LOCAL TARGETS

Richmond's Best Value Performance Plan includes components to improve waste management. Best Value Performance Indicators for waste are shown in Table C2.5, and Local Performance Indicators are shown in Table C2.6.

Table C2.5 Best Value Performance Indicators

Code	Description	Contents/format	Target 2003/04	2003/04	Target 2004/05	Target 2005/06	Target 2006/07
ENVIRONMENT							
199	Cleanliness of relevant land and highways	%	New	15%	13%	10%	8%
82a	Recycling	% household waste	20.5%	17.64%	23%	29%	29%
82b	Composting	% household waste	4.5%	4.4%	6%	7%	7%
82c	Recovery heat & power	% household waste	0%	0%	0%	0%	0%
82d	Landfill	% household waste	75%	77.96%	71%	64%	64%
84	Household waste collected	Kgs per capita	551	501	501	501	501
86	Cost waste collection	£ per household	£32	£30.48	£37	£38	£39
87	Cost waste disposal	£ per tonne municipal waste	N/A	N/A	N/A	N/A	N/A

¹http://www.richmond.gov.uk/home/environment/planning/unitary_development_plan/udp_online_version.htm

Code	Description	Contents/format	Target 2003/04	2003/04	Target 2004/05	Target 2005/06	Target 2006/07
ENVIRONMENT							
89@	People satisfied with cleanliness standard in their area	% satisfied	60%	54%			
90a@	People satisfied with household waste collection	% satisfied	80%	73%			
90b@	People satisfied with waste recycling	% satisfied	75%	65%			
90c@	People satisfied with waste disposal (local tips)	% satisfied	75%	73%			
91	Pop served by a kerbside collection of recyclables	%	80%	79%	90%	90%	95%

Table C2.6 *Local Performance Indicators*

Description	Contents/format	Target 2003/04	2003/04	Target 2004/05	Target 2005/06	Target 2006/07
ENVIRONMENT						
Participation rate for home composting	%	%51	%50	%52	%53	%54
Recycling rate at the Reuse and Recycling Centre	%	%21	%22	%23	%25	%26
Number of collections missed per 100,000 collections of household waste	Number	150	113	100	90	80
Cost of street cleaning per household	£	£32.00	£33.85	£34.00	£35.00	£36.00
Cost of street cleaning per kilometre of street	£	£5,900	£6,728	£6,800	£7,000	£7,200
Number of complaints about street cleaning received	Number	700	291	280	250	200
Number of fly tips removed	Number	1,000	659	600	500	400
Number of gullies cleaned	Number	15,3000	16,162	15,300	15,300	15,300

C2.8 *THE LONDON PLAN*

C2.8.1 *Planning for Waste¹*

In order to meet the national policy aim that most waste should be treated or disposed of within the region in which it is produced (regional self-sufficiency) the Mayor will work in partnership with the London Boroughs, the Environment Agency, statutory waste disposal authorities and operators to ensure that facilities with sufficient capacity to manage 75 per cent (16 million tonnes) of waste arising within London are provided by 2010, rising to 80 per cent (19 million tonnes) by 2015 and 85 per cent (22.5 million tonnes) by 2020. An early alteration to this plan will seek to bring forward regional self sufficiency targets for individual waste streams.

The Mayor will work in partnership with the government, boroughs, Environment Agency, statutory waste disposal authorities and operators to minimise the level of waste generated, increase re-use and recycling and composting of waste and reduce landfill disposal. Boroughs should ensure that land resources are available to implement the Mayor's Municipal Waste Management Strategy, Waste Strategy 2000, the Landfill directive and other EU directives on waste.

The Mayor will work in partnership with the waste authorities, Environment Agency and operators to exceed recycling or composting levels in household waste of:

- 25 per cent by 2005
- 30 per cent by 2010
- 33 per cent by 2015.

The minimum quantities represented by those targets are 1 million tonnes in 2005, 1.35 million tonnes in 2010 and 1.65 million tonnes in 2015. This would leave some 3.05 million tonnes in 2005, 3.1 million tonnes in 2010 and 3.25 million tonnes in 2015 to be dealt with by other means, with a declining reliance on landfill and an increasing use of new and emerging technologies. Having regard to the existing incineration capacity in London and with a view to encouraging an increase in waste minimisation, recycling, composting and the development of new and emerging advanced conversion technologies for waste, the Mayor will consider these waste management methods in preference to any increase in mass burn incineration capacity. Each case however will be treated on its individual merits. The aim is that current incinerator capacity will, over the lifetime of this plan, become orientated towards non-recyclable residual waste.

¹http://www.london.gov.uk/mayor/strategies/sds/london_plan/

Appendix D

Indicative Action Plans

Some Boroughs may not wish to be bound by these action plans and will produce plans of their own.

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Action Plans will be used by the West London Waste Authorities to guide and to monitor the implementation of the Strategy. These provide a route map for how the Strategy's objectives will be achieved. The authorities recognise that wholesale changes in waste management cannot be made immediately and that new arrangements will need to be implemented step by step over a period of time. The use of Action Plans can help the Strategy to be brought into effect in a flexible way and to evolve over a number of years in response to changing performance and circumstances.





These Action Plans will be 'live' documents and will be kept regularly up to date. Significant changes to Action Plans may trigger a change to the overall Strategy.

The Action Plans included within this appendix are:

- implementing the Strategy;
- waste reduction;
- waste reuse;
- recycling and composting;
 - dry recyclables;
 - kitchen & garden waste;
 - Civic Amenity (CA) sites.
- diversion of biodegradable municipal waste from landfill;
- management of electronic equipment; and
- management of hazardous waste.

Each of the Action Plans contains details of activities to be undertaken, by whom and by what date. It also includes details of the policies and objectives to which the plan relates.

The symbols and colours used on the plans are as follows:

	Activity	B	London Borough of Brent
	Target Date	E	London Borough of Ealing
	Proposed/potential activity	Ha	London Borough of Harrow
	Proposed/potential target date	Hi	London Borough of Hillingdon
●	Milestone	Ho	London Borough of Hounslow
		R	London Borough of Richmond
		W	West London Waste Authority
		All	All Authorities

This action plan links closely to Policy 1, which states: *Current and future policy development will have regard to the National and Mayor of London's Municipal Waste Management Strategies and other relevant national, regional and local guidance.*

Figure 2.1 Action Plan for Implementing the Strategy

	Who?	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	2006/7
STRATEGY DOCUMENT COMPLETION												
Draft strategy sign off and release for public consultation	All auths											
Public consultation	All auths											
Approval of final Draft	All auths											
Draft Strategy to GLA for consultation	WLWA											
Final Strategy to GLA	WLWA											
Final Strategy to Defra	WLWA											
IMPROVING JOINT WORKING												
Investigate structural issues re. trade waste/CA site income	All auths											
Investigate how LATS costs transferred to Boroughs/equity	All auths											
Investigate options for recycling credits/levy	All auths											
Conclusion of joint working	All auths											
Agree any changes between authorities	All auths											
BOROUGH STRATEGIES												
Prepare strategy or action plan	Brent											
Review 2003 strategy, include action plan	Ealing											
Review strategy, include action plan	Harrow											
Review strategy, include action plan	Hillingdon											
Review 2003 strategy, include action plan	Hounslow											
Review strategy, include action plan, updated by Summer 05	Richmond											

Last updated: 16 September 2005

Tackling waste reduction will help the authorities to reduce costs and waste reduction sits at the top of the waste hierarchy. Home composting, real nappy use and exclusion of trade waste from household waste collections are currently major ways of reducing household waste generation. *Figure 3.1* sets out how the West London Authorities intend to address waste reduction and reuse, setting out who will do what and when.

D3.1

LINKS TO CORE STRATEGY

The actions listed *Figure 3.1* link closely to Objectives 1 and 11, which are to:

- manage waste in accordance with the waste hierarchy: reduce waste first, then reuse, recycle and compost resources, then recover energy and, as a last resort, dispose of waste (Objective 1); and
- work together to encourage waste reduction and reuse initiatives within the wider community. (Objective 11).

And also to Policy 2: West London Waste Authority and its constituent Boroughs will prioritise waste reduction and waste reuse.

D3.2

TARGETS & MONITORING

Suggested targets for this area of this strategy have been developed to help monitor the implementation of activities. These are to:

- divert an additional 40 000 tonnes of waste from the household waste stream by 2020 through home composting, real nappies campaigns and other activities:
- get 280 000 households home composting by 2020 (government target to get 50% of households home composting, WLWA has approximately 360 000 households with gardens)
- remove all trade waste from household waste stream where possible

These have yet to be approved by authorities.

Monitoring waste reduction activities is difficult. West London will rely on survey data to understand the impact of waste reduction programmes. A baseline survey will be needed to determine current levels of home composter use and use of real nappies and potentially also the amount of trade waste

within the household waste stream. It is likely that surveys will be needed every three years to monitor performance.

Figure 3.1 Action Plan for Waste Reduction

	Who?	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Action plan agreed	All Boroughs															
HOME COMPOSTING																
<i>Provision of subsidised bins</i>																
Determine number of home composters already provided	All Boroughs															
<i>Promotion work and policy support</i>																
Survey to determine number of households home composting	All Boroughs															
Promotion campaign	All Boroughs															
280 000 households home composting (77% of households with gardens)																
REAL NAPPIES																
Recruitment of outreach worker for WLWA area	WLWA															
Promotion for real nappies (eg real nappy week)	All Boroughs															
Decision on whether to provide subsidised service (Ha and R already provides subsidised service)	B, E, Hi, Ho,															
Survey of number of families using real nappies																
10% of families to use real nappies																
20% of families to use real nappies																
TRADE WASTE ENFORCEMENT																
Survey to determine how much trade waste in hhld stream	All Boroughs															
Decisions on future of trade waste services (see LATS plan)	All Boroughs															
Set targets for trade waste within household stream	All Boroughs															
Policy support exclude trade from hhld waste (CA/collec)	All Boroughs															
Agreement to set up enforcement / inspection teams	B, E, Ha, Ho															
Enforcement/inspection teams extended	E, Hi, Ri															
Revisit target and plan additional actions																
All have enforcement teams																
TARGET																
20 000 tonnes of waste excluded from household stream per year																
40 000 tonnes of waste excluded from household stream per year																

Last updated: 16 September 2005

D4 ACTION PLAN: WASTE REUSE

Encouraging the reuse of waste will help authorities to reduce costs and address the need to move waste up the waste hierarchy. The action plan, setting out who does what and when is shown in *Figure 4.1*.

D4.1 LINKS TO CORE STRATEGY

This action plan for waste reuse, like that for waste reduction is also linked closely to objectives 1 and 11 and policy 2.

D4.2 TARGETS & MONITORING

Targets for monitoring waste reuse will be prepared as these action plans are revised by constituent Boroughs.

Figure 4.1 Action Plan for Waste Reuse

	Who?	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
REUSE																
Action plan agreed	All Boroughs															
<i>Prepare targets and monitoring strategy for reuse</i>																
<i>All CA sites to provide areas for reuse of wood</i>																
Maintain current area for reuse/salvage contract	B, E, Ho, Ri															
Maintain current area for reuse, plus plans for improvement	Hi															
<i>All CA sites to provide areas for reuse of rubble</i>																
Maintain current area for reuse/salvage contract	B, E, Hi, Ho, Ri															
<i>All CA sites to provide areas for reuse of furniture</i>																
Maintain current service/links with furniture reuse charity	B, Hi, Ho, Ri															
At two sites currently, plans for final site	E															
Maintain links with furniture reuse charity	Hi, Ho, Ri															
<i>Promotion of Reuse</i>																
Discussion of WLWA-wide promotion of reuse																
Continue general promotion of waste reduction and reuse through Council literature, doorstepping etc.	All Boroughs															

Last updated: 23rd June 2005

Tackling recycling and composting is needed to ensure that waste is managed more sustainably. It will help the authorities to meet statutory, regional and local targets for recycling and composting and will also help to divert biodegradable municipal waste away from landfill. *Figure 5.1* provides the overarching action plan for recycling and composting. Separate action plans are provided for:

- kerbside recycling;
- bring recycling;
- recycling from flats, estates and schools;
- kitchen & garden waste recycling;
- civic amenity sites;
- recycling of other types of waste;
- improving levels of participation in schemes and levels of material capture by schemes; and
- planning sorting capacity and procurement.

D5.1

LINKS TO CORE STRATEGY

The action plans for recycling and composting link to objectives 1, 9 and 10, these are:

- *manage waste in accordance with the waste hierarchy: reduce waste first, then reuse, recycle and compost resources, then recover energy and, as a last resort, dispose of waste (Objective 1);*
- *exceed performance required by current targets, to reduce the risk of failure and to put in systems that allow West London to be ahead of the game (Objective 9); and*
- *work together to develop coordinated services and infrastructure for waste collection, treatment, transfer and disposal and to share the costs and rewards of implementing the strategy (Objective 10).*

It also links to policies 3 and 4, which state:

Policy 3: *Jointly, the West London Waste Authority and constituent Boroughs will aim to recycle and compost:*

- *28% of municipal waste by 2006/7;*
- *40% of municipal waste by 2010; and*
- *50% of municipal waste by 2020.*

These targets will aim to be reached from a base of meeting statutory performance standards for household waste recycling and composting in each authority by April 2006. The Action Plans will set intermediate targets.

Policy 4: *The collection authorities will serve all households with recycling collections of at least four materials by 2008.*

D5.2

TARGETS & MONITORING

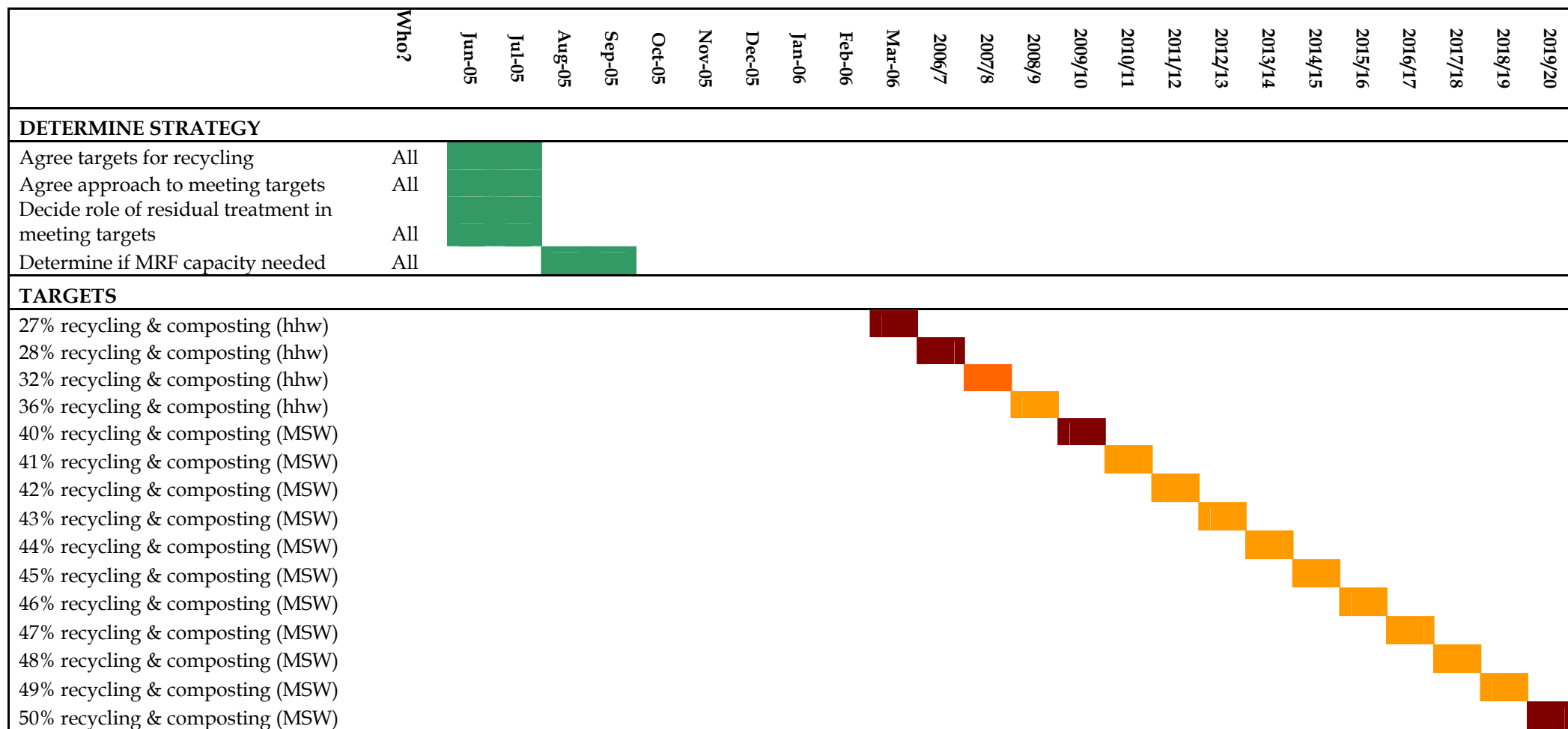
Targets for recycling and composting are:

- 27% recycling & composting (household waste) in 2005/6;
- 28% recycling & composting (household waste) in 2006/7, increasing linearly to:
- 40% recycling & composting (MSW) in 2009/10;
- 50% recycling & composting (MSW) in 2019/20;

From a baseline of 17% recycling & composting in 2003/4.

This will be monitored through examining BVPI 82 a & b figures for household waste recycling & composting. Other MSW recycling figures already captured by authorities will be added to this to give MSW recycling & composting

Figure 5.1 Action Plan for Recycling & Composting



Last updated: 23rd June 2005

hhw = household waste

Figure 5.2 *Range of Materials Currently Collected by Kerbside for Recycling*

RANGE OF MATERIALS	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
The Boroughs already collect the following materials (✓) in their kerbside schemes. The proposed dates for adding new materials are shown in the action plan below						
PAPER (News & Pams)	✓	✓	✓	✓	✓	✓
YELLOW PAGES	✓	✓	✓	✓	✓	✓
CARDBOARD	-	-	Organic Bin	-	✓	-
GLASS (Bottles and Jars)	✓	✓	✓	-	✓	✓
CANS	✓	✓	✓	✓	✓	✓
ALUMINIUM FOIL	✓	✓	✓	✓	✓	✓
TEXTILES	✓	✓	✓		✓	✓
BATTERIES	✓	✓	-	-	✓	-
PLASTIC BOTTLES	-	-	✓	✓	✓	-
SMALL WEEE	-	-	✓	-	-	-
ENGINE OIL	-	-	-	-	✓	-

Figure 5.3 *Action Plan for Kerbside Recycling*

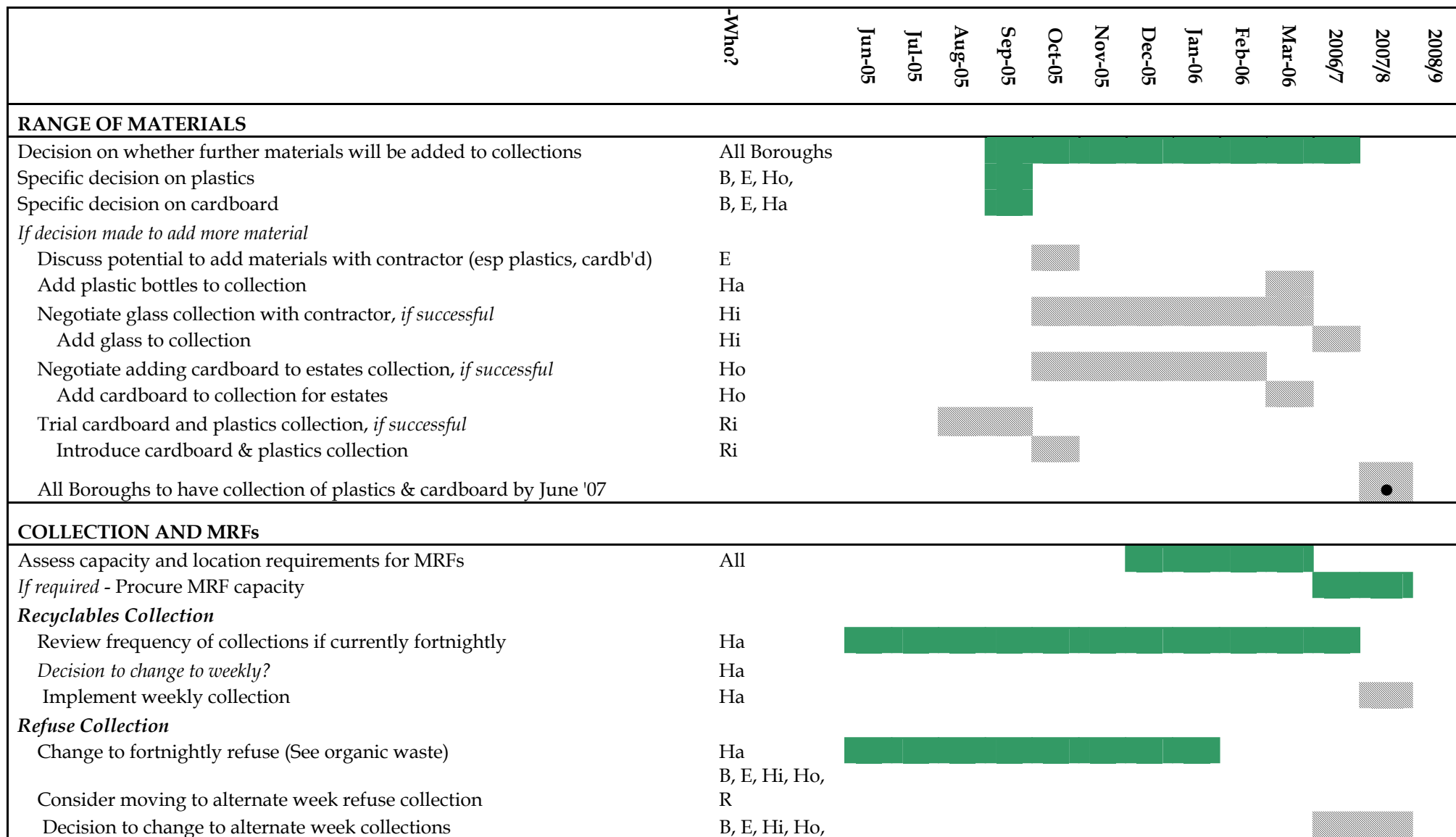
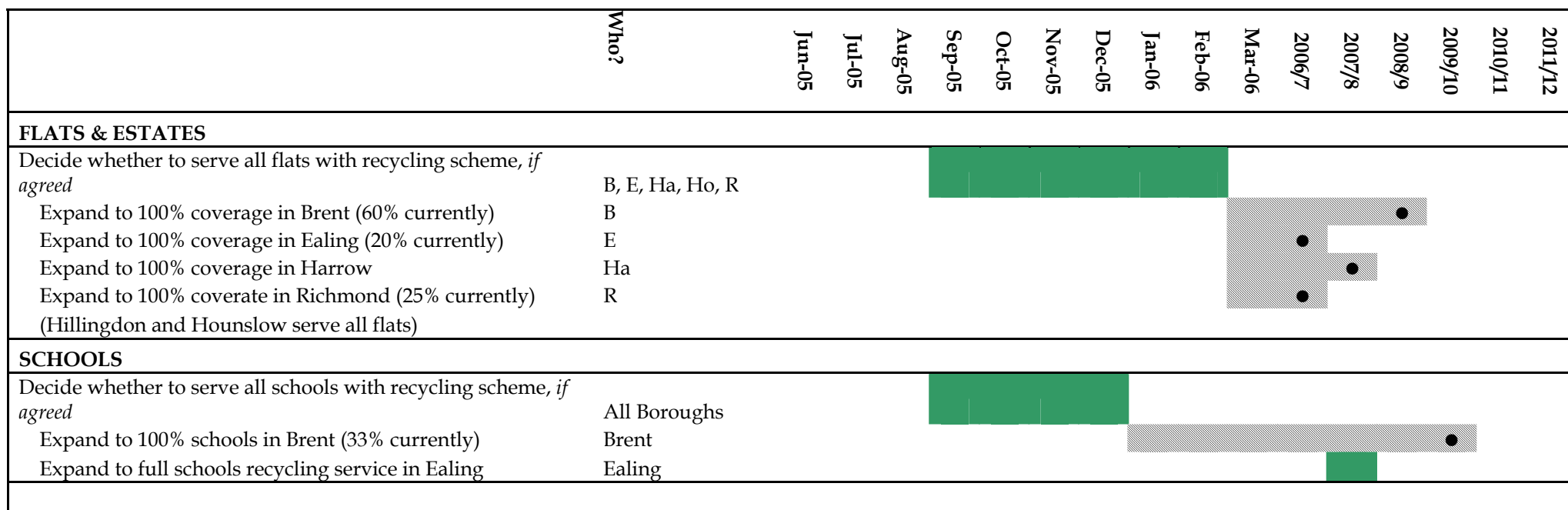


Figure 5.5 Action Plan for Bring Recycling



Last updated: 1st September 2005

Figure 5.6 Action Plan for Flats, Estates & Schools



Last updated: 23rd June 2005

NB Please refer to *Annex B* of the Baseline Report for the range of materials currently collected at flats, estates and schools in each borough

Figure 5.7 *Range of Organic Materials Collected at Kerbside for Composting*

RANGE OF MATERIALS	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond
The Boroughs already collect the following materials (✓) in their kerbside organic waste schemes						
KITCHEN WASTE	✓ (trial)	✓ (trail)	✓	-	✓ (trail)	✓ (trial)
GARDEN WASTE	✓	✓	✓	✓	✓	✓
CARDBOARD	-	-	✓	-	-	

Figure 5.8 Action Plan for Kitchen & Garden Waste

[illegible]

Weekly Service

Decision whether to run service weekly	Ealing, Richmond
Serve all households weekly (June 2006)	Brent
Serve all households weekly (Sept 2006)	Harrow
Serve all households weekly (aspirational target)	Hillingdon
(Hounslow already has a weekly collection, Richmond has a fortnightly opt-in service and does not plan to change)	

Households

Serve all households	Harrow
(E, Ho, R, B, Hi serve all households, some opt in)	



Last updated: 23rd June 2005








Figure 5.9 Action Plan for Civic Amenity Sites

	Who?	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	2006/7	2007/8	2008/9	2009/10	2010/11
RECYCLING & COMPOSTING																
<i>Brent</i>																
Plan improvements at CA sites	Brent															
<i>Ealing</i>																
Refurbishing remaining two CA sites (one site recently refurbished)	Ealing															
Reach CA recycling & composting rate (incl rubble) of 40% (August 2007)	Ealing															
<i>Harrow</i>																
Plan improvements at CA sites	Harrow															
Roll out improvements at CA sites	Harrow															
<i>Hillingdon</i>																
Plan redevelopment of 2 CA sites	Hillingdon															
Roll out improvements at CA sites	Hillingdon															
<i>Hounslow</i>																
Continue improving performance at CA site (recent refurbishment)	Hounslow															
<i>Richmond</i>																
Kew site layout and signage to be improved (WRAP funding)	Richmond															
TARGET																
Reach CA recycling rate (incl rubble) of 50% (May 2007)																
Reach CA recycling rate (incl rubble) of 70% (March 2010)																
Agree target for diversion of green waste through CA sites (see reuse, sorting of bulky waste for reuse)																

Last updated: 23rd June 2005

Figure 5.10 Action Plan for Other Wastes

[illegible]

recycling (CA sorting)			
Suggested target to achieve 30% recycling	All authorities		
EVENTS			
All to agree West London approach to recycling from events	All authorities		
Continue to provide glass collection service following rugby matches at Twickenham (no major events in Hounslow)	R		
PACKAGING			
Review packaging waste & liaison with industry	All authorities		
Work with trading standards	Richmond		
Work with British Retail Association	WLWA		

Last updated: 8th Sept 2005

Figure 5.11 Action Plan for Improving Participation & Capture

	Who?	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	2006/7	2007/8	2008/9
IMPROVING PARTICIPATION & CAPTURE														
<i>Incentive schemes</i>														
Outcome of WIP funded project (barcode reading £50 lucky boxes)	Ealing													
Outcome of Waste Watch study	Hounslow													
Agree incentives needed across West London to improve recycling rate	B, E, Ha, Ho, R													
Implement agreed incentive schemes (Brent have no plans to extend incentives schemes. Hillingdon has no plans to implement incentives schemes)	B, E, Ha, Ho, R													
<i>Promotion</i>														
Continue recycle for London promotions	B, E, H													
Recycle for London promotions, continued employment of recycling officers	Ha, Ho													
Recycle for London promotions, recruitment of recycling assistant	R													
Review, consider adopting attitude changing policies, <i>if agreed</i> :	All authorities													
Make decision on compulsory recycling & others	All authorities													
Implement policies (by December 2007)	All authorities													

Last updated: 23rd June 2005

Figure 5.12 Action Plan for Sorting Capacity & Procurement

	Who?	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
PROCUREMENT																					
To ensure collections contracts are reviewed and amended as necessary to support the implementation of the Strategy	All boroughs																				
Pursue procurement of residual treatment bridging capacity	WLWA																				
Secure residual waste treatment capacity	WLWA																				

Last updated: 8th Sept 2005

West London is required to reduce the amount of biodegradable municipal waste landfilled year by year between 2005 and 2020. The action plan in *Figure 6.1* explains how the authorities are aiming to achieve the required levels of reduction and how they may use the Landfill Allowance Trading Scheme to meet any shortfall.

D6.1**LINKS TO CORE STRATEGY**

This action plan for reduction of biodegradable municipal waste to landfill is closely linked to objectives 1, 3, 8, 9 and 10.

- *manage waste in accordance with the waste hierarchy: reduce waste first, then reuse, recycle and compost resources, then recover energy and, as a last resort, dispose of waste (Objective 1);*
- *make changes to the way waste is managed now to prevent environmental degradation, rather than postpone decisions (Objective 3);*
- *minimise the costs of waste management while complying with legislative requirements (Objective 8) ;*
- *exceed performance required by current targets, to reduce the risk of failure and to put in systems that allow West London to be ahead of the game (Objective 9); and*
- *work together to develop coordinated services and infrastructure for waste collection, treatment, transfer and disposal and to share the costs and rewards of implementing the strategy (Objective 10).*

It is also linked to policies 5 and 6, which state:

- **Policy 5:** *WLWA and its constituent Boroughs will reduce biodegradable municipal waste landfilled as best fits with the Landfill Allowance Trading Scheme.*
- **Policy 6:** *WLWA and constituent Boroughs will seek a residual waste management solution in accordance with the waste hierarchy, that presents value for money and that offers reliability in the long term.*

D6.2**TARGETS & MONITORING**

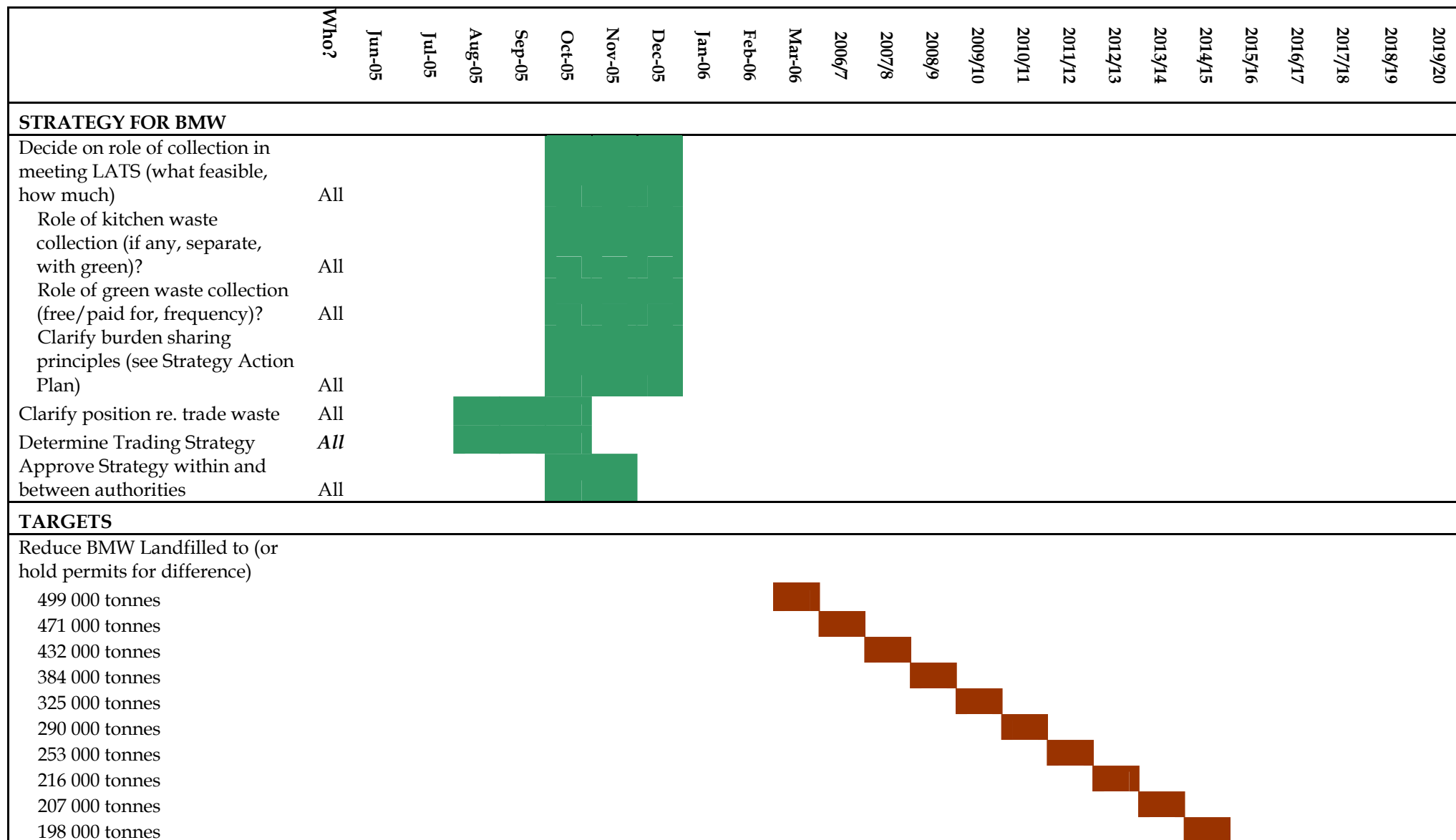
Targets are for the authorities to reduce the tonnes of municipal waste landfilled to the levels below or to hold landfill allowances (permits) for the difference and are shown in *Table 6.1*. Monitoring will be undertaken by the West London Waste Authority as they report to the Environment Agency on an annual basis.

Table 6.1 *Targets for Biodegradable Municipal Waste Landfilled*

Date	Target
2005/6	499 000
2006/7	471 000
2007/8	432 000
2008/9	384 000
2009/10	325 000
2010/11	290 000
2011/12	253 000
2012/13	216 000
2013/14	207 000
2014/15	198 000
2015/16	189 000
2016/17	18 0000
2017/18	17 0000
2018/19	161 000
2019/20	152 000

(note, targets include 2% contingency, rounded to nearest 1 000 tonnes)

Figure 6.1 Action Plan for BMW





Last updated: 23rd June 2005

The authorities will need to be aware of the changing legislation surrounding the management of waste electronic and electrical equipment. Civic Amenity sites within the authorities' areas may become reception centres for this type of material. A simple action plan is shown in *Figure 7.1*.

This action plan links closely to Objective 3 and Policy 7 which state:

- make changes to the way waste is managed now to prevent environmental degradation, rather than postpone decisions (Objective 3); and
- **Policy 7:** The West London waste authorities will seek to provide waste management services that offer good value, provide customer satisfaction and that meet and exceed legislative requirements.

Figure 7.1 *Action Plan for Management of WEEE*

	Who?	2005/6	2006/7	2007/8	2008/9
MANAGEMENT OF ELECTRICAL EQUIPMENT					
Provision of area for WEEE collection at CA sites	All				
Adapt special collection services to collect segregated WEEE	All				
Continue Kerbside service	Ha				
Consider provision of kerbside service	B, E, Hi, Ho, R				
Introduce kerbside service?	B, E, Hi, Ho, R				



Last updated: 1st September 2005

The legislation surrounding the management of hazardous waste is changing. The West London Waste Authorities will need to be aware of this. This has been incorporated into the action plan in *Figure 8.1*.

This action plan links closely to Objective 3 and Policy 7 which state:

- make changes to the way waste is managed now to prevent environmental degradation, rather than postpone decisions (Objective 3); and
- **Policy 7:** The West London waste authorities will seek to provide waste management services that offer good value, provide customer satisfaction and that meet and exceed legislative requirements.

Figure 8.1 *Action Plan for Hazardous Waste & Batteries*

	Who?	2005/6	2006/7	2007/8
Provision for hazardous waste/ELVs/Fridges Accommodate changes to the regulations Bridging facilities between introduction of haz waste regs & WEEE	All			
Provision of facilities for household batteries collection Currently provide Under review (Harrow have no plans to introduce battery collection)	B, E, Ho, Ri Hi			

Last updated: 23rd June 2005

Appendix E

References, Glossary and Abbreviations

DETR (2000) Waste Strategy 2000

DETR (2001) Guidance on Municipal Waste Management Strategies

Defra (2005) Guidance for Waste Collection Authorities on the Household Waste Recycling Act 2003

Defra (2004a) Guidance for waste authorities in two-tier areas on application of duty to have a Joint Municipal Waste Management Strategy

Defra (2004b) Consultation on Draft Guidance on Municipal Waste Management Strategies

Defra (2004c) Advice on Data and Forecasting

Entec and Defra (2004) Analysing the 'Mix' and Interactions between Household Waste Systems, Good Practice Guidance

London CRN for GOL (2005) Estates Recycling in London – A Study of Best Practice and Options for Improvement

GLA (2003) Rethinking Rubbish in London: The Mayor's Municipal Waste Management Strategy

GLA (2004) The London Plan

West London Waste Authority Best Value Performance Plan 2004 -5

Waste Watch for Defra Recycling for Flats

Term	Description
Best Value	The duty on local authorities to deliver effective, economic and efficient services and seek improvement in the quality and standard of their service provision.
Best Practicable Environmental Option (BPEO)	A BPEO is the outcome of a systematic and consultative decision making procedure that emphasises the protection and conservation of the environment. The BPEO process determines, for a given set of objectives, the option that provides the most benefits or the least damage to the environment, at acceptable cost, both in the long-term and in the short-term. The concept of BPEO has now been removed from the national waste strategy, Waste Strategy 2000.
Biodegradable waste	This is waste that is able to decompose through the action of bacteria or other microbes, including materials such as paper, food waste and garden waste.
Bring site	A bring site or brink bank is a localised collection point for recyclables such as glass, paper, cans, etc
Bulky waste	Waste is considered 'bulky' if weighs more than 25kg or any item that does not fit into the householder's bin; or if no container is provided, a cylindrical receptacle of 750mm in diameter and 1m high.
Central composting	Large-scale schemes which turn kitchen and garden waste from households into compost and which may also accept green park waste.
Clinical waste	Clinical waste is generated by medical, nursing, dental, veterinary, pharmaceutical, etc and may present a risk of infection.
Commercial waste	Commercial waste arises from premises used for trade, business, sport, recreation or entertainment, but excluding municipal and industrial waste.
Composting	The degradation of organic wastes in the presence of oxygen to produce a fertiliser or soil conditioner.
Dry recyclables	Materials such as paper, textiles and cans that can be collected through kerbside schemes or bring banks.
Gasification	This process is defined in the Renewables Obligation Order 2002 as the substoichiometric oxidation or steam reformation of a substance to produce a gaseous mixture containing two or all of the following substances: oxides of carbon, methane and hydrogen.
Green waste	Vegetation and plant waste from household gardens and public parks and gardens
Hazardous waste	Defined in the Landfill Regulations as any waste defined in Article 1 (4) of Directive 91/689/EEC on hazardous waste.
Household waste	Waste from domestic properties including waste from RRCs, material collected for recycling and composting, plus waste from educational establishments, nursing and residential homes and street cleansing waste.

Term	Description
Incineration	This is the controlled burning of waste, either to reduce its volume or its toxicity, whose current emission standards are very high. Ash residues are usually landfilled.
Kerbside collection	Any regular collection of recyclables from private households and from commercial or industrial premises. It excludes collection services requested on demand.
Landfill sites	Landfills are areas of land in which waste is deposited, which often consist of disused quarries. In areas where there are limited or no ready-made voids, the waste is deposited above ground and the landscape is contoured, which is named landraising.
Municipal waste	This includes all waste collected by a Waste Collection Authority, or its agents, such as waste from household, municipal parks and gardens, beach cleansing, commercial or industrial premises, and fly-tipping.
Precautionary Principle	<i>As defined in Waste Strategy 2000:</i> Any integrated waste management system must make allowance for the precautionary principle, which states that where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.
Putrescible	Organic material with a tendency to decay, eg kitchen waste
Recycling	Recycling involves the reprocessing of waste material, either into the same product or a different one. Many non-hazardous wastes such as paper, glass, cardboard, plastics and scrap metals can be recycled.
Reduction	Reduction or minimisation can be accomplished through reviewing the production processes as to optimise utilisation of raw (and secondary) materials and recirculation processes. This may lower disposal costs and the usage for raw materials and energy. Also householders can reduce waste by reusing products and buying goods with reduced packaging.
Reuse	The commercial sector can reuse products designed to be used a number of times, such as reusable packaging. Householders can buy refillable containers, or re-use plastic bags. Reuse contributes to sustainable development and can save raw materials, energy and transport costs.
Residual Waste	Waste collected in black sacks/wheeled bins that has not been collected for recycling or composting.
Separate collection	Kerbside schemes where recyclables are collected separately to the ordinary household waste collection - by a different vehicle/part of the vehicle or at a different time.
Special waste	This is defined by the Control of Pollution (Special Wastes) Regulations 1980 as meaning any controlled waste that contains any of the substances listed in Schedule 1 to the Regulations, or is dangerous to life, or has a combustion flashpoint of 21°C or less, or is a medical product as defined by the Medicines Act 1968 .
Strategic Environmental Assessment (SEA)	Strategic Environmental Assessment – SEA describes environmental assessment applied to policies, plans and programmes, as required under the SEA Directive.

Term	Description
Treatment	This involves the chemical or biological processing of certain types of waste to render them harmless, to reduce their volume before landfilling, or to recycle certain materials.
Waste	This is the wide-ranging term including most unwanted materials and is defined by the Environmental Protection Act 1990. Explosives and radioactive wastes are excluded.
Waste arisings	This is the amount of waste produced in a given area during a given period of time.
Waste Hierarchy	<p>The waste hierarchy, introduced by the EU Waste Framework Directive, is an abstract framework that prioritises the options for waste management. It represents a sliding scale starting with the most sustainable option (reduction) and ending with the least sustainable option (disposal):</p> <ul style="list-style-type: none"> • reduction; • re-use; • recovery (ie recycling, composting and energy recovery); • disposal.
Waste management industry	This comprises businesses and not-for-profit organisations carrying out the collection, treatment and disposal of waste.
Waste streams	Waste produced by different sources.

Abbreviation	Description
ABPR	Animal By-products Regulations 2003
AD	Anaerobic digestion – AD is the biological decomposition of organic material in the absence of oxygen, producing biogas (typical composition of 65% methane and 35% carbon dioxide) and residue (digestate) suitable to be used as a soil improver.
ATT	Advanced thermal treatment – ATT comprises processes such as gasification and pyrolysis in which waste is heated to very high temperatures to produce a gas, which can be used for electricity production.
BMW	Biodegradable municipal waste
BPEO	Best Practicable environmental Option (see above for explanation)
BVPI	Best Value Performance Indicator
C&D waste	Construction and demolition waste
C&I waste	Commercial and industrial waste
CA site	Civic amenity site
Defra	Department for Environment Food and Rural Affairs
DETR	(former) Department of the Environment, Transport and the Regions
EC	European Commission
EfW	Energy from waste – This includes a number of established and emerging technologies, such as incineration. Many types of waste are combustible due to their relatively high calorific values – this energy can be recovered through eg incineration with electricity generation.
ELV	End-of-life vehicle - An ELV is a vehicle that is considered waste within the meaning of Article 1 of the Waste Framework Directive
EPA	Environmental Protection Act 1990
EU	European Union
GLA	Greater London Authority
JWDPD	Joint Waste Development Plan Document
LATS	Landfill Allowance Trading Scheme
LB	London Borough
MRF	Material Recovery Facility
MSW	Municipal solid waste

Abbreviation	Description
RDF	Refuse derived fuel
RoHS Directive	EC Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment.
RRC	Reuse and Recycling Centre (refurbished CA sites)
SA	Sustainability Appraisal - Under the Planning and Compulsory Purchase Act 2004 all Development Plan Documents and Supplementary Planning Documents have to be the subject of a Sustainability Appraisal. The appraisal will ensure that the plan conforms to the concepts of Sustainable Development, and also to ensure it meets the requirements of the European Strategic Environmental Assessment (SEA) Directive.
SEA	Strategic Environmental Assessment (See above)
The WET Act	The Waste and Emissions Trading Act
UK	United Kingdom
WCA	Waste Collection Authority – WCA is a local authority responsible for regularly collecting of from each household waste. It can also collect commercial and industrial waste from the private sector, if requested.
WDA	Waste Disposal Authority – WDA is a local authority responsible for the provision of civic amenity sites, and disposal sites at which the Waste Collection Authorities dispose of their controlled waste.
WEEE	Waste electrical and electronic equipment
WLWA	West London Waste Authority