

# THE LONDON BOROUGH OF BRENT WASTE STRATEGY

## BASELINE ASSESSMENT REPORT



May 2005



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## 1.0 INTRODUCTION

### 1.1 Purpose of the Strategy

Targets set under the Government's Waste Strategy<sup>1</sup> require the London Borough of Brent (Brent) to improve its recycling rate from approximately 14% at present to 33% by 2015/16.

Interim targets include 18% by 2005/06 (Best Value Performance indicator, BVPI Targets) and 30% by 2010/11 (Waste Strategy 2000 targets).

Improving Brent's performance is crucial to the Council's ambition to be an "excellent" Authority under the Government's Comprehensive Performance Assessment (CPA).

In 2003 a Waste Management Inspection was carried out in Brent by the Audit Commission. This resulted in a rating of One Star (a Fair Service), with promising prospects for improvement.

Other major drivers for improvement include the annual Landfill Tax increase set at £3 per tonne as from 2005-06, which will increase Landfill Tax from its current level of £15 per tonne to at least £35 per tonne. In addition, the Government has introduced the Landfill Allowance Trading Scheme (LATS) which will significantly limit the amount of municipal waste that can be disposed of to landfill. Failure to reduce the landfilling of waste to a level within an agreed allocation could see the Waste Disposal Authority, West London Waste, and in turn Brent Council being subject to significant fines.

As the cost of waste disposal to landfill is set to become significantly more expensive than at present it is even more important for the Council to implement waste minimisation initiatives and successful recycling/composting schemes.

Brent's priorities for action include:

- The development of a comprehensive waste management strategy;
- Raising local awareness to engage public participation;
- Improving and extending existing schemes; and
- Introducing new recycling schemes.

The aim of this document is to provide a framework for strategic decisions to be taken on the management of municipal waste in Brent over the next 20 years. It adopts a flexible approach, recognising the need to respond to rapid developments of new ideas and opportunities. The strategy covers only municipal waste – i.e. that waste stream for which the Council has a responsibility as a Waste Collection Authority (WCA).

The West London Waste Authority are working together with its constituent Boroughs to produce a Joint Municipal Waste Management Strategy for the WLWA area, and have produced a Baseline Report to which this Baseline Assessment gives regard.

<sup>1</sup> Waste Strategy (2000) DETR

## 1.2 Context of the Strategy

The national policy objectives for waste management, which are set out in the Government's waste strategy for England and Wales, "Waste Strategy 2000", (and the Waste Strategy Unit Report "Waste Not Want Not" that builds on Waste Strategy 2000) and "Guidance on Municipal Waste Management" (March 2001), set the following broad requirements:

- To reduce the amount of waste that society produces;
- To make the best use of the waste that is produced, and
- To choose waste management practices which minimise the risks of immediate and future environmental pollution and harm to human health.

Fundamental to any waste strategy is the **Waste Hierarchy**, first put forward in the Government's Sustainable Development Strategy in January 1994. This waste hierarchy is illustrated in Figure 1.1.

Waste reduction is at the top of the hierarchy. To date in the UK the principal focus has been on the recycling of waste, however it is simply not enough merely to find different ways of dealing with the waste produced, and the priority must therefore shift to producing less waste in the first place.

**Figure 1.1 The Waste Hierarchy**



Second in the hierarchy is reuse of waste, which essentially requires using a product over and over again. If the product regarded as waste is no longer suitable for reuse, it may still contain materials of value that can be recovered through recycling, composting or treatment with energy recovery.

Only when all of the other levels of the waste hierarchy have been maximised, should disposal of material be considered. Various European Union Directives limit the amount and type of remaining material that is permitted for landfill. However, regardless of the method of waste management applied, there will always be a need for landfill for those elements of the waste stream that cannot be further re-used, recycled, composted or otherwise treated.

## 2.0 BRENT IN CONTEXT

### 2.1 Current Situation

The London Borough of Brent is situated in North West London (see Figure 2.1) and covers an area of approximately 4,200 hectares, divided into 21 Wards (see Figure 2.2). The 2001 census records a population of 261,232 residing in approximately 100,000 households (see Table 2.1). The Borough is densely populated at 60.9 persons per hectare.

**Figure 2.1: London Borough Map**



**Figure 2.2: Ward Map of the London Borough of Brent**





**Table 2.1: Household Numbers**

Year	Total Households	Household Residents	Average H-hold Size
2001	99,991	261,232	2.6

The Borough has a diverse ethnic mix, as indicated by the data in Table 2.2, and is the second most ethnically diverse borough in the country, creating a number of distinct local communities such as Harlesden, Wembley and Kilburn. This can result in differing waste generation profiles in terms of quantity and type of waste, and the waste strategy needs to take account of this.

**Table 2.2: Ethnic Groups**

Ethnic Groups					
	Total	%	Ethnic Group	Total	%
White	119,278	45.3	British	76,893	29.2
			Irish	18,313	7
			Other White	24,072	9.1
Mixed	9,802	3.8	White & Black Caribbean	2,739	1
			White & Black	1,739	0.7
			White & Asian	2,529	1
			Other Mixed	2,795	1.1
Asian or Asian British	73,062	27.7	Indian	48,624	18.5
			Pakistani	10,626	4
			Bangladeshi	1,184	0.4
			Other Asian	12,628	4.8
Black or Black British	52,337	19.9	Caribbean	27,574	10.5
			African	20,640	7.8
			Other Black	4,123	1.6
Chinese or other	8,985	3.4	Chinese	2,812	1.1
			Other	6,173	2.3

Table 2.3 shows that almost half (45.7%) of Brent's population live in flats, which are either purpose built or converted. This has implications for the collection of waste from households in terms of accessibility and space, with the development of separate kerbside collections for recyclables being difficult to implement.

**Table 2.3: Dwelling Types in Brent**

Detached (%)	Semi-Detached (%)	Terrace (%)	Purpose Built Flats (%)	Converted Flats (%)	Other (%)
6.5	27.7	18.9	26.9	18.8	1.3

## 2.2 Population Growth

The population of Brent is growing rapidly, living in either the wealthy suburban areas or in inner city London. Large areas of Southern Brent are deprived and many people are excluded from society. In 2000, Brent was found to have five of the 10% most deprived areas in the UK. Deprivation levels can have a significant impact on willingness to participate in recycling schemes. An indication of the rate of population growth anticipated for Brent is provided in Table 2.4 below

**Table 2.4: Population Growth**

Year	Population	Growth Rate (%)
1991	243,025	n/a
2001	263,464	8
2011	284,541	8
2021	307,304	8

Source: 1991 and 2001 are actual figures from the 1991 and 2001 census, growth rate equates to 0.8% per annum, or 8% per 10year period. This has been calculated using available census data from 1991 and 2001, and applied to calculate 2011 and 2021 population estimates.

## 2.3 Major Developments

There are a number of major developments and regeneration programmes planned within Brent over the next few years that will have implications in terms of waste generation; these are outlined below:

- Wembley: A new national stadium, an additional 3,700 residences and a variety of commercial outlets are proposed for the Wembley area. The vision is to create a world-class destination of national and regional significance, and to regenerate the Wembley area thereby ensuring the renewal of the most deprived local neighbourhoods.
- Church End and Roundwood Estates (1,500 properties), Chalk Hill (1,900 properties), and Stonebridge (1,755 properties), housing regeneration projects. These total 5,155 new properties.
- Park Royal Partnership (in association with the London Boroughs of Hammersmith and Fulham, and Ealing) – a development that will increase employment, within four main areas:
  - Western Gateway, new office campus

- Southern Gateway, mixed use development incorporating a hotel, industrial, offices, and residential areas.
- Northern Gateway, new Asian leisure and cultural centre and new distribution warehouse.
- Eastern Gateway, a collection of railway linked sites and existing industrial estates.

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### **3.0 WASTE MANAGEMENT TODAY**

#### **3.1 General**

During 2003/04 Brent residents generated 115,597 tonnes of household waste, of which 8.6% was recycled. The household recycling and composting (BVPI) target set by the Government for 2005/06 is 18%, indicating that the recycling of household waste within Brent has to more than double in the two years following 2004. Figures for the first few months of this year indicate a recycling/composting level of around 14%.

Waste collection and related services fall within the remit of StreetCare's Waste Services Department, which assumes the following responsibilities:

- Domestic Refuse Collections;
- Bulky Waste Disposal; and
- Street Cleaning.

An Organogram indicating the structure of the Waste Services Department is included in Appendix A1.

The disposal of household waste arising in Brent, in addition to 5 other neighbouring London Boroughs (Harrow, Hillingdon, Ealing, Hounslow, and Richmond upon Thames) is the responsibility of the Waste Disposal Authority (WDA), West London Waste Authority (WLWA).

#### **3.2 Waste Contracts**

A list of Current waste management related Contracts is presented as Appendix A2. In particular, kerbside recycling is contracted to ECT Recycling, whilst household waste collection and other services are contracted to Onyx Waste Services.

#### **3.3 Bring Sites**

There are currently 116 'Bring Sites' in Brent with provision to recycle some or all of the following:

- Aerosols;
- Books;
- Cans;
- Carrier bags;
- Glass;
- Junk Mail;
- Paper (newspapers and magazines);
- Plastic;
- Shoes; and
- Tin foil.

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A list of ‘Bring Sites’ by Ward is provided in Appendix A3. The number of ‘Bring Sites’ within the Borough varies over time due to complaints regarding inappropriate sites utilised, and removal in favour of estates recycling.

### **3.4 Kerbside Recycling**

The London Borough of Brent, in partnership with ECT, provides a weekly kerbside recycling service to 73,000 households within the Borough. These residents have been provided with a 44 litre green box into which a variety of recyclable materials (including foil, batteries – household and automotive, engine oil, glass, paper, shoes, textiles, tins and cans, and yellow pages) can be deposited and subsequently collected for recycling. Residents are requested to undertake initial sorting before placing items into the green box, and collection operatives further sort these materials prior to deposit in the collection vehicle.

### **3.5 Estates Recycling**

As indicated earlier, there are a significant proportion of flats, apartments and similar residences in the Borough which are not suitable for a kerbside collection service. As of October 2003 the Council has been working in partnership with Brent Housing Partnership and ECT Recycling with the aim of setting up a suitable alternative recycling scheme for these types of residences. The scheme involves locating a set of 5 wheeled bins (240 litre capacity), locked in a metal frame, near the bin store for each block of flats or apartments, and into which specific recyclable materials can be deposited. Each bin is clearly labelled to indicate the type of material accepted, with one provided for:

- Green glass;
- Clear glass;
- Brown glass;
- Aluminium and Steel cans; and
- Newspapers and Magazines.

These bins are emptied by ECT Recycling on a regular basis. Currently, there are 250 estates schemes in operation.

### **3.6 Reuse and Recycling Centre**

A new Reuse and Recycling Centre has recently been opened on Abbey Road in Park Royal. The site provides facilities for the recycling of cardboard, garden waste, rubble, soil, scrap metal, wood, electrical equipment, mobile phones, printer cartridges, fridges, fluorescent tubes, engine oil, car batteries, and household batteries. Householders are also able to deposit bulky household waste for disposal. Compost and compost bins are also sold at the site. The facility is open 7 days a week from 8am until 4pm, but is closed on Christmas Day, Boxing Day and New Year's Day.

The emphasis at the facility is very much on the recovery of waste for recycling. Staff direct and advise residents on how to recycle as much of their waste as possible.

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There is a strict 'NO VAN' policy in operation at the site so as to prevent the deposit of trade waste.

### **3.7 Composting**

Brent Council has been offering residents a garden waste recycling service since March 2004. Some 15,000 properties have been supplied with a 240 litre capacity green wheeled bin into which green garden waste can be deposited. These bins are emptied on a fortnightly basis. The rest of the Borough has been offered a free green waste collection service using special biodegradable bags, which can be ordered free from the Council's Garden Waste Hotline; collections are by appointment only.

The Council has a partnership arrangement with West London Composting Ltd (WLC), who compost all green waste delivered to the Re-use and Recycling Centre and also green waste arising from household collections. Under the agreement, WLC will compost up to 650 tonnes of garden waste collected by the Council per month at their High View Farm site in Harefield.

### **3.8 Commercial Waste**

Brent Council do not operate a commercial waste collection service. However, commercial organisations are provided with a list of private licensed waste contractors. The Council is implementing a new enforcement strategy to ensure that businesses within the Borough dispose of their waste lawfully, in line with the 'Duty of Care' requirements of Sections 34 and 47 of the Environmental Protection Act 1990.

### **3.9 Bulky Household Waste**

Onyx provide a disposal service on behalf of StreetCare, for large items of household furniture and kitchen appliances, including mattresses, beds, sofas, fridges, heaters, TVs and internal doors. The Council allows the collection of up to 5 items free of charge up to three times a year.

The Council does not allow the collection of glass, radiators, cast iron material, builders materials, external doors or garden waste. Items not included in the free collection category can be taken to the Reuse and Recycling Centre.

### **3.10 Fridges and Freezers**

The Council provides a collection service for old fridges and freezers from households. Currently no fee is levied for this service.

### **3.11 Clinical Waste**

A clinical waste service is provided to private households which includes the safe collection and disposal of items such as hypodermic needles, incontinence pads and dialysis waste. The Council provides confidential information, advice and a free disposal service for clinical waste arising from private households.

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### **3.12 Flytipped Waste**

If a report is logged regarding flytipped waste, arrangements are made for it to be removed within 24 hours of the report. During 2004/05, Brent Council received 508 reports of flytipping which involved fridges and other materials, 1,190 reports of flytipping which involved fridges only, and 3,862 reports of abandoned vehicles. This equated to an estimated 4,327 tonnes of flytipped waste during 2004/05.

### **3.13 Batteries and other Hazardous Household Waste**

Both household and car batteries can be recycled using the kerbside collection service. Car batteries can be left out adjacent to the green box, and household batteries placed in a bag within the green box. Batteries can also be taken to the Reuse and Recycling Centre for recycling.

Electrical equipment can be taken to the Reuse and Recycling Centre for recycling. There are currently no provisions at the facility to collect other hazardous waste; this is dealt with under a contract with the City of London who co-ordinate a hazardous waste collection service on behalf of Brent Council, in addition to many other London Boroughs.

### **3.14 Waste Awareness**

Brent Council has teamed up with Business Eco Network to improve and promote waste management within the Borough. During the waste awareness programme, which started on 28th June 2004, a team of recycling campaigners called on 31,000 houses across the Borough. Residents participated in completing a questionnaire and also pledged to ‘do their bit’ and recycle. A handy booklet of information about recycling was also distributed.

### **3.15 Waste Minimisation**

#### ***3.15.1 Home Composting***

For those residents wishing to compost at home, the Council can supply subsidised home composters. These come in two sizes (220 litre and 330 litre capacities) and cost just £5 including delivery. During 2004, 782 home composters were distributed, totalling 11,782 home composters sold to date.

#### ***3.15.2 Internal Initiatives***

An internal initiative within Brent Council has included a pilot recycling project. Six Council sites were selected to take part in the pilot, and a waste audit carried out to establish the types of wastes being produced and disposal methods used; this also allowed the identification of new materials available for recycling. Internal communication and promotional material included posters, mouse-mats, cotton bags (to encourage re-use), e-mails and the Council website.

Recycling facilities made available at each site include:

- Paper: existing collections have been expanded to include office paper, envelopes, newspapers and magazines, in addition to confidential waste shredding;
- Cardboard;
- Food and drinks cans;
- Plastics, including drinks bottles (PET), milk bottles (HDPE), plastic bags (LDPE), and margarine tubs (PP);
- Toner cartridges;
- Redundant office furniture; and
- IT equipment.



## 4.0 CURRENT WASTE PERFORMANCE

### 4.1 Historic and Current Waste Arisings

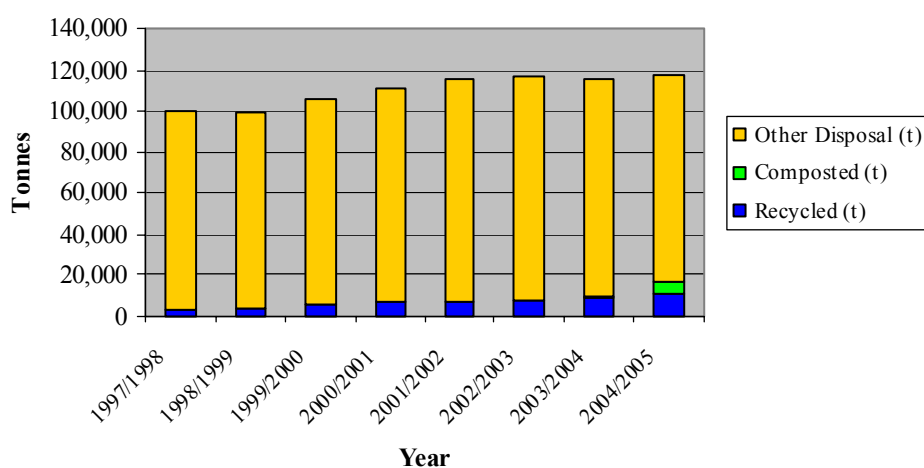
Table 4.1 and Figure 4.1 provide details of the total tonnage of waste collected from all Brent households over the period 1997 to 2005, indicating the tonnage recycled, composted, and disposed of during each year. The results show that between 1997 and 2005 the total tonnage of household waste collected increased by 17,547t from 99,876t to 117,423t (an increase of 17.6%). However, the total disposed of has only increased by 3,693t (an increase of 3.8%). This indicates a recycling increase of 7,745t and a composting increase of 6,108t, giving a combined total of 13,853t, of which, 9,065t has been achieved during the past 3 years, most notably, with the introduction of composting.

**Table 4.1: Waste Arisings and Disposal Method<sup>2</sup>**

Year	Recycled (t)	Composted (t)	Other Disposal (t)	Collected (t)
1997/1998	2,925	0	96,951	99,876
1998/1999	4,357	0	94,596	98,953
1999/2000	6,164	0	99,659	105,823
2000/2001	7,122	0	103,825	110,947
2001/2002	7,065	0	108,461	115,526
2002/2003	7,713	0	108,531	116,244
2003/2004	8,820	1,084	105,693	115,597
2004/2005	10,670	6,108	100,644	117,423

Source: 1997 – 2004 data Brent.gov.uk, '04-'05 supplied summary

**Figure 4.1: Waste Arisings and Disposal Method**

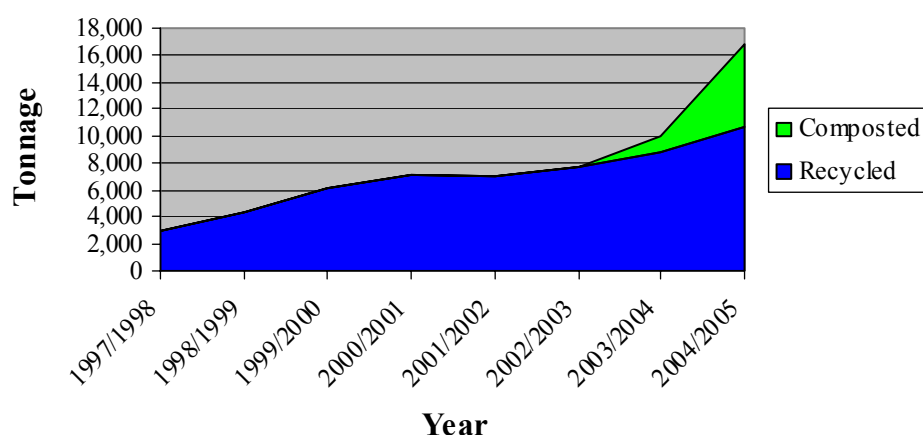


<sup>2</sup> For a quarterly breakdown, see Appendix A4

## 4.2 Recycling and Composting Performance

Historically, low levels of recycling have been achieved in Brent, with few materials being segregated for recycling, traditionally limited to glass and paper. The total tonnage of household waste recycled has increased from 2,925t in 1997 to 10,670t in 2004 (see Figure 4.2 below). Since the introduction of green waste collection and composting in 2002, the tonnage of household waste composted has increased from 1,084t during 2003/04 to 6,108t during 2004/05<sup>3</sup>.

**Figure 4.2: Historic and Existing Recycling and Composting Performance**



## 4.3 Comparison with Other WLWA Constituents<sup>4</sup>

Table 4.2 provides a comparison of Brent's performance against those of the other WLWA constituent Borough of Ealing, Harrow, Hillingdon, Hounslow, and Richmond upon Thames for 2003 to 2004. Appendix A5, BVPI explores this in further depth.

**Table 4.2: BVPIs for the six WLWA Constituents, 2003/04**

2003/04						
	Brent	Ealing	Harrow	Hillingdon	Hounslow	Richmond upon Thames
BV82a (% household waste recycled)	7.6	10.5	10.4	13.9	14.2	17.6
BV82b (% household waste composted)	0.9	1.2	2.7	10	1.5	4.4
BV84 (Kgs collected household waste / head)	424	424.6	460	539.8	465	501
BV86 (£ household waste collected / household)	61.7	38.6	60	36.2	37.3	30.5
BV91 (% of households with a kerbside collection / within 1km of bring bank)	75.4	77.8	88.4	89	97.3	79

<sup>3</sup> Ref: Chapter 5, subsection 5.1

<sup>4</sup> For figures, see Appendix A5, BVPI.

The data indicate that in comparison to the other constituent Boroughs:

- The recycling and composting performance in Brent is the lowest;
- Brent has the lowest waste generation rate per head of population;
- Brent has the highest costs for waste collection; and
- Brent has the lowest proportion of households provided with a kerbside collection service.

#### 4.4 Waste Composition

Table 4.3 provides a summary of waste compositional data drawn from a study of 250 households within Brent. However, this data has been applied to relatively few, broad categories from a small sample base. Therefore, it was felt necessary to apply further compositional analysis to gain a greater understanding of the typical waste arisings.

**Table 4.3: Waste Compositional Data**

Category of Waste	Weight in Refuse (kg)	% of total	Kg / household / year	Tonnes (total / year)
Paper & Card	822	32	171	17,815
Glass	172	7	36	3,726
Ferrous	55	2	11	1,192
Non-ferrous metal	22	1	5	477
Dense Plastic	145	6	30	3,141
Plastic Film	130	5	27	2,816
Textiles	78	3	16	1,690
Miscellaneous	380	15	79	8,232
Putrescibles	742	29	154	16,075
<b>TOTAL</b>	<b>2,546</b>	<b>100</b>	<b>530</b>	<b>55,164</b>

Source: The London Borough of Brent

Table A6.1 in Appendix A6 provides a comparison of waste compositional data, simplified in terms of expected material types. These data indicate that the percentage of potentially recyclable material ranges from 56% to 81%, (allowing for some loss due to possible contamination). Whilst this provides useful background data, given the multicultural nature of the London Borough of Brent it is recommended that a more detailed and extensive waste compositional analysis is undertaken to so as to provide a more robust basis for assessing future waste management options.

In the absence of detailed compositional data for Brent, a WRAP Report<sup>5</sup> (see Appendix A6, table A6.2 for compositional data) contains detailed compositional information from collected household waste and Civic Amenity site waste, by percentage. By applying the WRAP compositional data to Brent’s waste arisings tonnages, the tonnage of each type of recyclable material can be determined.

#### 4.5 Cost of Service

Table 4.4 provides a summary of waste collection costs for Brent since 1993/94. This indicates some interesting variations in cost over that period, with a reduction in the early part of this period, and steadily increasing costs since 1998/99 to the current level of £68.00 per household. Cost increases reflect legislation changes and also the introduction of source segregated collection schemes.

**Table 4.4: Summary of Cost of Waste Collection per Household**

	1993/ 1994	1997/ 1998	1998/ 1999	1999/ 2000	2000/ 2001	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005
Cost of waste collection per household	£50.76	£33.21	£25.21	£31.25	£43.85	£43.90	£54.60	£61.70	£68.00

Source: 1993 – 2001 & 2004/05 Brent.gov.uk<sup>6</sup>, 2001 – 2004 ODPM (BVPI data)

<sup>5</sup> Strategy Unit Report (2002) Analysis of Household Waste Composition and Factors Driving Waste Increases. WRAP

<sup>6</sup> Brent Council Performance Indicators Actual Report, 2000/02. Policy and Regeneration Unit, amended 28<sup>th</sup> September 2001.

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## **5.0 FUTURE REQUIREMENTS**

European Directives and UK policy and legislation impact on all aspects of waste management (collection, storage, transportation, reprocessing, recycling, treatment and disposal) in a number of ways. A summary of the principal pieces of legislation relevant to Waste Collection Authorities (WCAs) is provided below, together with listings of other relevant legislation, strategy documents and forthcoming legislation. Further details of legislation identified in Sections 5.1 and 5.2 can be found in Appendix A7.

### **5.1 Current Relevant Legislation**

#### **Environmental Protection Act (1990)**

The Environmental Protection Act (EPA) 1990 is designed to implement an integrated approach to environmental regulation and protection, and is the principal piece of legislation dealing with the duties and responsibilities in relation to waste management.

Section 34 of the EPA introduces a statutory Duty of Care, placing a general duty on anyone who has responsibility for controlled waste (including household waste and WCAs) to ensure it is managed properly and recovered or disposed of safely.

Sections 45-61 of the EPA set out the responsibilities of WCAs and WDAs in respect of the collection, disposal or treatment of controlled waste. As a WCA, Brent Council must:

- Arrange for the collection of household waste within its area;
- Deliver for disposal all waste which is collected by the WCA to such places as the WDA directs, with the exclusion of any wastes that the WCA has made arrangements for the recycling of the waste; and
- To carry out investigation with a view to deciding what arrangements are appropriate for dealing with the waste by separating, baling, or otherwise packaging it for the purpose of recycling it.

#### **Landfill Regulations 2002**

The Landfill (England and Wales) Regulations 2002 implement the requirements of the EU Landfill Directive (1999/31/EC). Key Directive provisions for local authorities relate to the gradual reduction of biodegradable municipal waste (BMW) going to landfill and the promotion of alternatives such as recycling, composting, and energy from waste (EfW). This has implications for a WCA in terms of the separate collection of materials for recycling or recovery as they are required to contribute toward the WLWA meeting their targets. Targets include:

- Reduce the amount of BMW landfilled to 75% of that produced in 1995 by 2010;
- Reduce the amount of BMW landfilled to 50% of that produced in 1995 by 2013;
- Reduce the amount of BMW landfilled to 35% of that produced in 1995 by 2020;

### **Statutory Recycling and Composting Standards, Waste Strategy 2000**

A series of recycling and recovery targets for household and municipal waste have been established in ‘Waste Strategy 2000’ in order to comply with the Landfill Directive BMW diversion targets. An essential part of achieving these targets is the drive towards greater household recycling and composting. Key targets are as follows:

- Recycle or compost at least 25% of household waste and recover value from 40% of MSW by 2005;
- Recycle or compost at least 30% of household waste and recover value from 45% of MSW by 2010;
- Recycle or compost at least 33% of household waste and recover value from 67% of MSW by 2015.

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 WCAs and WDAs. The intention of these standards is to increase the national recycling rate to 25% in 2005/06, thereby making progress toward the Landfill Directive diversion targets for 2010 and beyond.

### **Waste and Emissions Trading (WET) Act 2003**

The WET Act is intended to facilitate the UK in meeting its national targets for reducing the amount of BMW disposed of to landfill, and is implemented through the Landfill (Scheme Year and Maximum Landfill Amount) Regulations 2004. The Act provides a framework for the Landfill Allowance Trading Scheme (LATS), whereby tradable landfill allowances will be allocated to WDAs each year. Each WDA will be able to determine how to use its allocation of allowances in the most effective way, and may be able to trade them with other authorities. This has indirect implications for WCAs in that the Power of Direction in section 31 enables a WDA to direct and pay for additional WCA action to separate waste.

**Table 5.1: Other Legislation particularly relevant to Brent Council**

Legislation	Description
Waste Minimisation Act 1998	Provides Local authorities with Powers to implement waste minimisation initiatives.
Local Government Act 1999	Sets the Best Value targets for Brent of 18% recycling and composting by 2005.
Household Waste Recycling Act 2000	Requires that Local Authorities introduce separate collections for a minimum of two materials for recycling by the 31 <sup>st</sup> December 2010
Animal By-Products Regulations 2003	Sets requirements for the composting of waste animal by-products including kitchen waste.

## 5.2 Emerging Relevant Legislation

There are a number of pieces of emerging legislation that will have an impact on the collection and management of municipal waste including:

- Hazardous Waste Regulations (waste defined as hazardous will need to be separated from other waste and dealt with through separate collection arrangements).
- Waste Electrical and Electronic Equipment Directive (the role of WCAs is currently undecided, however, it is likely that arrangements will be made for separate collection)
- Batteries Directive Proposals (it is likely that arrangements will need to be in place for the separate collection of spent portable batteries)

## 5.3 Regional Policies and Proposals

The Mayor's Municipal Waste Management Strategy<sup>7</sup> sets out a number of policies and proposals to achieve the objectives of the strategy. A number of these will impact on the management of waste within Waste Collection Authorities; some of the more relevant policies and proposals are set out in Appendix A8.

## 5.4 Waste Targets

Brent has set itself internal targets to meet national 2010 targets and are summarised as follows:

**Table 5.2: Brent Councils projected BVPI performance targets<sup>8</sup>**

	Indicator	Target			
		2004/05	2005/06	2006/07	2007/08
BV82a	Household waste recycled	11%	11.50%	12.40%	15%
BV82b	Household waste composted	3%	6.70%	7.70%	9%
BV84	Household waste collected per head	441kg	460kg	460kg	420kg
BV91	Residents served by kerbside recycling	95%	100%	100%	100%

Targets have also been set in Waste Strategy 2000 (refer Section 5.1)

<sup>7</sup> GLA (2003) Rethinking Rubbish in London: The Mayor's Municipal Waste Management Strategy

<sup>8</sup> BV84 2007/08 reduction assumes there is a reduction in total domestic waste production by this point

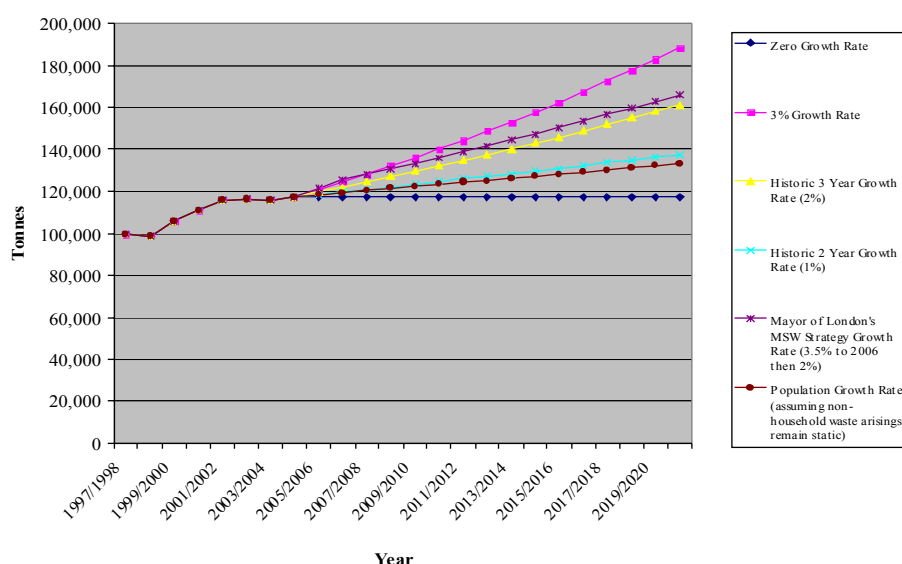
## 6.0 FUTURE WASTE PERFORMANCE

### 6.1 Waste Growth

Predicting future waste growth can be very difficult due to a range of socioeconomic and demographic factors. Figure 6.1 illustrates historic, current, and forecasted waste arisings for the London Borough of Brent. Six future growth scenarios have been considered, based on those that were used in the WLWA Waste Strategy Baseline Report<sup>9</sup>:

- Zero growth rate;
- Constant 3% growth rate;
- Historic 3 year growth rate (produces a 2% average);
- Historic 2 year growth rate (produces a 1% average);
- 3.5% growth rate to 2006, then 2% (Mayor of London’s MSW Strategy); and
- Population growth rate (assuming non-household waste arisings remain static)<sup>10</sup>.

**Figure 6.1: Household Waste Growth Forecasts<sup>11</sup>**



The ‘historic 3 year growth rate scenario’ was chosen as that most likely to reflect forecasted waste arisings within the WLWA’s Joint Municipal Waste Management Strategy, and is the scenario chosen to reflect Brent’s forecasted MSW arisings. This scenario takes into account the more recent data set available and reflects changes in new policies and services. As such, the forecast is thought to best reflect current and future practices with regards waste management.

<sup>9</sup> West London Waste Authority Joint Municipal Waste Management Strategy Baseline Report, January 2005. ERM

<sup>10</sup> Based on the Mayor’s Spatial Development Strategy (2004) estimate of 19% growth in population over the next 10 years and an assumption that this growth rate would continue until 2020.

<sup>11</sup> Tabulated results as Appendix A9



This scenario suggests an average 2% annual growth rate, which implies that waste arisings within Brent will increase from 117,404t during 2004/05 to around 161,171t during 2020/21, an increase of 43,767t.

## 6.2 Waste Diversion Requirements

### 6.2.1 Recycling and Composting

As discussed in Section 5.4, national and local targets have been set for the recycling and recovery of household waste and municipal waste by specified target years. The BVPI local targets are designed to facilitate a steady improvement in Brent’s performance with regards to recycling and composting, in order to meet the national ‘Waste Strategy 2000 targets,’ and are as follows:

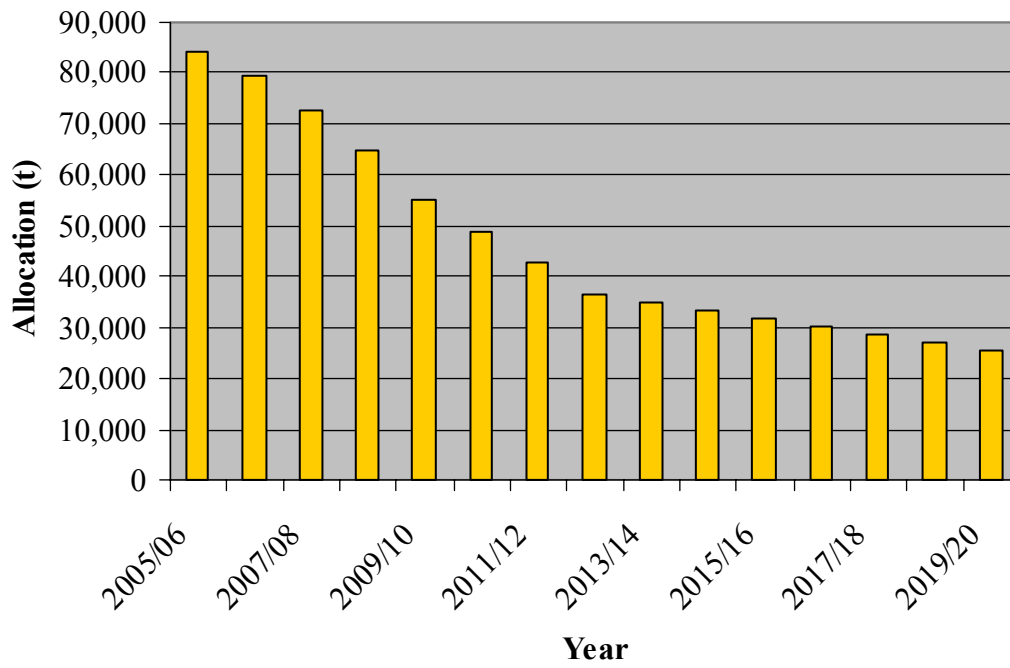
**Table 6.1: London Borough of Brent Recycling and Composting Targets**

Target Year	% Recycled / Composted	Target Source	Recycling and Composting Tonnage
2005	18	BVPI	21,559
2010	30	Waste Strategy 2000	39,671
2015	33	Waste Strategy 2000	48,180

### 6.2.2 LATS Requirements

The WET Act 2003 allocates to WLWA allowances for the landfilling of biodegradable municipal waste (BMW). As a Waste Collection Authority Brent Council does not have a direct Allowance under LATS. However, as a constituent of the West London Waste Authority (the relevant Waste Disposal Authority) it is expected to contribute to meeting the Allowances set for the WDA. The West London Waste Authority (WLWA), along with the six collection authorities, has agreed to split the landfill allowances equally. Thus Brent is responsible for ensuring that sufficient municipal waste is delivered to the appropriate recycling, composting and residual treatment facilities to meet one sixth of the total landfill allowances allocated to WLWA. Figure 6.2 indicates the allocation of WLWAs landfill allowances to Brent’s municipal waste. Tabulated data regarding Brent’s projected MSW arisings, BMW arisings, landfill allowance and diversion requirements are in Appendix A10.

### Figure 6.2: Brent’s LATS Allocations



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## 7.0 OPTIONS FOR ACHIEVING TARGETS

### 7.1 Waste Minimisation

Waste minimisation is at the top of the waste hierarchy and is vital in reducing the growth in waste arisings. The Waste and Resources Action Programme (WRAP) launched a Waste Minimisation Programme in 2003, working to stem the growth in household waste. In addition, the West London Waste Authority (WLWA) is considering options to promote general re-use of materials and utilising outlets such as charity shops and car-boot sales etc. whilst also recognising the fact that there are additional job creation and training opportunities. It must be recognised, however, that there are limits to amount of waste that can be diverted for reuse, and that the public can view second hand goods in a negative way.

Some other initiatives which can reduce and minimise waste have been outlined below

#### 7.1.1 Home Composting

Promotion of home composting is considered to be one of the easiest means of reducing waste arisings. It is also the best example of the '*proximity principal*' being applied, since it deals with waste as close to the point of production as possible, at the household itself. With up to 30% of the household waste stream typically being garden or putrescible waste, high participation in home composting can have a significant impact on waste arisings. However, case-studies indicate that individual households can only realistically compost between 100–200kgs per year, with many potentially compostable materials being otherwise disposed of. The benefits of home composting include a reduction in the use of peat-based compost and home bonfires, although many people are unwilling or unaware of how to compost their green waste. Home composting is also only suitable for properties with gardens and sufficient space to house the composter; inappropriate use can also lead to pest problems, although this can be minimised by avoiding certain food types.

Currently any waste diverted via home composting does not count towards an Authority's recycling and composting figures. For this reason many Authorities, including Brent, are introducing green waste collection schemes. Such schemes, particularly when they are offered free, tend to limit the uptake of home composting and can lead to an overall increase in waste arisings. The Government, with the assistance of WRAP, is currently reviewing mechanisms by which an allowance can be made for home composting in an Authority's recycling performance.

Brent Council is supporting the option of home composting with the sale of subsidised home composting bins.

#### 7.1.2 Reuseable Nappies

It is estimated that, on average 3-4% of household waste arisings comprises of disposable nappies. Nappy waste can be reduced by encouraging mothers to use reusable nappies. This has additional benefits in terms of the use of laundry services stimulating the local economy, whilst at the same time resulting in cost savings to parents. Many Authorities in the UK sponsor 'Real Nappy' campaigns and nappy laundering services. However, the support of

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key organisations and individuals is required and take-up of reusable nappies services is variable.

### **7.1.3 Waste Disposal Units**

In many industrialised countries, the use of in-sink macerators for disposal of food waste is common place; this is particularly the case in the United States. In the UK macerators are rarely used, despite the benefit of removing putrescible waste from the household waste stream.

A whole scale retrofit of the entire housing stock in Brent with macerators is clearly not feasible. However developments of new residential complexes could be encouraged to consider providing such units. Any policy decision by the Council to this effect will need to be in consultation with Thames Water since the use of macerators will increase the loading on existing sewage handling and treatment systems.

By way of example, food waste disposal units (at a unit cost of approximately £500 per unit) are being considered for the new Wembley development as a means of reducing waste arisings and avoiding the need for segregated collections of putrescible materials.

## **7.2 Options for Recyclate Collection**

### **7.2.1 ‘Bring Banks’**

The Council currently operates 116 ‘Bring Banks’ throughout the Borough, which equates to one per 862 households, based on a population residing in approximately 100,000 dwellings.

Brent Council is seeking to reduce the number of ‘Bring Banks’ in favour of the provision of recycling sites at housing estates (particularly those areas that are subject to flytipping and vandalism).

Further information of ‘Bring Banks’ in Brent is provided in Section 3.3 Appendix 3

Policy Guidance to Developers should encourage the provision of ‘Bring Banks’ or recycling sites in new residential and retail developments. ‘Bring Banks’ are often opposed due to their unsightly nature and potential to attract vandalism. The Council should therefore give consideration to alternative designs (for example, special housings or underground banks).

### **7.2.2 Household Waste Recycling Centres**

There are a number of containers for recyclate provided at the new Re-use and Recycling Centre located in Park Royal (further details provided in Section 3.6). Brent Council is aiming to maximise the potential of the Re-use and Recycling Centre by publicising the new Centre and providing clear signage to direct residents to the site. The Council is also seeking to identify charities that would be willing to work in partnership with the Council and the WLWA to encourage the recycling and reuse of furniture and other bulky household goods.

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### **7.2.3 Kerbside Mixed Waste Collections**

Some Authorities adopt a ‘survival bag system’ approach whereby kerbside recyclables and ‘residual’ household waste are both collected from the kerbside and deposited into the same vehicle, either mixed or in separate compartments in the same vehicle. This has the effect of reducing the time spent collecting waste and recyclate, and also reduces the number of vehicles required. The load is then deposited at a transfer station or MRF where the survival bags are separated and then opened for sorting. Experience has shown that the use of ‘dirty’ Materials Recycling Facilities of this type result in the production of low grade materials for recycling, and this can impact on their value and usability.

### **7.2.4 Kerbside Sort Collections**

This is the approach currently employed by ECT Recycling in partnership with Brent Council. Householders are requested to place particular materials into a plastic box for ease of sorting at the kerbside. Whilst this approach does result in higher collection costs it does produce a much better quality and higher value recyclate. An increase in the range of materials targeted by Brent Council will require some modifications to the existing vehicles.

The WLWA has considered recycling and composting options for paper and has concluded that the performance of the kerbside sort collection schemes is much better than that achieved through the use of ‘Bring Banks’ or Household Waste Recycling Centres.

### **7.2.5 Kerbside Co-Mingled Collections**

This method of collection is more time efficient whilst giving rise to a relatively high quality recyclate. In this approach the mixed (or co-mingled) dry recyclables are collected from the kerbside and emptied into a dedicated vehicle. The materials are then delivered to a ‘clean’ MRF for separation and bulking up. This approach requires a more sophisticated MRF, and therefore the overall costs for the system tend to be similar to the kerbside sort option.

Should the Council consider replacing the existing kerbside sort scheme with co-mingled collection scheme then use of a MRF with the capability of accepting mixed recyclate would need to be procured.

Of relevance to all collection methods is the choice of collection receptacle, receptacle volume and collection frequency. Where receptacle volumes are undersized, this can limit the quantity of recyclables that householders segregate. There is anecdotal evidence to suggest that householders are selective about the types of waste placed in the collection receptacle; for example plastic bottles will be consigned to the recycling box at the expense of other materials such as cardboard and tins. It is therefore important to ensure adequate space for recyclables in the collection receptacle. The frequency of collection is also an important consideration. Recent experience indicates that the collection of recyclable materials on a weekly basis is preferred, with the collection of ‘residual’ waste being changed to fortnightly. The implications of such changes do, however, need to be considered very carefully before being implemented.

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## **7.3 Options for Organic Collections**

### **7.3.1 Garden Waste**

The Council currently operates a free green waste collection service. Free services tend to maximise participation, although they can lead to increases in waste arisings and also divert materials from other management routes (such as home composting and Household Waste Recycling Centres).

Most Councils have concluded that garden waste collections will need to be continued in order to achieve weight based recycling and composting targets. For landfill diversion targets (implemented through LATS), which are based on absolute diversion figures rather than percentage of arisings, the argument becomes more tenuous. The LATS does in fact encourage the removal of green material from the waste stream through home composting as the preferred waste management method.

The Council may wish to consider introducing a charging regime for green waste collection services to help control the volume of green waste deposited by householders and to encourage the use of other, more appropriate and sustainable management options.

### **7.3.2 Kitchen and Putrescible Waste**

Whilst the Council may be able to achieve their 18% statutory recycling target for 2005/06 from the diversion of dry recyclables and green waste alone, higher recycling rates are only likely to be feasible by introducing arrangements for the separate collection of kitchen derived organic waste. This is reflected in the fact that one of Brent Council's priorities for 2005/06 is the introduction of an organic waste collection including cardboard and kitchen derived waste for centralised (in-vessel) composting. A kitchen waste collection trial is due to commence during June 2005, from 800 properties within the Borough. It is intended that this will be an extension to the existing garden waste collection service, and would principally be taken up by those householders who currently do not compost their own kitchen waste.

## **7.4 Novel Collection Options**

Alternative waste collection options, particularly for high rise residences, are being considered for use at a number of new development sites in London where traditional collection methods can prove difficult. This includes use of vacuum removal systems, which have been used extensively in a number of countries (e.g. Spain and Sweden). In such systems the waste, either dry recyclables or residual waste, is placed in a colour coded bag and then deposited by householders at the system inlet; the waste is then sucked under vacuum through a network of underground pipes to a central terminal station where it is automatically compacted in containers prior to dispatch to a MRF or landfill. The main advantages include the avoidance of vehicle movements on site, the avoidance of open air storage of putrescible waste and the encouragement of greater segregation of materials for recycling.

## **7.5 Street Waste**

One option which can be effective in increasing the tonnage of recyclables collected is to target street waste arisings. Recycling bins can be clearly labelled and located at strategic locations either alongside normal litter bins, or as a direct replacement. Segmented bins can also be used as an alternative that allows the collection of mixed litter and a variety of dry recyclable materials. Alternatively, the bins can be stored underground, with deposit points easily visible and located above ground. Both of these options have implications in terms of new infrastructure requirements, and the possible need for modifications to collection vehicles.

## **7.6 Current Action Plans**

Brent Council has developed a number of action plans focusing on waste management, and these are presented in Appendix A11. In summary these include:

- Extend the ‘green box’ dry recyclables service, including additional properties and also seeking to increase participation rates for areas of the Borough already receiving the service;
- Expand the estates focused collection schemes;
- Identify appropriate collection systems for those properties currently considered to be unsuitable for both the green box and estates services;
- Expand the existing green waste collection service to include kitchen derived organic waste and cardboard;
- Explore the potential to improve facilities at ‘Bring Banks’;
- Maximise the recycling potential of the new Re-use and Recycling Centre; and
- Continue to promote the purchase and use of subsidised home composters.

The waste strategy for Brent will need to consider and encompass these agreed actions, all of which should lead to an increase in recycling and composting levels.

## 8.0 FUTURE WASTE MANAGEMENT OPTIONS

### 8.1 Option Modelling

In order to establish whether Brent Council is in a position to meet the various waste management targets a number of potential waste management options for improving recycling and composting performance have been considered. The options are summarised in Table 8.1 below and discussed in more detail in Appendix A12.

**Table 8.1: Waste Management Options<sup>12</sup>**

Option Number	Details
Option 0	<p><b><i>Baseline performance</i></b></p> <p>This option replicates current levels (2004/5) of performance and is included as a baseline against which to compare other options.</p>
Option 1a	<p><b><i>Improvements to Re-Use And Recycling Centre site performance</i></b></p> <p>This option assumes additional efforts at the Re-use and Recycling Centre to divert materials for recycling and composting. This approach offers a cost effective means of enhancing recycling rates and is one which many Local Authorities are adopting. Option 1a assumes that 50% of wood and metal goods are recovered.</p>
Option 1b	<p><b><i>Additional materials added to kerbside collection</i></b></p> <p>The kerbside collection service currently targets paper, cans, glass and textiles for recycling. Option 1b assumes an enhancement of the service to collect additional materials, namely cardboard and plastics. Plastic collection would be limited to plastic bottles only as the markets for other post-consumer plastics are limited at present. Participation and material capture rates for these new materials are equivalent to the rates achieved for existing materials.</p>
Option 1c	<p><b><i>Increased bring bank provision</i></b></p> <p>There are currently 116 ‘Bring Bank’ sites across the Borough at a rate of 1 per 862 households. Option 1c assumes enhancement of the ‘Bring Bank’ network to achieve a level of 1 per 500 households. An additional 84 sites would be required to achieve this coverage. In reality it may be difficult to find this number of sites.</p>
Option 2a	<p><b><i>Expansion of current kerbside arrangements to 100% of households</i></b></p>

<sup>12</sup> Kerbside collections includes estates based schemes



	<p>At present approximately 70% of households in Brent receive a kerbside collection service. Notwithstanding the high percentage of flats in the Borough, Option 2a considers the expansion of the kerbside collection service to 100% of properties, and concentrating on the current range of materials.</p>
Option 2b	<p><b><i>Expansion of kerbside collection to 100% of households with additional materials</i></b></p> <p>Option 2b is the same as Option 2a but includes the additional materials targeted in Option 1b</p>
Option 3	<p><b><i>Collection of kitchen derived organic (putrescible) waste assuming average participation and material capture rates</i></b></p> <p>The Council currently offers a green waste collection service. Option 3 models the collection of kitchen derived organic waste and cardboard. It is assumed that the service would be offered to those households currently receiving a kerbside collection service. A material capture rate of 50% has been assumed.</p>
Option 4	<p><b><i>Enhanced kerbside collection scheme assuming maximum participation and capture rates</i></b></p> <p>Like many schemes in the UK the current kerbside collection service fails to recover a high proportion of recyclable materials in the waste stream. Option 4 considers 80% participation and materials capture rates.</p>
Option 5	<p><b><i>Enhanced kerbside collection with additional materials and maximum participation and capture rates</i></b></p> <p>Option 5 would achieve similar levels of performance as Option 4 but includes the additional materials identified in Option 1b.</p>
Option 6	<p><b><i>Collection of kitchen (putrescible) waste assuming maximum participation and material capture rates</i></b></p> <p>Option 6 replicates Option 3 but with maximum participation and materials capture rates (80%)</p>
Option 7a	<p><b><i>Enhanced kerbside collection with current materials including kitchen (putrescible) waste with maximum participation and material capture rates</i></b></p> <p>Option 7a reflects Options 4 and 6 combined</p>
Option 7b	<p><b><i>Enhanced kerbside collection with additional materials including kitchen (putrescible) waste, plastic bottles, card and paper</i></b></p>

	<p><b><i>packaging with maximum participation and material capture rates</i></b></p> <p>Option 7b replicates Option 7a, but with the additional collection of plastic bottles, cardboard and paper packaging</p>
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Modelling of each option has been carried out using a mass balance approach. Waste compositional data published by WRAP<sup>13</sup> has been used to characterise the composition of Brent's household waste.

The performance of each option has been assessed against the required performance for the target years, 2005, 2010 and 2015, and is summarised in Table 8.2 below.

**Table 8.2: Option Performance**

Option	Description	Increase recovery rate compared to baseline			Absolute Recovery Rate		
		Recycling	Composting	Total	Recycling	Composting	Total
0	Baseline	0.00%	0.00%	0.00%	8.83%	5.33%	14.15%
1a	Reuse & recycling centre enhancements	2.77%	0.00%	2.77%	11.60%	5.33%	16.93%
1b	Baseline kerbside +additional materials	1.48%	0.00%	1.48%	10.31%	5.33%	15.64%
1c	Increase Bring Bank provision	1.70%	0.00%	1.70%	10.53%	5.33%	15.86%
2a	100% Kerbside Dry	2.31%	0.00%	2.31%	11.14%	5.33%	16.46%
2b	100% Kerbside Dry + additional material	4.44%	0.00%	4.44%	13.26%	5.33%	18.59%
3	Kitchen waste collection	0.00%	4.82%	4.82%	8.83%	10.14%	18.97%
4	Enhanced kerbside dry performance	8.43%	0.00%	8.43%	17.26%	5.33%	22.58%
5	Enhanced kerbside dry performance + additional material	12.31%	0.00%	12.31%	21.14%	5.33%	26.46%
6	Enhanced kitchen waste performance	0.00%	9.65%	9.65%	8.83%	14.97%	23.80%
7a	Kerbside Dry + Putrescibles (enhanced)	8.43%	9.65%	18.08%	17.26%	14.97%	32.23%
7b	Kerbside Dry incl. additional materials + Putrescibles (enhanced)	12.31%	9.65%	21.96%	21.14%	14.97%	36.11%

### 8.1.1 Target Year 2005/6

Brent Council's statutory Best Value target for 2005/06 is 18% recycling and composting, which equates to the diversion of some 21,559 tonnes of material.

<sup>13</sup> Strategy Unit Report (2002) Analysis of household waste composition and factors driving waste increases. WRAP

The national target for 2005 is 25%, which equates to 29,938 tonnes of material diverted for recycling or composting.

The performance of each of the options against these two targets is indicated in Figure 8.1.

**Figure 8.1: Option Performance Against Targets for 2005/06**

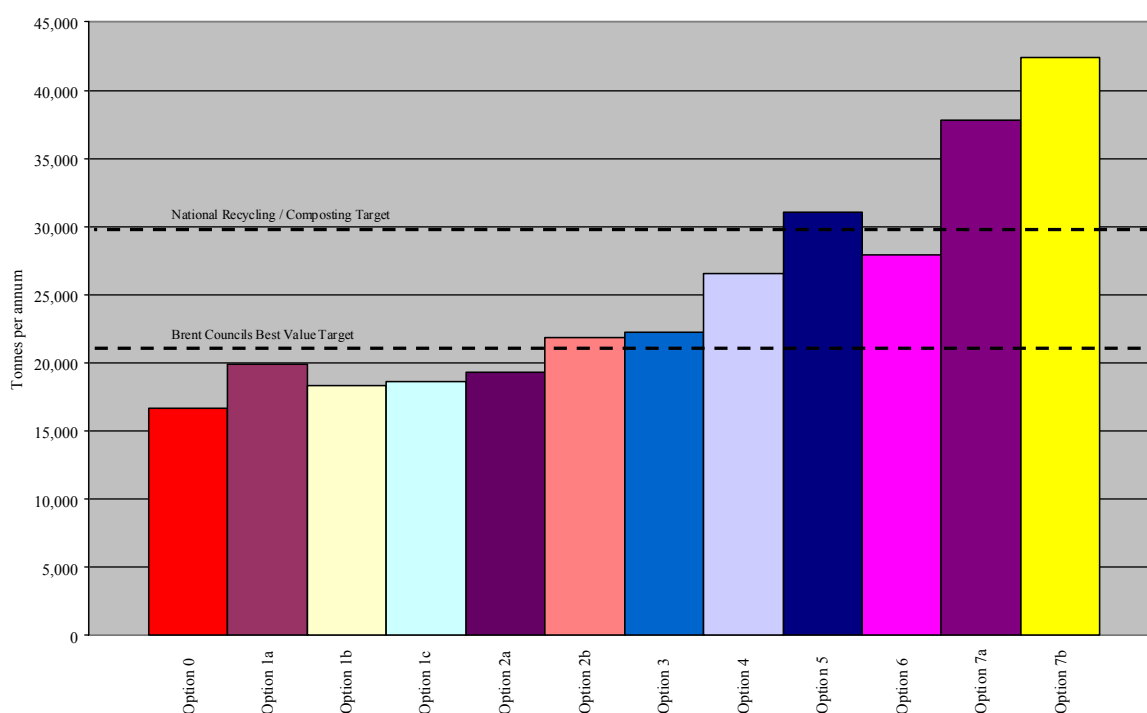


Figure 8.1 indicates that only Options 5, 7a, and 7b would meet the national target for 2005/06 of 25%, although Options 2b, 3, 4, 5, 6, 7a, and 7b would meet, and exceed the statutory recycling and composting target of 18% for the same period.

This confirms that the following alternative actions will need to be considered:

- Expansion of kerbside collection to 100% of households, and with additional materials targeted (Option 2b);
- Collection of kitchen derived organic waste, with average participation and material capture rates (Option 3);
- Enhanced kerbside collection, including current materials and with maximum participation and capture rates of 80% (Option 4);
- Enhanced kerbside collection with additional materials and with maximum participation and capture rates of 80% (Option 5);
- Enhanced kerbside collection with current materials and kitchen waste with maximum participation and capture (Option 6)
- Enhanced kerbside collection with current materials *and* kitchen derived organic waste, and with maximum participation and capture rates of 80% (Option 7a); or

- 
- Enhanced kerbside collection with current materials, kitchen waste *and* additional collections of plastic bottles, cardboard and paper packaging with maximum participation and capture rates of 80% (Option 7b).

All seven of these options highlight that the collection of recyclables from the kerbside needs further development and expansion if the 2005/06 target is to be met. The more realistic and achievable of these Options would be Options 2b and 3, as all others specify high participation and capture rates; to achieve such rates would involve extensive promotional work engagement of public support over an extended period of time.

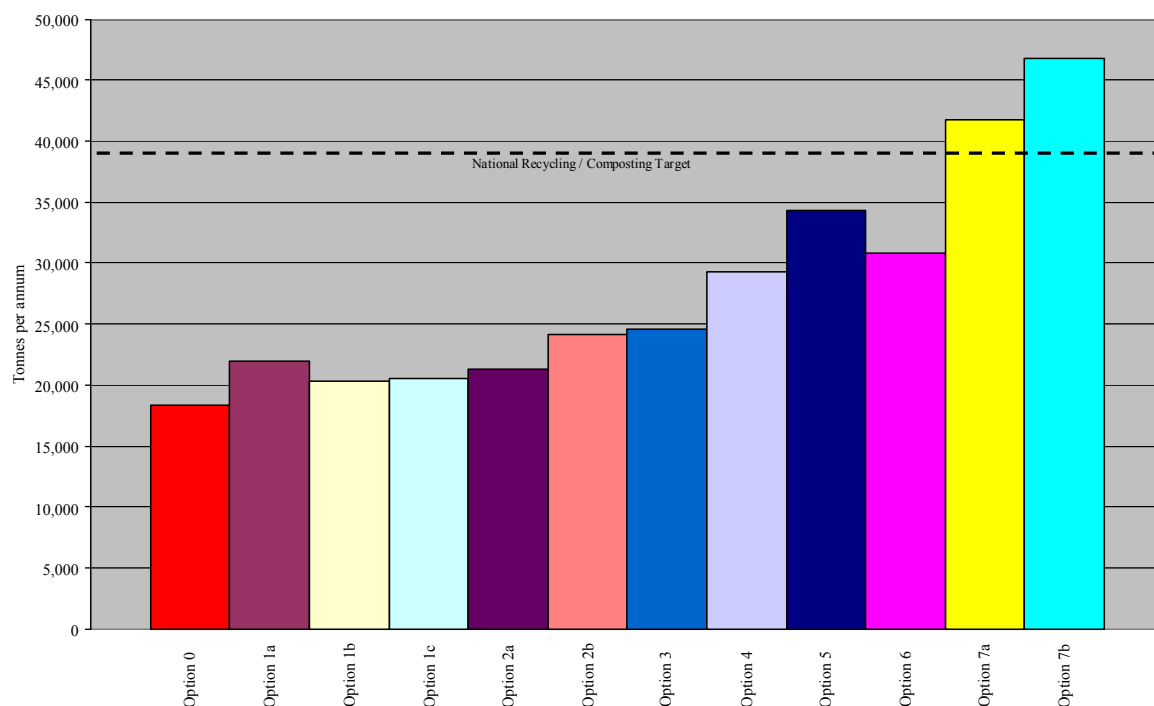
### **8.1.2 Target Year 2010**

An assessment of option performance against 2010 target (30% recycling) is summarised in Figure 8.2 below. This confirms that only Options 7a and 7b would meet the 30% figure, and on this basis it can be concluded that one of the following two approaches would need to be adopted:

- Enhanced kerbside collection including current materials *and* kitchen derived organic waste, and with maximum participation and capture rates of 80% (Option 7a); or
- Enhanced kerbside collection including current materials, kitchen derived organic waste *and* additional collection of plastic bottles, cardboard and paper packaging, and with maximum participation and capture rates of 80% (Option 7b).

If Option 5 is adopted as the preferred approach to meet 2005 targets, then the collection of recyclables from the kerbside will need further development and expansion if the 2010 target is to be met.

### **Figure 8.2: Option Performance against Target for 2010**



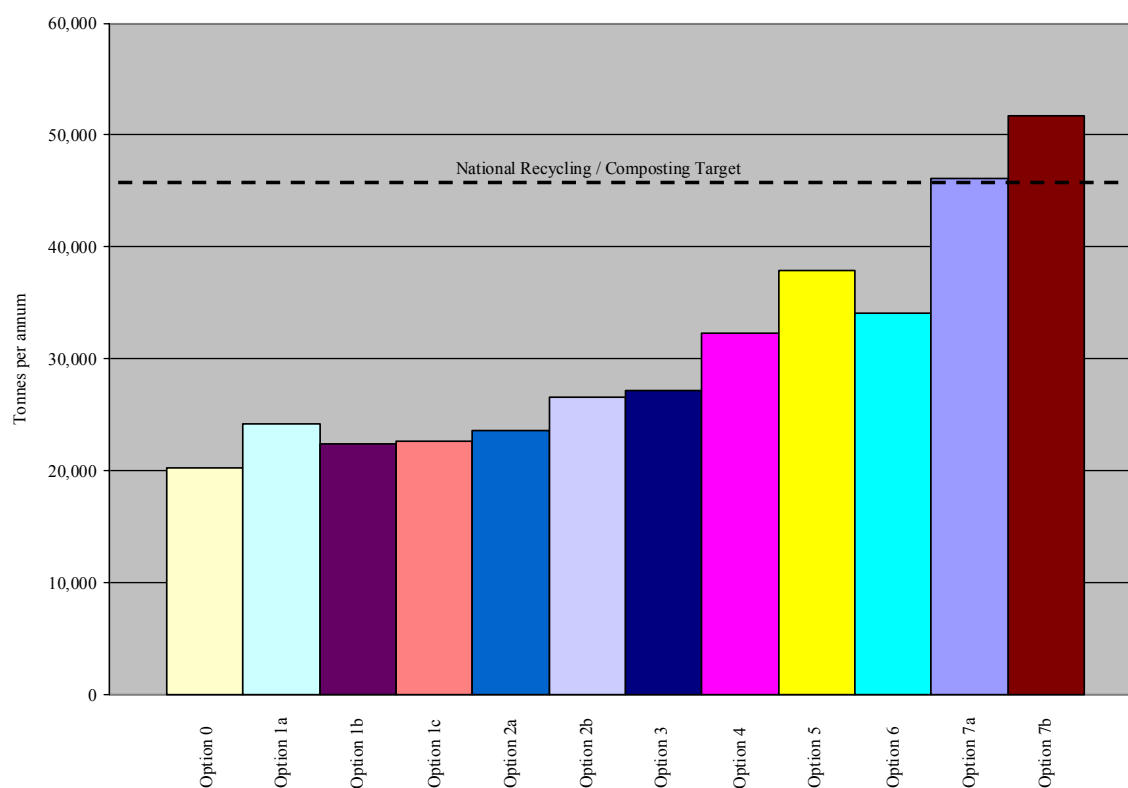
### 8.1.3 Target Year 2015

An assessment of option performance against 2015 target (33% recycling) is summarised in Figure 8.3 below. This indicates that only one option would achieve the required diversion, Option 7b. This would require the following measures:

- Enhanced kerbside collection including current materials, kitchen derived organic waste *and* additional collection of plastic bottles, cardboard and paper packaging with maximum participation and capture rates of 80%.

If Option 7a is adopted as the preferred approach to meet the 2010 target, then the collection of recyclable materials from the kerbside will need further development and expansion if the 2015 target is to be met.

**Figure 8.3: Option Performance against Target 2015**



#### **8.1.4 Options Summary**

Brent Council has a number of Options available to them for meeting and even exceeding their statutory recycling target for 2005. Into the future it appears that only Options 7a or 7b would provide the basis for moving towards meeting the longer terms targets for 2010 and 2015.

Brent Council has developed a list of current action plans, which includes expanding the ‘green box’ and similar recyclable materials collection services (including estates based schemes). This is aimed at extending the coverage to additional properties and increasing participation of those already receiving the service. Further considerations are the need to identify appropriate collection systems for those properties currently considered to be unsuitable for both the green box and estates based services, also the expansion of the green waste collection service to include kitchen derived organic waste and cardboard.

If Brent Council is successful in achieving these aims the Council should be in a good position to meet the recycling and composting targets in the short-term. However, the introduction of plastic bottles and paper packaging to the kerbside collection rounds will need to be considered in order to meet the 2010 target.

In order to meet the 2015 target of 33% recycling the Council has two options:

- Aim for a gradual increase in performance, utilising Options 2b or 3 to meet the 2005 targets, further developing kerbside collections in line with Option 7a to meet the

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2010 target, then building on this in line with Option 7b so as to meet the 2015 target. To achieve this Brent Council will need to secure maximum public participation and capture rates (of around 80%) from the outset, whilst progressively introducing additional materials to the collection scheme; or

- Expand materials collection at an earlier stage to include kitchen derived organic waste, plastic bottles, and cardboard and paper packaging, whilst securing maximum participation and capture rates (of around 80%) over a 10 year period.

All of the options identified have implications in terms of the need for collection vehicle modifications, additional collection crews or time spent sorting at the kerbside, and possible transport implications in delivering materials to different handling facilities; all of these will have the potential for additional costs, although these will be partially offset by savings made in diverting waste from landfill.

Figure 8.4 summarises the options available to Brent Council in meeting their targets, identifying material types, capture rates and household coverage required.

**Figure 8.4: Summary of Requirements for each Option**

	Materials				Participation & Capture				Options to meet targets		
	Current materials	100% household coverage	Additional materials cardboard & plastic	Additional materials kitchen waste	Average participation levels	Average material capture rate (50%)	Maximum participation levels (80%)	Maximum capture rate (80%)	2005	2010	2015
Option 2b		★	★		★	★			★		
Option 3				★	★	★			★		
Option 4	★						★	★	★		
Option 5			★				★	★	★		
Option 6				★			★	★	★		
Option 7a				★			★	★	★	★	
Option 7b			★	★			★	★	★	★	★