



# City of Westminster

## **Municipal Waste Management Strategy 2016 – 2031**

Version 3.0 (WCC Adopted)

5<sup>th</sup> November 2014

## **Foreword**

Waste is one of the biggest environmental challenges of our time. We all create waste and need to deal with it in a responsible way. 180,000 tonnes are produced in Westminster every year; enough to fill the Albert Hall 26 times over and this is the Council's Strategy for ensuring that it is managed effectively and its impact on our local and global environment is reduced.

How we deal with waste has changed significantly in the last decade and I suspect in another 10 years the changes will be equally as significant. What we throw away isn't waste but a resource. A majority of the materials thrown away can be reused and recycled into products we then go onto buy.

Reducing, reusing and recycling waste is the best solution for dealing with waste financially and environmentally however, only 14% of all our waste collected is currently recycled and therefore there is a huge opportunity to substantially increase the reuse and recycling rates. We aim to increase the recycling rate to 35% by 2020, 40% by 2025 and 45% by 2031. Westminster faces a unique set of waste management challenges but with your help we can achieve these targets.

Thank you to the residents, businesses and other organisations who responded to the consultation and helped to shape this strategy. But I hope your involvement will not end there. Please help us to further develop services to make best use of limited public funds and minimise the environmental impact of collecting and disposing of your unwanted things.

Councillor Edward Argar

Cabinet Member for City Management, Transport and Infrastructure.

## Glossary and Acronyms

**Anaerobic digestion (AD)** - a process where biodegradable material is encouraged to break down in the absence of oxygen. Material is placed into an enclosed vessel and in controlled conditions the waste breaks down into *digestate* and *biogas*.

**Bring (drop-off) recycling** - Recycling schemes where the public bring material for recycling to collection points.

**Composting** - an aerobic, biological process in which organic wastes, such as garden and kitchen waste are converted into a stable material which can be applied to land to improve soil structure and enrich the nutrient content of the soil.

**Energy from waste (EfW)** – includes a number of established and emerging technologies, though most energy recovery is through incineration technologies. Many wastes are combustible, this energy can be recovered through (for instance) incineration with electricity generation.

**Gasification** - converts the bulk of the waste's carbon-containing material into gases by heating it in the controlled presence of oxygen. The products from this process form low to medium heating value fuel gases together with tars, char and ash. These products are ultimately dependent on the type of reactor as well as the waste, but most systems produce a raw gas suitable for direct firing in kilns or boilers.

**Hazardous Waste** – waste is defined as hazardous under environmental legislation when it contains substances or has properties that make it harmful to human health or the environment. This does not mean it is an immediate risk to human health, although some waste can be.

**Household waste** - this includes waste and recyclables from household collection rounds, waste from services such as street sweepings, bulky waste collection, litter collection, hazardous household waste collection and from Reuse and Recycling sites.

**Household Waste Recycling Centre (HWRC)** - Purpose built recycling centre designed to collect bulky, hazardous or large quantities of household waste.

**In-vessel composting (IVC)** - composting in an enclosed vessel or drum with a controlled internal environment, mechanical mixing, and aeration.

**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. Fly ash residues are disposed of to landfill.

**Kerbside collection** - any regular collection of waste/ recyclables from premises, including collections from commercial or industrial premises as well as from households. Excludes collection services delivered on demand.

**Materials Recycling Facility (MRF)** - is a facility where mixed recyclables are received and mechanically or manually separated into different material streams ready for recycling.

**Mechanical/ Biological Treatment (MBT)** - is an overarching term referring to a number of processes that treat residual waste before disposal. The aim of MBT is to minimise the environmental impacts of end disposal and to gain some further value from the waste through the recovery of materials and, in some cases, energy. The possible permutations of MBT treatment are numerous. The main technologies are based on either "splitting" or "stabilisation". In "splitting", a derived fraction of material is treated biologically. In "stabilisation" the entire waste is subjected to biological treatment with subsequent splitting of the mass of stabilised material to produce compostable/ recyclable material, refuse derived fuel (RDF) and residues for landfilling.

**Micro Recycling Centre (MRC)** – Bring (drop-off) recycling sites in Westminster.

**Municipal solid waste (MSW)** – for the purposes of this strategy MSW constitutes those wastes collected by Westminster City Council. This includes household waste, street cleansing wastes and commercial waste (waste from shops, offices, hotels and restaurants amongst others).

**Refuse Derived Fuel (RDF)** - is a fuel produced by shredding and dehydrating MSW. Some extraction of recyclables may occur before shredding and after processing.

**Waste arisings** - the amount of waste generated in a given locality over a given period of time.

<b>Foreword – Cabinet Member</b>	<b>1</b>
<b>Glossary and Acronyms</b>	<b>2</b>
<b>Content Page</b>	<b>3</b>
<b>1. Purpose of Strategy</b>	<b>5</b>
<b>2. Aims/Objectives/Targets</b>	<b>6</b>
<b>3. Drivers of Change</b>	<b>7</b>
3.1 Efficient use of public funds	7
3.2 Sustainable Development – Carbon/Climate Change	7
3.3 Waste Hierarchy	7
3.4 Local Drivers/Demographics	8
3.5 Regional Drivers	10
3.6 European and National Legislative Drivers	10
<b>4. Setting the Scene (Current services and infrastructure)</b>	<b>14</b>
4.1 Treatment, Transfer and Disposal	18
4.2 Current Waste Contract Arrangements	22
4.3 Waste Arisings Data	23
4.4 Waste Composition	25
4.5 Comparison with similar authorities	25
<b>5. Managing Westminster’s Waste (overview of options considered, objectives and targets)</b>	<b>28</b>
5.1 Waste Projection	28
5.2 Waste Treatment Options Overview	30
5.3 Waste Reduction, Reuse and Awareness	32
5.4 Recycling	35
5.5 Composting	42
5.6 Residual Waste Treatment/Disposal	44
5.7 Other Wastes	52
<b>6. Performance Monitoring, Reviews and Risk Management</b>	<b>54</b>

## **Appendixes**

- I. Census 2011**
- II. Checklist – Mayor’s Objectives**
- III. Legislative Drivers**
- IV. Micro Recycling Centre Facilities**
- V. Waste Prevention Activity – Recent History**
- VI. Communications Review 2012**
- VII. Communications Plan 2012**
- VIII. Organic Treatment Technologies**
- IX. Residual Treatment Technologies**
- X. EPS/CIF Results of Modelled Options**

## **Supplementary Reports**

- 1. Strategic Environment Assessment – Scoping Paper and Environmental Report**
- 2. Consultation Report**
- 3. Greenhouse Gas Models for Disposal Options**

# 1. Purpose of the Strategy

This strategy has been developed to provide a framework for sustainable waste management in Westminster. The strategy sets out how municipal waste will be managed between 2016 and 2031 and replaces the Council's current municipal waste management strategy 2004-2016.

Westminster's current waste disposal arrangements come to an end in 2016 and the strategy will inform the procurement of new arrangements and guide service decision making up to 2031.

This Strategy has been produced using guidance issued by DEFRA on developing Municipal Waste Management Strategies. The MWMS is also subject to a Strategic Environmental Assessment (SEA) to assess the environmental effects of the strategy (Supplementary Report 1).

The strategy provides a set of aims and objectives and specific targets which will support achieving sustainable waste management.

The strategy covers the Council's municipal collection and disposal arrangements for waste reduction, reuse, recycling, composting, treatment and disposal. It does not cover the specifics of street cleansing arrangements nor the operational detail concerning waste collection arrangements. It does not cover commercial or industrial waste collected by other organisations with Westminster. It is not the Local Waste Plan the council's strategy for allocating land use for waste facilities.

## 2. Aims/Objectives/Targets

### Overarching Goal

To minimise the burden on the public purse through the effective and efficient management of municipal waste.

### Aims

1. To have zero waste to landfill.
2. To maximise the management of waste in the top three sections of the waste hierarchy (reduction, reuse and recycling).
3. To achieve conformity with the Waste Strategy for England 2007 and the London Municipal Waste Management Strategy (2011) where practicable and cost effective to do so.

### Objectives

1. The Council will continue to promote waste reduction initiatives particularly those relating to food waste.
2. The Council will promote and facilitate initiatives that maximise the reuse of goods and materials before they enter the waste stream.
3. The Council will continue to develop partnerships with organisations (particularly local community groups and others in the third sector) to stimulate higher reduction, reuse and recycling rates.
4. The Council will continue to implement best practice in waste awareness and education
5. The Council will, in conjunction with their collection and processing contractors, continuously and pro-actively review the range of materials, collected for recycling and introduce additional materials where possible.
6. The Council will develop recycling services that encourage high participation.
7. The Council will seek to maximise the quality of the recyclable material collected.
8. The Council will expand 'on the go' recycling services for street litter.
9. The Council will continue to investigate opportunities to open a Reuse and Recycling Centre.
10. The Council will expand commercial waste recycling services.
11. The Council will continue take appropriate enforcement action against those businesses, visitors and residents who seek to dispose of their wastes irresponsibly.
12. The Council will develop partnerships with neighbouring boroughs to increase the efficiency and effectiveness of services.
13. The Council will seek to treat as much waste within Greater London as possible, where cost effective to do so.
14. The Council will seek to prioritise high performing, low emission, modern, sustainable technologies and operations that achieve value for money.
15. The Council will seek to send no residual waste to landfill.
16. The Council will develop plans for the responsible management of specialist waste streams.

### Municipal Waste Strategy Targets

1. To achieve zero growth in the amount of waste produced by each household per year by 2020.
2. To reduce the amount of household waste not re-used, recycled or composted by the residents of Westminster to 225 kg per capita by 2020.
3. To maximize the reuse of municipal waste.
4. To achieve a municipal waste recycling rate of 35% by 2020, 40% by 2025 and 45% by 2031.
5. To encourage all commercial organizations in Westminster to recycle their waste.
6. To maximize diversion of biodegradable municipal waste from landfill to meet national and regional targets.
7. To minimize the environmental impact of managing Westminster's municipal waste including meeting the Mayor's CO2 emissions performance standard (EPS) and carbon intensity floor (CIF).
8. To meet the national recovery targets of 67% by 2015 and 75% by 2020.
9. To maximize the treatment of waste within Greater London where practical to do so.

## 3. Drivers of Change

### 3.1 Efficient use of limited public funds

The funding regime to local government has undergone a major shift since the Government's Comprehensive Spending Review (CSR) was announced in the autumn of 2010. The impact has been a cut of 28% to local government core funding in real terms to be delivered over four years to 2014/15. Over the first two year period since the CSR was announced (2011-13) the Council has already successfully delivered £84m of savings initiatives. This substantial funding challenge will almost certainly continue throughout the term of this strategy and the primary driver for the waste services to be procured will therefore be **to achieve the optimum utilisation of scarce budgetary resources**.

Achieving value for money usually means buying the product or service with the lowest whole-life costs that is 'fit for purpose' and meets the specification. Legislation and taxation policy is increasingly incentivising the diversion of waste for treatment as a resource; whether through materials recycling or energy generation. Achieving value for money is therefore largely consistent with the other objectives described in this strategy but will remain the primary measure against which procurement decisions will be determined.

### 3.2 Sustainable Development – Carbon/Climate Change

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Not destroying finite resources and earth's climate and natural ecosystems are core elements of sustainable development.

The management of waste is a very visible contributor towards climate change, and through the various stages of its production, transport, handling, treatment and disposal, releases carbon in the form of carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>). These greenhouse gases, along with other gases and particulates (such as aerosols and particulate matter), accumulate in the atmosphere and are altering the amount of heat leaving the earth's atmosphere. As a result, the earth's temperature is rising and there is serious concern over the potential global consequences. For example, low-lying land may flood if ice caps melt. At a local level, Westminster is highly susceptible to flooding due to its location within the flood plain of the River Thames and other local river courses.

Methane is twenty-three times more potent than carbon dioxide as a greenhouse gas and is released as waste decomposes in landfill without the presence of oxygen. Diverting waste from landfill is therefore a key priority for UK local authorities. Much has been done already with a drop in landfill of municipal waste from 76% in 2000 to 36% in 2012 in England and Wales but more is to be done. The Climate Change Act 2009 sets out legally binding targets for the reduction of greenhouse gases and encompasses a carbon budgeting system in a bid to develop a 'low carbon economy'.

### 3.3 Key Driver - Waste Hierarchy

The waste hierarchy is at the heart of the Council's approach to managing waste. In looking at how to manage any waste, this approach firstly focuses on the scope for waste prevention, and then examines each subsequent option before disposal is considered. This is a prudent approach to waste management, that is designed to minimise climate change impacts. There will be exceptions to this, as the Waste Strategy for England 2007 (WS2007) explains:

*"Recent studies have confirmed that the waste hierarchy remains a good general guide to the relative environmental benefits of different waste management options but that there will be exceptions to this for particular materials and in particular circumstances"*



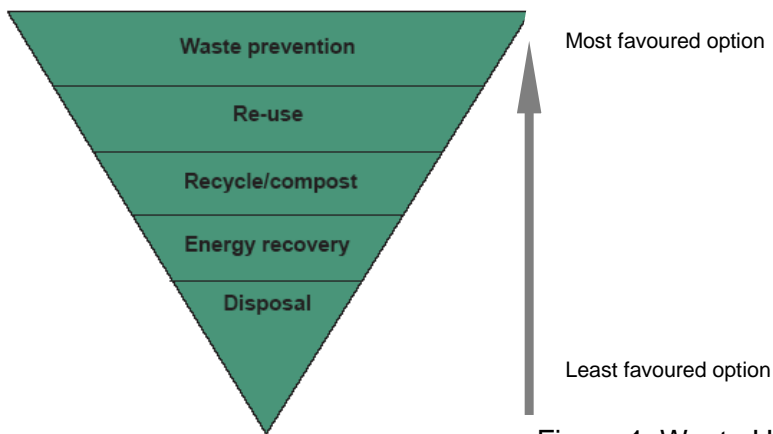


Figure 1: Waste Hierarchy

1. Reducing the waste that is produced, e.g. buying goods that do not have excessive packaging.
2. Reusing waste that is produced without altering it, e.g. reusing plastic bottles.
3. Recycle/compost the waste to make the same or another material, e.g. glass bottles can be made into glass bottles again and can also be used in aggregate for road building.
4. Treating the waste in order to recover value through energy release, e.g. biogas from composting food waste can be used to generate electricity.
5. Disposal of the waste without recovering any value from it, or disposing of waste after treatment when no further value can be extracted, e.g. sending waste to landfill.

Except for disposal, all levels of the waste hierarchy, can help to reduce greenhouse gas emissions. By reducing, reusing and recycling waste the need for new raw materials is lessened. Recovery of energy through waste treatment technologies not only reduces carbon emissions from landfill, but can directly produce electricity and heat from our waste to avoid the use of fossil fuels.

The development and implementation of this Municipal Waste Management Strategy addresses a number of key national policies and legislation. A key legislative driver is the diversion of biodegradable municipal waste (BMW) from landfill, as required by the EU Waste Framework Directive 2008, and the Landfill Directive 1999. In addition, the Waste Strategy for England 2007 sets national waste reduction, recycling and recovery targets; whilst the Mayor of London's London Plan 2008 sets Regional targets.

### 3.4 Local Drivers/Demographics

The most efficient and effective methods of collecting and treating waste will be strongly influenced by the local context in which they are delivered. Few, if any, areas in the UK have a more complex set of operational constraints than Westminster.

Located in the heart of London the City of Westminster is home to the Monarchy, the Government and many Commonwealth High Commissions and foreign embassies. One of 33 London Boroughs, the City includes within its boundaries some of London's most prestigious landmarks and districts, including Westminster Abbey, Houses of Parliament, Buckingham Palace, Big Ben, Marble Arch, Mayfair, Oxford Street, Piccadilly Circus, Soho and Trafalgar Square.

Within its 2,204 hectares (8.51 square miles) Westminster takes in Regent's Park to the north, Hyde Park to the west, and Covent Garden to the east. To the south it follows the River Thames. The residential areas of the City extend from Queens Park to St Johns Wood and from Bayswater to Pimlico.

Westminster is also one of Europe's most prestigious business locations and houses the international headquarters of many multinational organisations. Small businesses play an equally important part in the economy of Westminster. There are 48,000 businesses in Westminster; more than 93% of firms employ fewer than 25 people.

Westminster has a unique set of challenges to face in delivering sustainable waste management services which include:

- 89% of households are flats, waste storage space is as a result limited The ability to identify who is and isn't recycling in a multiple occupancy/high turnover environment to allow targeted communications is a considerable barrier to achieving elevated recycling rates.
- 20% of households have single waste chutes severely discouraging recycling initiatives. To increase the challenge, doorstep recycling collections in many housing estates and similar multi-occupancy properties are not considered 'fire safe' by the London Fire Brigade and therefore near entry bring facilities are the only viable option which have already been installed. (65,000 properties)
- 121,000 households in 6 square miles, 12,000 businesses served. Westminster has a reported population density of 102 people per hectare compared to 52 and 4 the London and UK average respectively. However, the WCC figure includes the Royal Parks and in reality the density is over double that formally reported. The congestion and complexity of operating in a densely populated environment makes the consistent capture of high quality recyclables a challenge to access.
- The 160 bring sites are subject to contamination/fly-tipping and collection staff actively check whether materials are suitable for recycling or need to be disposed of as general waste.
- Waste is often (61,000 properties/50% of housing stock) managed by porters, cleaners, housing management teams ('gatekeepers') rather the waste producers. Door knocking exercises in Westminster are less effective than elsewhere because of 'gatekeepers' not allowing access to speak to or deliver leaflets to residents in multi-occupancy due to privacy concerns.
- Resident turnover of 30% per annum means a continual communications effort is required.
- Significant language and cultural diversity.
- A security zone covers 15% of the city preventing the installation of recycling on the go facilities in some of the highest footfall areas.
- Car ownership is low (37% of households have access) limiting the ability of households to reuse and recycle larger items of waste,
- Listed building and conservation areas limit the ability to alter streets and buildings to incorporate sustainable waste management systems.
- Visitor and commuter population is over 1 million each week day.
- 48,000 businesses generating 2.1% of UK's GDP.
- High number of special events including Royal Events, London Marathon, New Years Eve, and Notting Hill Carnival where security and a requirement to reopen roads quickly prevent significant separation of recyclables.
- Westminster contains by far the largest night-time economy concentration in the UK.

## Demographics

The 2011 census results from the Office of National Statistics suggest that Westminster had a resident population of 219,400. Up from 190,631 in 2002 (ONS, Mid-Year Estimates 2002). The daytime population however increases to more than one million, including 550,000 people employed in Westminster and more than 29 million tourists visiting each year. There are more than 3,300 entertainment venues in Westminster, with music and dance venues alone having capacity for 190,000 people each night. Total capacity in late-night venues (after 11.00pm) is approximately 225,000.

The 2011 Census also confirmed that Westminster has the:

- second smallest average household size (2.0 persons);
- second highest percentage of one-person households (49%);
- second highest percentage of households living in flats (89%);
- fourth lowest percentage of households with a car or van (37%).

The detailed 2011 census information can be found in Appendix I.

### 3.5 Regional Drivers

#### Mayor of London's Municipal Waste Management Strategy 2011

The Mayor of London has established pan London Municipal Waste Management recycling targets (2015 – 2031). It is expected that all boroughs combined achievements would realise the targets shown in table 1.

**Table 1: Mayor's Municipal Waste Targets (2015 – 2031)**

Year	Recycling and Composting Municipal Solid Waste (MSW)
2015	45%
2020	50%
2031	60%

The Mayor's key targets for the management of London's municipal waste are as follows:

1. To achieve zero municipal waste direct to landfill by 2025.
2. To reduce the amount of household waste produced from 970kg per household in 2009/10 to 790kg per household by 2031. This is equivalent to a 20 per cent reduction per household.
3. To increase London's capacity to reuse or repair municipal waste from approximately 6,000 tonnes a year in 2008 to 20,000 tonnes a year in 2015 and 30,000 tonnes a year in 2031.
4. To recycle or compost at least 45 per cent of municipal waste by 2015, 50 per cent by 2020 and 60 per cent by 2031.
5. To cut London's greenhouse gas emissions through the management of London's municipal waste, achieving annual greenhouse gas emissions savings of approximately:
  - 545,000 tonnes of CO<sub>2</sub>eq in 2015
  - 770,000 tonnes of CO<sub>2</sub>eq in 2020
  - One million tonnes of CO<sub>2</sub>eq in 2031
6. To generate as much energy as practicable from London's organic and non-recycled waste in a way that is no more polluting in carbon terms than the energy source it is replacing. This is estimated to be possible for about 40 per cent of London's municipal waste after recycling or composting targets are achieved by 2031. Specific Carbon Intensity Floor (CIF) targets have been established by the Mayor that the Council is required to meet.

The Mayor's targets encompass all Municipal Solid Waste (MSW), not just the fraction from households that is covered by the WS2007 targets. To reach the MSW recycling rate of 40% means that the Council would need to promote recycling of additional municipal streams such as commercial waste, waste from parks and fly tipped waste.

The Mayor of London has the power of direction as regards the Council's waste strategy which therefore needs to be 'in general conformity' with the Mayor's Municipal Waste Management Strategy. A check-list of the Mayor's policies/proposals and how this strategy support them is included at Appendix II

#### Mayor of London's London Plan 2011

To support the proximity principle, PPS10 (Planning for Sustainable Waste Management, ODPM 2005) requires the Mayor through the London Plan to identify the tonnages of municipal solid waste (MSW) and commercial/ industrial (C/I) waste to be managed and to apportion them by waste planning authority area to get local waste treatment self sufficiency rather than rely on sending wastes outside of London for processing, treatment or disposal.

### 3.6 European and National Legislative Drivers

#### EU Waste Framework Directive 2008

This Directive sets out a European framework for managing waste, and includes an increased statutory target of 50% recycling by 2020. It also includes important provisions on distinguishing between disposal and recovery and between waste materials and by-products. These measures act to promote a greater variety of new and emerging treatment technologies for residual treatment. The directive also promotes the Proximity Principle i.e. that waste should be managed as close as practicable to the point at which it is generated. This limits the environmental impact of transporting waste long distances and helps to ensure

that communities take responsibility for their own waste rather than dumping it on others. There is a requirement to set up separate collections of waste for houses and businesses of at least paper, metal, plastic and glass by 2015.

### **The Landfill Directive 1999**

The most significant part of the Landfill Directive 1999 was the restriction on the tonnage of biodegradable waste that could be sent to landfill by each Member State. This aims to decrease the amount of methane that is produced by waste decomposing in landfills and so reduce the overall effect on global warming. The targets are as follows:

- By 2020 to reduce the biodegradable municipal waste disposed to landfill to 35% of that produced in 1995. The Directive also set general standards for landfill management and introduced a ban on the landfilling of liquids, tyres and certain hazardous wastes. Additionally the co-disposal of hazardous, non-hazardous and inert waste was banned.

### **Landfill Tax**

The 2010 Budget made the short term status of Landfill Tax more certain by setting in place a rise of £8 per tonne a year from 2010/11 to 2014/15, culminating in a tax of £80 per tonne. Whilst the future rates after this date are unclear, it is a cost that the City Council wants to reduce as much as possible. As the costs of Landfill Tax, and landfill gate fees continue to rise they are together making landfill an increasingly expensive waste management option.

### **Waste Strategy for England 2007 (WS2007)**

The WS2007 sets an objective to “decouple waste growth (in all sectors) from economic growth and put more emphasis on waste prevention and re-use”. In practical terms this means stopping waste arisings growing as the economy grows (i.e. houses are built and people continue to spend money), and focusing on waste awareness and minimisation campaigns.

High recycling and composting and recovery targets for England have been set and are shown in table 2. Although these targets are not statutory (except the 2020 recycling and composting target, which is the same as that in the European Waste Directive 2008), Authorities should still aim to meet them as best practice. The WS2007 also supports the use of technologies that can recover energy from waste that cannot otherwise be reused or recycled within economic constraints.

**Table 2: WS2007 Targets (% of household waste requiring recycling and composting)**

	2015	2020
<b>Recycling and Composting</b>	45%	50%
<b>Recovery</b>	67%	75%

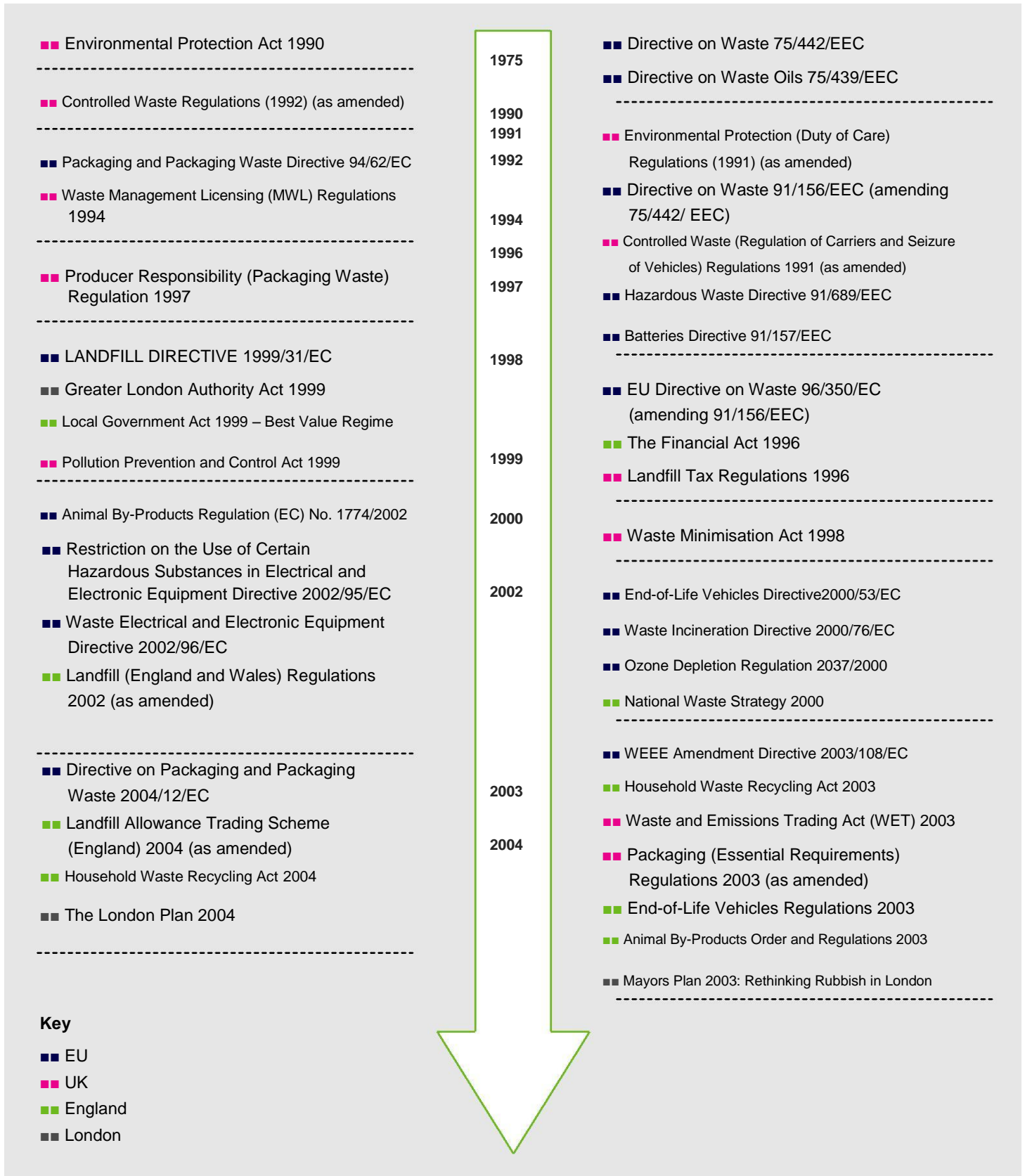
### **Waste Framework Directive (rWFD)**

The revised Waste Framework Directive (rWFD) (2008/98/EC) is central to European Waste Management Policy. The requirements of the rWFD have recently been transposed into European Member State legislation, this legislation applies to collections carried out in England and Wales and Scotland. Two of the key aspects of the rWFD are:

- sets a target for all Member States of a preparing for re-use/recycling target of 50% for household waste materials paper, metal, plastic and glass by 2020 (European Commission, 2008).
- requires separate collections to be set up for paper, metal, plastic and glass materials (subject to necessity and the collection system being technically, environmentally and economically practicable (TEEP)) by January 2015.

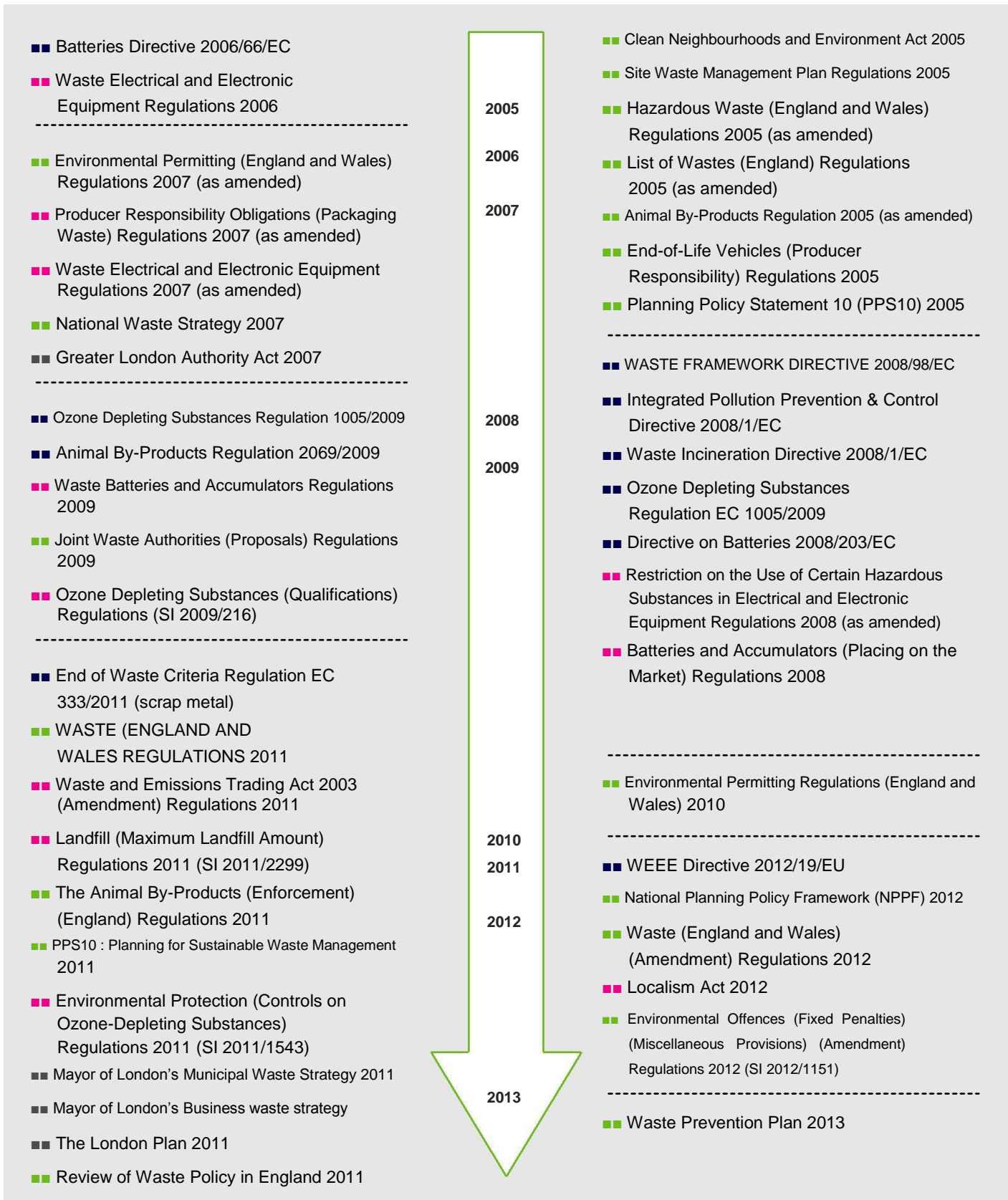
A complete list of legislative drivers on the service are shown in table 3. Appendix III provides more waste legislation detail.

**Table 3: Time line of EU and National Legislation and Policies Impacting City of Westminster Waste Management**



**Key**

- EU
- UK
- England
- London



## 4. Setting the Scene: Current Waste Management Services and Infrastructure

Collecting waste in a city centre is a complex undertaking. With over 1 million collections per week completed, collection times and frequencies are determined on a 'needs' basis largely dependent on the amount and type of waste generated and the available storage space of the property. As a result the frequencies of waste collection vary significantly not just from street to street but property to property. A 'one size fits all' approach to collection arrangements is inappropriate and unworkable. Table 4 shows the variety of waste collection frequencies residents have access to.

**Table 4: Waste Collection frequencies by households**

Collections per week	No. of households (waste collections) (,000s)	No. of households (recycling collections) (,000s)
Once		70
Two	44	14
Three	16	6
Five	38	
Seven or more	23	

Many of the households receiving five or more collections per week will mostly be in streets shared with businesses which require a frequent collection service. Many streets in the West End have three collections per day, seven days a week.

The Council currently has separate waste collection and disposal contracts. Table 5 shows the main waste and recycling contract arrangements. The major waste collection and disposal contracts come to an end or have break options in 2016.

**Table 5: Current Waste Management Contract Arrangements**

Service	Contractor	Annual Value	Start Date	End Date	Extension Option
<ul style="list-style-type: none"> <li>Waste and Recycling Collections, Street Cleansing and Ancillary Services</li> </ul>	Veolia ES Ltd	£36m	2010	2017	Up to 2024
<ul style="list-style-type: none"> <li>Transfer, Transport &amp; Disposal of Waste</li> <li>Sale of Recyclable Materials</li> </ul>	Veolia ES Ltd	£9m	1995	2016	Up to 2017
<ul style="list-style-type: none"> <li>Transfer, Transport &amp; Disposal of Waste</li> <li>Processing and Sale of Recyclable Materials</li> <li>Civic Amenity Facilities</li> </ul>	Cory Environmental Ltd	£1m	2002	2016	Up to 2032

## **Household Waste Collection Services**

Waste collection and re-use, recycling and composting in Westminster is currently undertaken by the following methods:

- Kerbside collection;
- Container collection;
- Bring banks;
- Bulky Waste Collection Service
- Household Waste Recycling Centre (HWRC) at Smugglers Way (Wandsworth)
- Mobile Recycling Centre
- Third party re-use,
- Hazardous Household Waste Collections
- Street litter and litter bin collections

### **Kerbside Collections**

The Council currently contracts out waste and recycling collection services to Veolia Environmental Services. Residual waste collections in bags are a minimum of twice weekly with some mixed residential/commercial streets having three waste collections a day 7 days a week as commercial demand necessitates. Kerbside recycling collection services in bags and boxes of mixed recyclables paper, cardboard, cartons, glass bottles and jars, tins, cans, plastic bottles, pots, tubs and trays.

The Council does not currently provide garden or food waste collection services to residents.

### **Container collections**

Residual waste and recycling container collections are twice a week minimum with some properties having container collections daily.

### **Bring banks**

On-street residual waste bins (Big Black Bins) are provided at 150 locations primarily in areas with large numbers of flats and high population turnover e.g. Pimlico, Bayswater. These facilities are emptied 3 times a day 7 days a week.

Recycling bring banks (Micro Recycling Centres) are provided at 160 locations across the city for a range of materials dependent upon the available space. Materials collected include paper, cardboard, glass bottles and jars, tins, cans, plastic bottles, pots, tubs and trays, textiles, books, and small WEEE. The bins are emptied as demand necessitates ranging from weekly to daily. All bins are emptied by Veolia with the exception of the textiles which is emptied by the charity SCOPE. The location and materials collected at Micro Recycling Centres are shown in Appendix IV.

Battery recycling facilities are provided at schools, council and estate offices by Battery Back as part of a producer compliance scheme.

### **Bulky Waste Collection Service**

As only 37% of households have access to a car or van the Bulky Waste Collection Service plays a vital role in the disposal of bulky waste. It also helps maintain clean streets. Residents are charged £21 for up to 5 items. Concession customers get free collections. The service also



provides estate based bulk store collections. White goods are recycled via EMR facility at Willsden.

### **Reuse and Recycling Centre (RRC)**

As a Waste Disposal Authority, the Council is required to provide places where waste can be deposited at all reasonable times and free-of-charge by local residents (Environmental Protection Act 1990 s.51). These “reuse and recycling centre” sites can either be located within Westminster or so as to be reasonably accessible to local residents. The Council fulfils its obligations by providing access to the Western Riverside Waste Authority site at Smugglers Way in Wandsworth. Western Riverside report 1000 tonnes of waste per annum are typically deposited by Westminster residents.

### **Mobile Recycling Centre**

Given the low level of car ownership in Westminster, providing recycling facilities within walking distance of households is welcomed by residents. Since September 2010, in addition to the MRCs, the Council has operated a mobile recycling centre each Sunday at a car boot sale in Pimlico for the drop off of materials not collected at the doorstep. Materials collected include textiles, small electrical/electronic equipment, books, discs, tapes, low energy light bulbs, mobile phones and printer cartridges. The centre also serves as a residents engagement point and a pick up point for recycling bags.

### **Third Party Reuse Services**

The cerebral palsy charity SCOPE, collect textiles from 25 banks across the city (Appendix IV) for reuse in their shops across London.

At the start of the 2004 two organizations provided collections for reusable furniture in Westminster. Both organizations have stopped collections in recent years the reasons cited being cost of operations including the congestion charge.

### **Hazardous Household Waste Collections**

The City of London operates a Household Hazardous Waste Collection and Disposal Service (HWCDs) on behalf of 31 of the 32 London Boroughs including Westminster. The service can remove asbestos and chemicals from households. The five year contract ceases on 1st October 2015. Ninety collections per annum from Westminster residents a year is typical.

### **Street litter and litter bin collections**

The Council swept 444 000km of streets in 2012/13. Streets are swept 24/7 across 3 shifts (Table 6) with 245 sweepers working on a weekday. Residential streets are swept at least three times a week while busy commercial areas like Oxford Street are swept continuously 24/7. 1500 litter bins are provided and emptied between 2 and 25 times daily. 800 of the bins are combined litter, dry recyclables (paper, cans and plastic bottles) and cigarette end bins. Street sweepers in addition to collecting litter also segregate dry recyclables.

**Table 6: Street sweeper resources across week (2013)**

<b>Shift</b>	<b>Monday to Friday</b>	<b>Saturday</b>	<b>Sun + Bank Holidays</b>
<b>Day (6am-2pm)</b>	166	105	105
<b>Evening (2pm-10pm)</b>	55	55	55
<b>Night (10pm-6am)</b>	24	24	24

### **Commercial Waste Collections**

The Council offers a range of waste collection services they include prepaid bag collections (residual and dry recyclable waste), container collections (residual, dry recyclable waste and food waste collections), bulky waste collections and compactor/baler collections and baler servicing.

In 2013/14 the Council collected 92,500 tonnes of commercial waste from 11,000 customers.

## **4.1 TRANSFER, TREATMENT AND DISPOSAL OF WASTE**

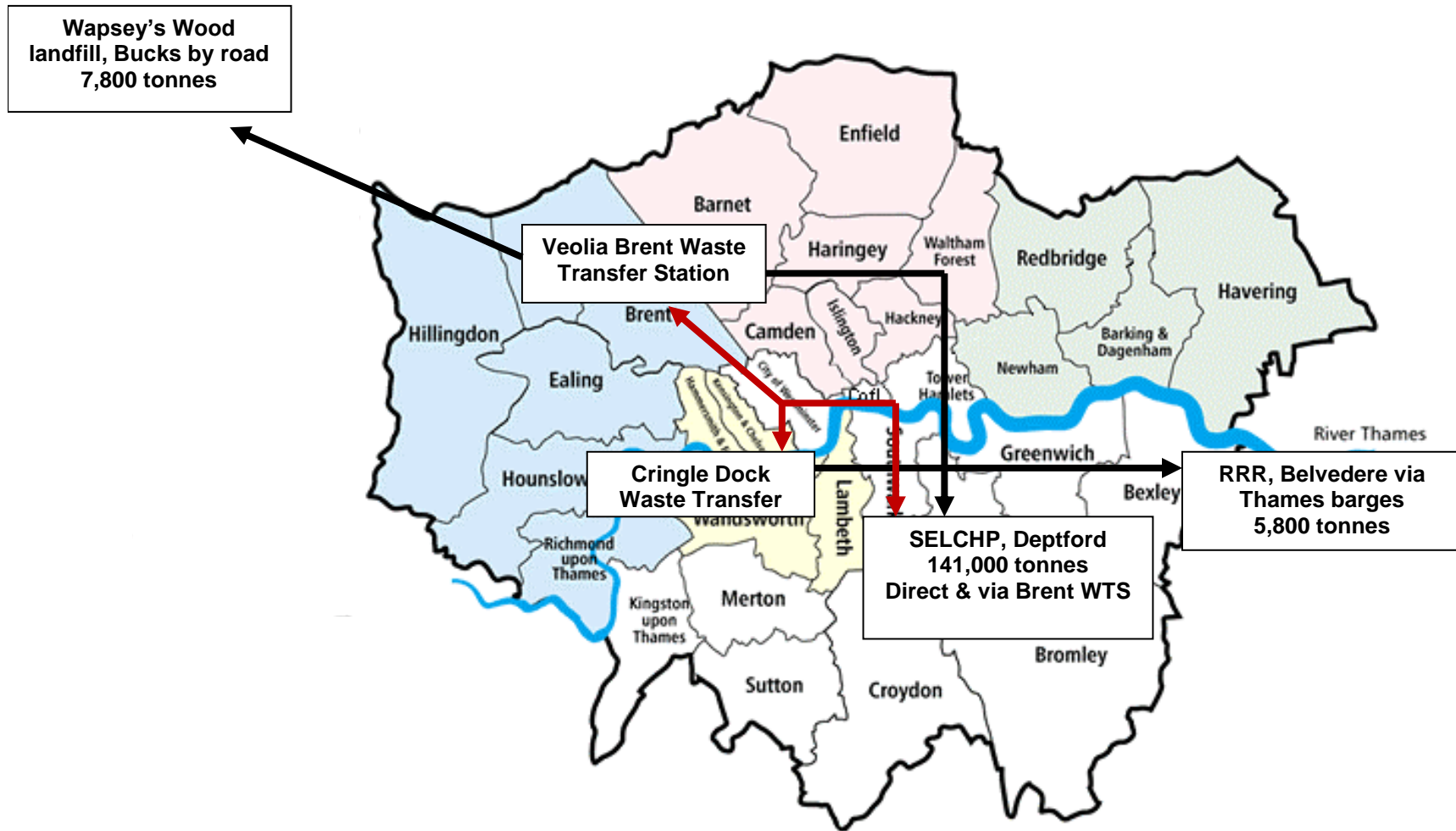
### **Residual Waste - Household**

Figures 2, 3 and 4 shows the locations of the transfer, treatment and disposal facilities currently used by the City Council and the quantities of waste treated.

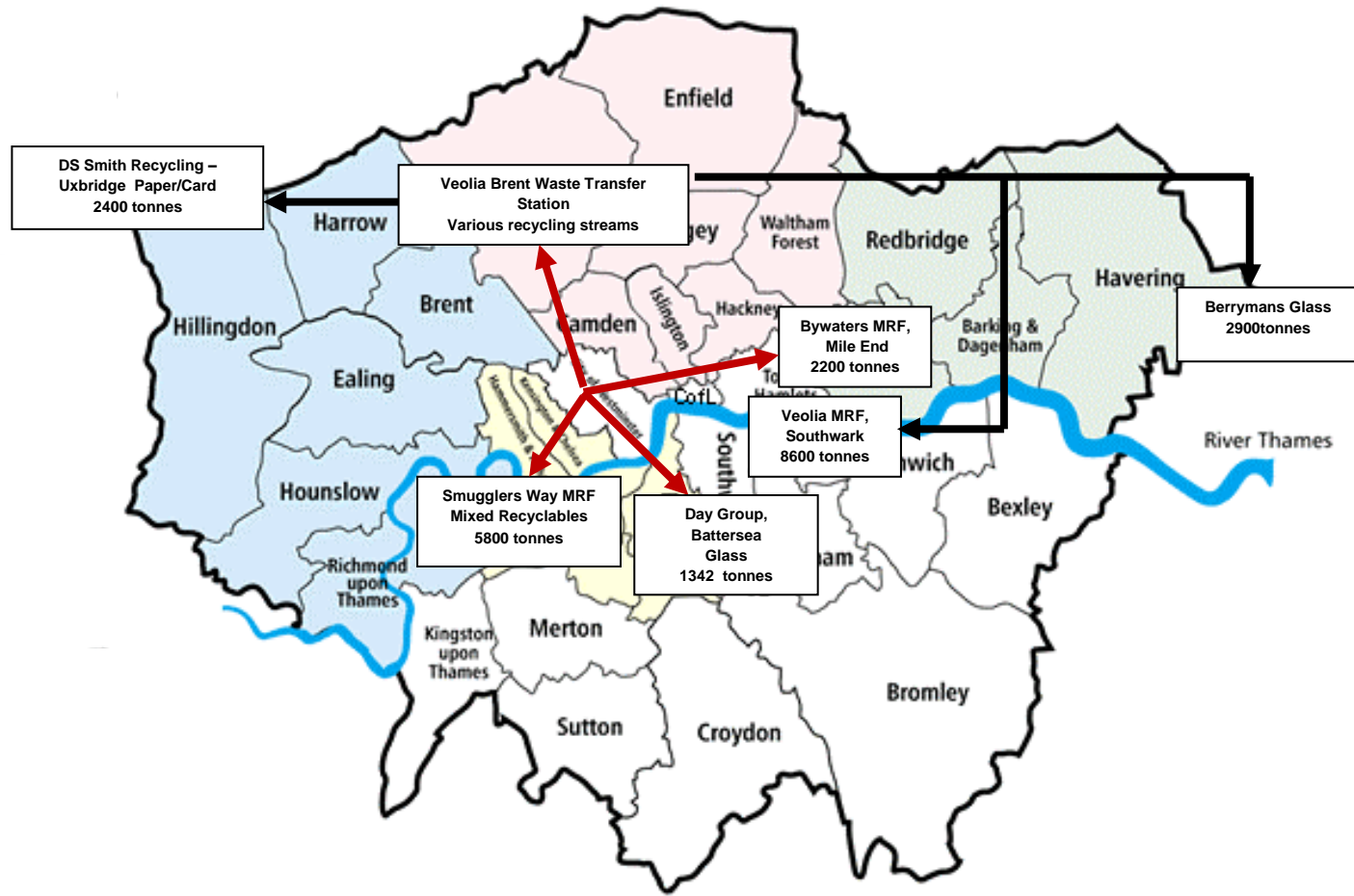
Currently the following waste transfer, treatment and disposal options are utilised for the processing of waste materials collected in the City.

- Transfer stations – a place where waste is aggregated for onward transit in bigger vehicles.
- Materials Recycling Facilities (MRFs) – a sorting plant where recyclables are separated into their different material streams.
- Energy from Waste plants – a plant that burns waste generating electricity and, at certain plants, heat.
- Landfill - the disposal of waste materials by burial.

**FIGURE 2: WASTE DISPOSAL ROUTES & TONNAGES 2012/13**



**FIGURE 3: MAIN RECYCLING ROUTES 2012/13**



**FIGURE 4: SMALLER TONNAGE RECYCLING ROUTES 12/13**



## **4.2 Current Waste Contract Arrangements**

### **Transfer Stations**

The Council currently uses three transfer stations located at Smugglers Way, Wandsworth, Cringle Dock, Battersea and Marsh Road, Wembley. The transfer stations are used for the bulking of the waste prior to further transport to processing or disposal facilities.

Smugglers Way and Cringle Dock (managed by Cory Environmental on behalf of Western Riverside Waste Authority) accept residual waste which is transferred to the Belvedere Energy from Waste facility in Bexley by river. Detritus from road sweepings are transferred via road to Sweeptech in Hassocks BN6.

Marsh Road, Wembley accepts residual waste which is transferred via road to South East London Combined Heat and Power (SELCHP), Deptford and Wapseys Wood Landfill in Buckinghamshire. Mixed dry recyclables are transferred to the Old Kent Road Veolia MRF. During the night residual commercial waste is deposited at the Marsh Road Transfer Station.

### **Management of Dry Recyclables**

Mixed dry recyclables go to three MRFs

- 1) Smugglers Way, Wandsworth (Cory Environmental)
- 2) Old Kent Road, Southwark (Veolia Environmental Services)
- 3) Twelvetreves Crescent, Bromley by Bow (Bywaters)

At the MRFs, the recyclable materials are sorted and graded prior to onward movement to reprocessors.

Paper and cardboard collected segregated from bring sites, schools, offices and other commercial customers is recycled by DS Smith via the Marsh Road Transfer Station.

Glass collected from bring sites, hotels, bars and restaurants is recycled by Berrymans via the Marsh Road Transfer Station and direct to Days Aggregates, Battersea.

Fridges are recycled by EMR, Willesden other WEEE are recycled by SWEEP in Sittingbourne, Kent. Batteries are collected by Battery Back and recycled in Belgium via a sorting facility in Dagenham.

### **Management of Residual Waste**

Residual waste is disposed of via two energy from waste plants SELCHP (Veolia ES), Deptford in London Borough of Lewisham and Riverside Resource Recovery (Cory Environmental) at Belvedere in the London Borough of Bexley. Where opening hours prevent direct delivery to

SELCHP, waste is temporarily stored at the Marsh Road transfer station with delivery the following day. That waste not accepted at the energy from waste facilities are landfilled at Wapseys Wood, Gerrards Cross in Buckinghamshire.

### Ancillary Contracts

The Council also has a range of other low or nil value contracts (Table 7) for the collection and disposal of Hazardous Waste, WEEE and Batteries. Table 7 also shows details of the mixed glass disposal contract.

**Table 7 : Ancillary Waste Management Contract Arrangements**

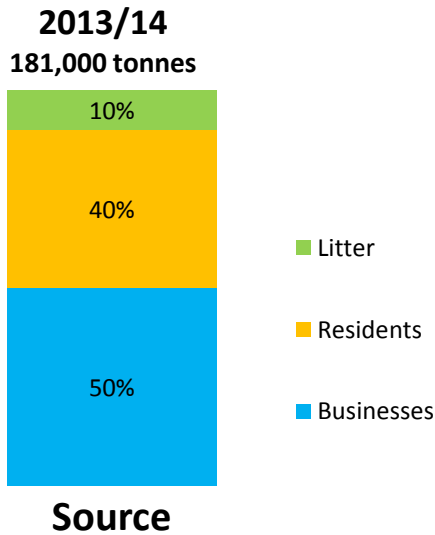
Service	Contractor	Annual Value	Start Date	End Date
Collection and Disposal of Hazardous Waste	Corporation of London (lead authority)	£5K	2010	2015
Sale of Mixed Glass for Recycling	Valpak Recycling Ltd	(£20K)	2013	2014
WEEE Collection Service	Veolia ESCS	£0	2012	2014
Battery Collection Service	Battery Back Limited	£0	2013	2014

### 4.3 Municipal Waste Arisings

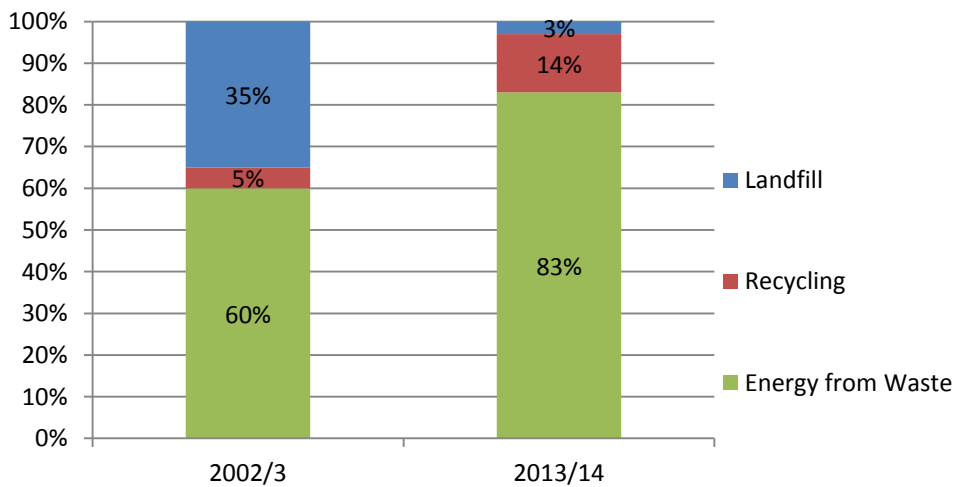
Unlike other local authorities in the UK the majority of waste collected is from commercial and street cleansing sources. (Figure 5) Waste generated by the residents makes up only 40% of the municipal waste stream. The vast majority (78%) of generated waste being incinerated to generate energy. The Council has been successful at reducing the amount of waste going to landfill in the last decade from 35% to 8% (figure 6). Insodoing supporting achievement of Landfill Directive targets.



**Figure 5: Municipal Waste Source**



**Figure 6: Waste Disposal Routes (2002/3 - 2013/14)**



#### 4.4 Waste Composition

Waste composition survey results show the variability of composition between sources. (Table 8)

50% of waste generated from households can be recycled using the doorstep recycling services currently provided. When you add bring site services (books, textiles/clothes, batteries and small electrical waste) a total of 57% of waste can be recycled. Food waste is the largest element of the household waste stream (Table 8) not currently collected for recycling.

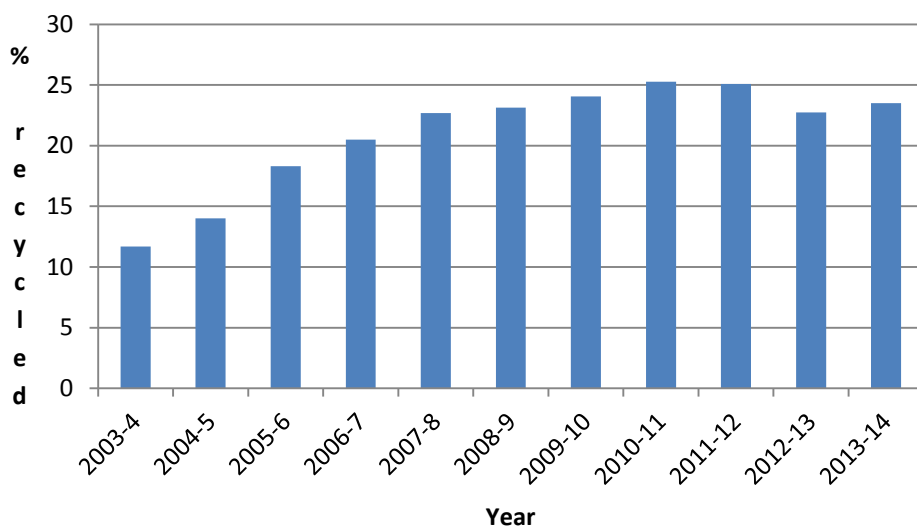
**Table 8: Household waste composition 2001**

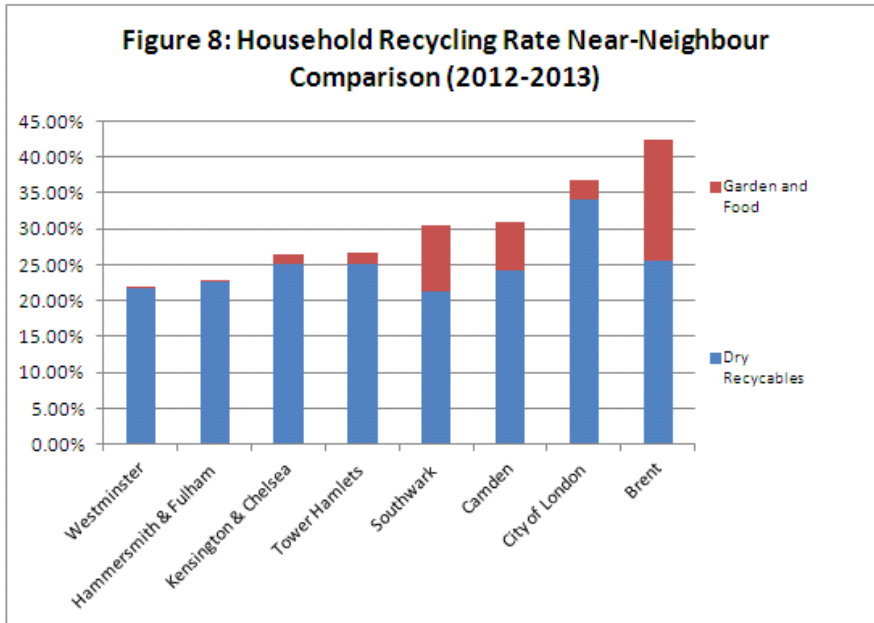
		HOUSEHOLD WASTE			COMMERCIAL WASTE		
MSW Composition	%	Residents	Litter Bins	Sweepings	Office	Retail	Hospitality
Paper & Card	45	34	38	23	72	68	23
Kitchen Waste	16	22	9	9	10	8	20
Garden Waste	3	5	2	17	0	0	0
Glass	14	8	13	8	5	3	42
Plastic Film	5	5	7	5	4	8	4
Plastic Bottles	4	6	4	2	3	4	3
Metals	3	3	2	2	2	2	3
Textiles	2	3	1	1	1	2	1
Misc. Combustible	7	10	18	27	2	3	4
Misc. Non-Combustible	2	4	6	6	1	2	0
<b>% of Total Waste:</b>		<b>33%</b>	<b>5%</b>	<b>5%</b>	<b>25%</b>	<b>12%</b>	<b>20%</b>
<b>Tonnes/Year:</b>		<b>62,700</b>	<b>9,500</b>	<b>9,500</b>	<b>47,500</b>	<b>22,800</b>	<b>38,000</b>

**4.5 Recycling Performance (Household): Comparison with similar authorities**

The Council has developed recycling services over the last decade and this has resulted in an increase in household waste recycling rate from 12% to 25%. (Figure 7) The most recent dip in performance has been the result of budgetary restrictions and removal of garden waste and autumn leaves composting.

**Household Waste Recycling Rate (2003-2014)**



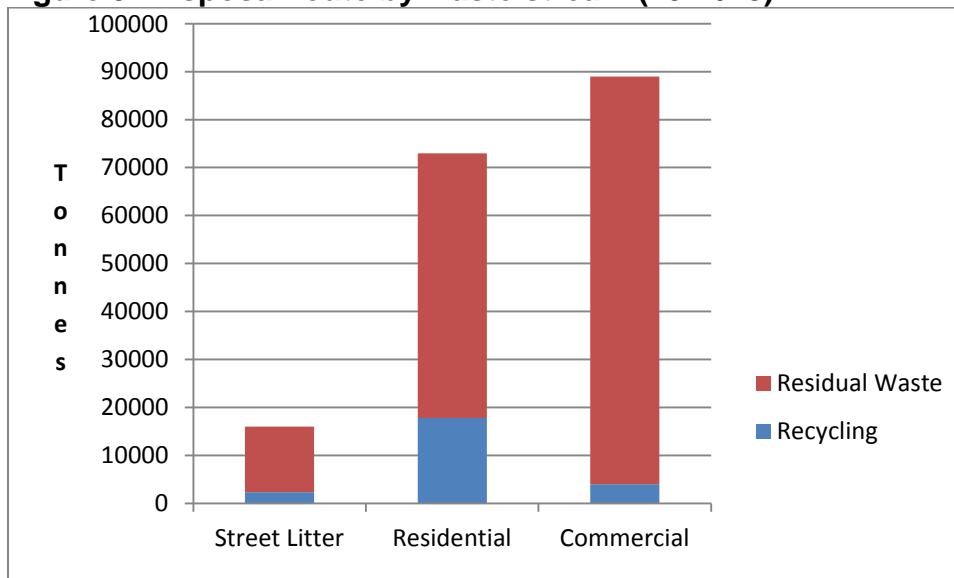


In 2011-12 the City Council's overall household waste recycling rate was 25% which was 338<sup>th</sup> of 352 English local authorities. (Figures include dry recyclables and composted food and garden waste) Figure 8 above shows our performance compared to our neighbours and other comparative inner London boroughs.

Doorstep recycling collection data shows participation rates of 45%. When combined with micro recycling centres collection data it is calculated 55% of the households actively recycle each week. The majority of recyclables are collected from residents (Figure 9)

The quantities of each waste stream recycled and sent for residual treatment are shown in figure 9. The street litter, residential and commercial waste recycling rates for 2012/13 were 17%, 32% and 5% respectively.

**Figure 9: Disposal route by waste stream (2012/13)**



### **Recycling and Composting Performance - Commercial**

Of the 91,500 tonnes of commercial waste collected in 2013/14 4800 tonnes was recycled a rate of 5% the majority from commingled collections.

A commercial food waste collection service commenced in the spring of 2013. 650 tonnes of commercial food waste were collected in 2013/14.

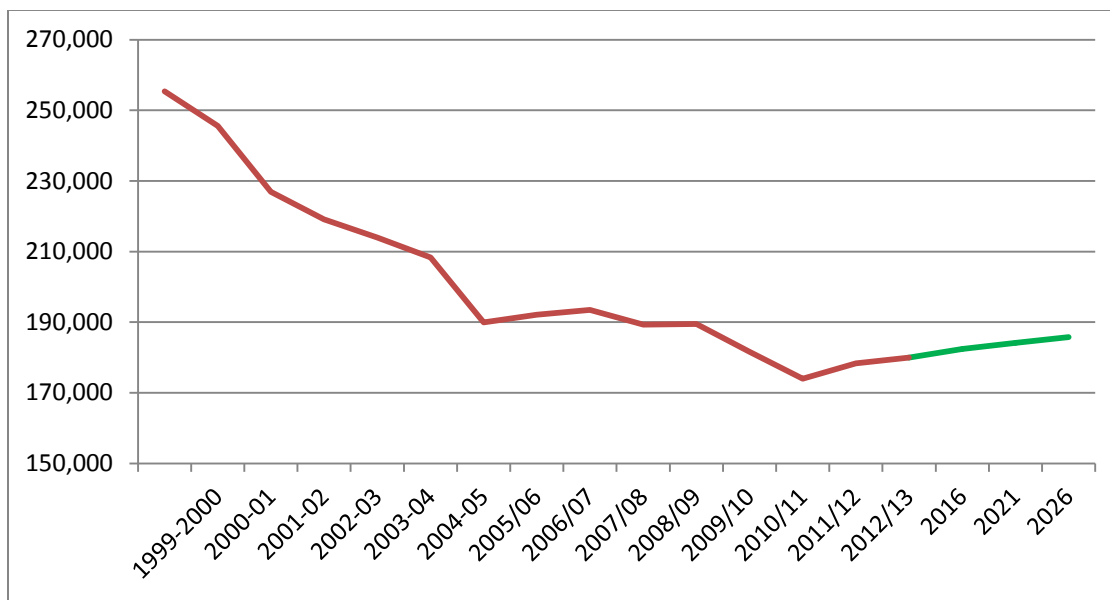
## 5. MANAGING WESTMINSTER’S WASTE 2016 - 31

### 5.1 Waste Projections

#### How much waste will be collected?

There has been a marked reduction in municipal tonnages collected in Westminster over the last 15 years from 250K tonnes to 178K tones p.a. (Figure 10). This is primarily the result of divestment of commercial skip services, the economy, packaging reduction, and some loss of commercial waste market share.

**Figure 10: Municipal Waste Management Tonnages** (1999-2013 and projected to 2031)



In 2009 the GLA projected Municipal Solid Waste generation (Table 9) in Westminster between 2011 and 2031 as part of the waste apportionment element of the Spatial Development Plan. The results are markedly different to those projected by the Council in 2013 highlighting the challenges associated with predicting changes in waste over time. As a consequence certain flexibility needs to be built into future disposal contracts to allow for waste growth and reduction.

Table 9: GLA Municipal waste projections for Westminster 2011-31 (K tonnes pa)

Year	2011	2016	2021	2026	2031
K Tonnes	192	202	212	221	228

Predicting the amount of waste to be generated in Westminster is particularly challenging as the street cleansing and commercial services make up 60% of MSW and

are subject to market forces and the strength of the economy which are difficult to predict. For planning purposes, Table 10 below represents the most likely scenario and the assumptions behind changes for each type of waste are explained below. Recognising this forecasting risk all future waste contracts will be awarded with protections in place to safeguard the council's position should the quantities of waste collected change substantially (whether upwards or downwards) for reasons beyond the council's control.

**Table 10: WCC Population and waste growth forecast 2013-31**

Year	Population	Annual Growth	Commercial (tonnes)	Street Cleansing (t)	Household (t)	Total Waste (t)
2013	224,043	-	92,500	17,000	72,000	181,500
2016	230,492	2.90%	92,500	17,000	74,073	183,573
2021	237,981	3.20%	92,500	17,000	76,480	185,980
2026	243,413	2.20%	92,500	17,000	78,226	187,726
2031	248,662	2.20%	92,500	17,000	79,913	189,413

(assumes static household waste generation levels for the period of 321.37 kg per person per year.)

It has been assumed that the Council will remain in the commercial waste market over the plan period and that there will be no growth in Commercial Waste tonnage. There is no certainty or meaningful control over the amounts of commercial waste that will be collected in the future. Commercial waste collection levels are determined by numerous factors outside our control including market entrants, and market prices for materials, fuel and disposal.

No change in street cleansing levels is assumed as the tonnage routinely reflects the strength of the economy and visitor numbers and there is no evidence available to suggest a growth or reduction will occur.

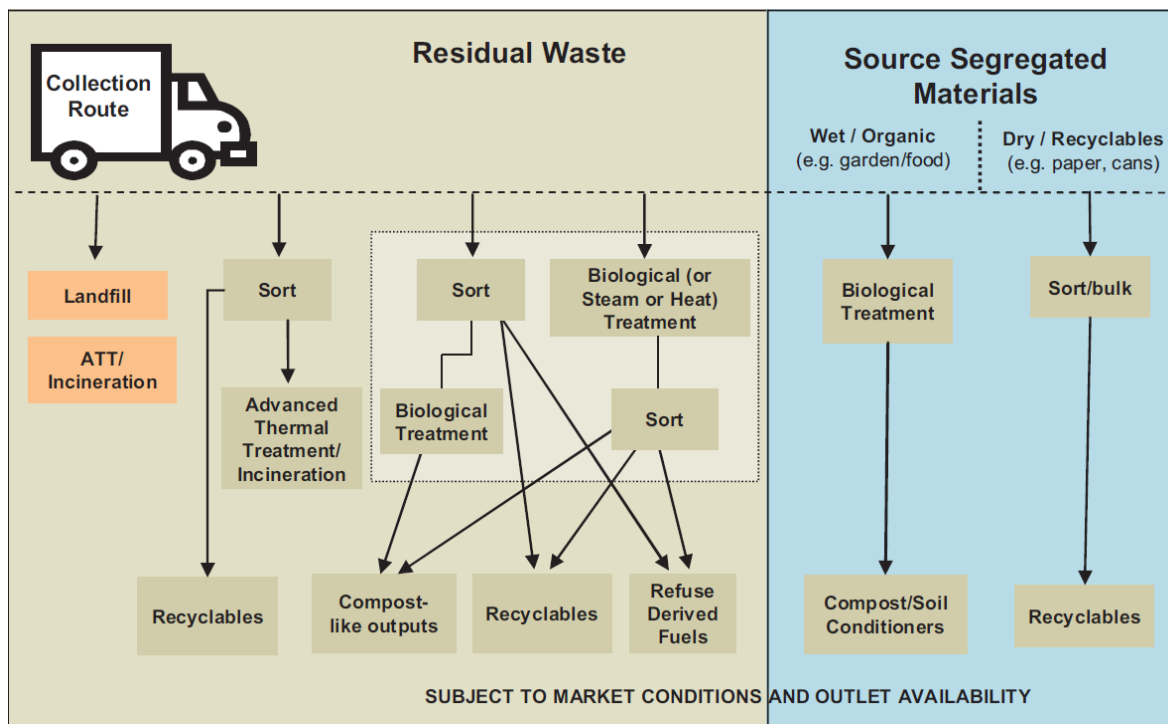
Household waste arisings are predicted to rise over the period 2013 – 31 from 72K to 80K tonnes as additional housing developments are completed. The planning department projection is for an increase from 122K households today to 135K by 2028.

## 5.2 Waste Treatment Options Overview

Waste collected separately can be reused, recycled or composted dependent on the material quality. Mixed waste can be burnt or landfilled. Options exist, including Mechanical Biological Treatment (MBT), to pre-treat mixed waste ahead of burning or landfilling to recover valuable materials for recycling and/or generate a compost. Pyrolysis and Gasification are two ways of burning waste known as Advanced Thermal Treatment (ATT).

A simplified diagram showing the range of treatment and disposal options and the various processing activities employed is shown in Figure 11.

**Figure 11: Waste treatment options**



### Cost of waste treatment options

Table 12 shows the median and range of UK disposal costs for different technologies and treatments for 2013. It is clear that segregation of mixed recyclables is markedly cheaper than other disposal routes. The disposal cost of organics treatment (composting and anaerobic digestion) is less than burning and landfilling.

Table 12: Summary information on disposal gate fees (£ per tonne) (WRAP 2013)

	<b>Grade / material / type of facility</b>	<b>Median</b>	<b>Range</b>
<b>Materials Recovery Facility (Recycling)</b>	All	£9	-£40 to £82
	Contracts starting in 2012 or later	-£7	-£40 to £13
<b>Organics</b>	Open-air windrow (OAW)	£24	£15 to £45
	In-vessel composting (IVC)	£46	£28 to £60
	Anaerobic digestion (AD)	£41	£25 to £66
<b>MBT</b>		£76	£66 to £82
<b>EfW</b>	Pre-2000 facilities	£58	£32 to £76
	Post-2000 facilities	£90	£62 to £126
<b>Landfill</b>	Non hazardous waste gate fee plus Landfill Tax	£93	£80 to £121

(<http://www.wrap.org.uk/content/wrap-gate-fees-report-2013>)



### **5.3 WASTE REDUCTION, REUSE AND AWARENESS**

**Objective 1 - The City Council will promote waste reduction initiatives particularly those relating to food waste.**

**Objective 2 - The Council will promote and facilitate initiatives that maximise the reuse of goods and materials before they enter the waste stream.**

**Objective 3 - The Council will continue to develop partnerships with organisations (particularly local community groups and others in the third sector) to stimulate higher reduction, reuse and recycling rates.**

**Objective 4 - The City Council will implement best practice in waste awareness and education.**

#### **Introduction, Track Record and Impact**

Waste reduction sits at the top of the Waste Hierarchy (Figure 1) and can be defined as the range of measures taken to prevent a material or product from becoming waste in the first place. Reduction encompasses actions taken at different stages in product life cycles; product design, production, consumption and end of life and is the most efficient, effective and sustainable means of managing waste.

The Council can influence the behaviours of local residents and businesses through effective waste management practices but has little sway over how industry and commerce manage waste during product life cycles and within supply chains. These activities are better affected through effective legislative, economic and market drivers.

Previous practical waste reduction and reuse activities have focused on providing local residents and businesses with the knowledge, infrastructure and incentives to make informed choices and actions to reduce the quantity of waste produced. Reducing food waste and junk mail and encouraging home composting, the use of reusable nappies and the reuse of clothes and books have been the main areas of reduction activity (Appendix V) in recent years.

**Reuse** using an item again after it has been used whether for the same function or another saves money, resources and greenhouse gas production. Reuse of waste is been common place in society (car boot sales/jumble sales) and has flourished with internet auction and give away sites such as ebay, gum tree and freecycle.

From a local authority perspective there are two types of **reuse**, that that occurs independent of the council and doesn't cost the council anything and reuse activity

managed by the council that requires funding and managing. Primarily bulky waste (furniture and white goods), books and textiles fall into this latter category.

Education and engagement campaigns that deliver behavioural change are fundamental to increasing reduction, reuse and recycling performance. The Council has undertaken a continuous and extensive waste **awareness** campaign since 2003 to promote reduction, reuse and recycling. The campaign was reviewed and praised by WRAP in August 2012 the results of which can be found in Appendix VI. The 2013 communications plan can be found in Appendix VII.

### **What will we do?**

**Target 1 – To achieve zero growth in the amount of waste produced by each household per year by 2020.**

**Target 2 - To reduce the amount of household waste not re-used, recycled or composted by the residents of Westminster to 225 kg per capita by 2020**

**Target 3 - To maximize the reuse of municipal waste.**

### **Household waste reduction**

Targets 1 and 2 will require the continued success of existing waste **reduction** initiatives and also the introduction of innovative schemes, prioritised for maximum impact. Generally, the schemes will involve engagement and action by the community as well as incentivising positive behaviours. The successful initiatives already in place will be continued as well as the identification and implementation of innovation and best practice as proven in other world class cities. We plan to build on the success of WRAP's Love Food, Hate Waste programme. Also we will run smart shopping initiatives, unsolicited mail campaigns, home composting and reusable nappy promotions. We will work with Trading Standards where excessive packaging is identified.

**Note:** DEFRA has recently instigated a Household Waste Prevention Review for England, in order to publish the first ever Waste Prevention Programme for England by December 2013. This document will provide a framework to help Westminster deliver best practice in waste prevention and will affect future plans and policies within this area. As a result, the content of this Chapter is likely to be affected and the subsequent action plans will reflect the programme recommendations. Any changes will be published on the Council website.

### **Commercial waste reduction**

Producers of commercial waste are already incentivised to reduce their waste by the savings they can make on waste collection and disposal. We will continue to promote

the Mayor's Green Procurement code and signpost SMEs to resource efficiency and waste reduction best practice guidance.

## **Household Reuse**

To achieve target 3, the Council will develop strategic partnerships with reuse organizations (including London Re-use Network) to maximize the reuse of bulky waste including white goods and furniture from residents and businesses.

We seek to expand bring sites for textile and WEEE and introduce doorstep collection services where cost effective to do so. We will provide, promote and expand reuse services including but not limited to toys, books and bikes.

Awareness and understanding of the value of unwanted reusable items is important in affecting behavior change. The education and engagement strategy will include encouraging resource reuse and recycling, highlighting the value of resources, and discourage residual disposal where inappropriate.

Given limited council budgets it is preferable that residents and businesses reuse their waste independent of the Council. We plan to support development of reuse networks and services. The challenge is to focus on education and engagement that changes the mindset that what is being thrown away is a resource with value not worthless waste.

## **Commercial Reuse**

Opportunities exist to increase the reuse of commercial bulky waste (Furniture and equipment). Partnerships with reuse organizations (including London Re-use Network) will be explored and implemented as cost effective to do so.

## **Awareness**

We will use tried and tested engagement methodologies (Appendix VII) to encourage greater recycling. We will use the Recycle Now iconography to support a consistent approach across London, further develop our website and improve functionality for mobile users and our social media presence.

We plan to door knock properties to raise awareness and we believe reward and recognition schemes still have a role to play in supporting achievement of higher recycling rates and the Council will introduce a scheme where appropriate to do so. We will develop partnerships with other local organization, neighbouring boroughs and regional bodies to maximize the impact of activities.

## 5.4 RECYCLING

**Objective 5 - The Council will, in conjunction with their collection and processing contractors, continuously and pro-actively review the range of materials, collected through the existing kerbside collection and bring schemes and introduce additional materials where possible.**

**Objective 6 - The Council will develop recycling services that encourage high participation.**

**Objective 7 - The Council will seek to maximise the quality of the recyclable material collected.**

**Objective 8 - The Council will expand 'on the go' recycling services for street litter.**

**Objective 9 - The Council will investigate opportunities to open a Reuse and Recycling Centre.**

**Objective 10 - The Council will expand commercial waste recycling services.**

### Background

Recycling is the process to change materials (waste) into new products to prevent waste of potentially useful materials, reduce the consumption of raw materials, reduce energy usage, pollution by reducing the need for "conventional" waste disposal, and lower greenhouse gas emissions.

### What have we done and impact (Household Recycling)

**Kerbside:** Since commencing commingled collections we have increased household recycling rates from 12% to 25%. (Figure 7). All households have access to a recycling service for dry recyclables. Household recycling participation was recorded at 45% in 2012. When combined with estimated bring site usage participation currently totals 55%.

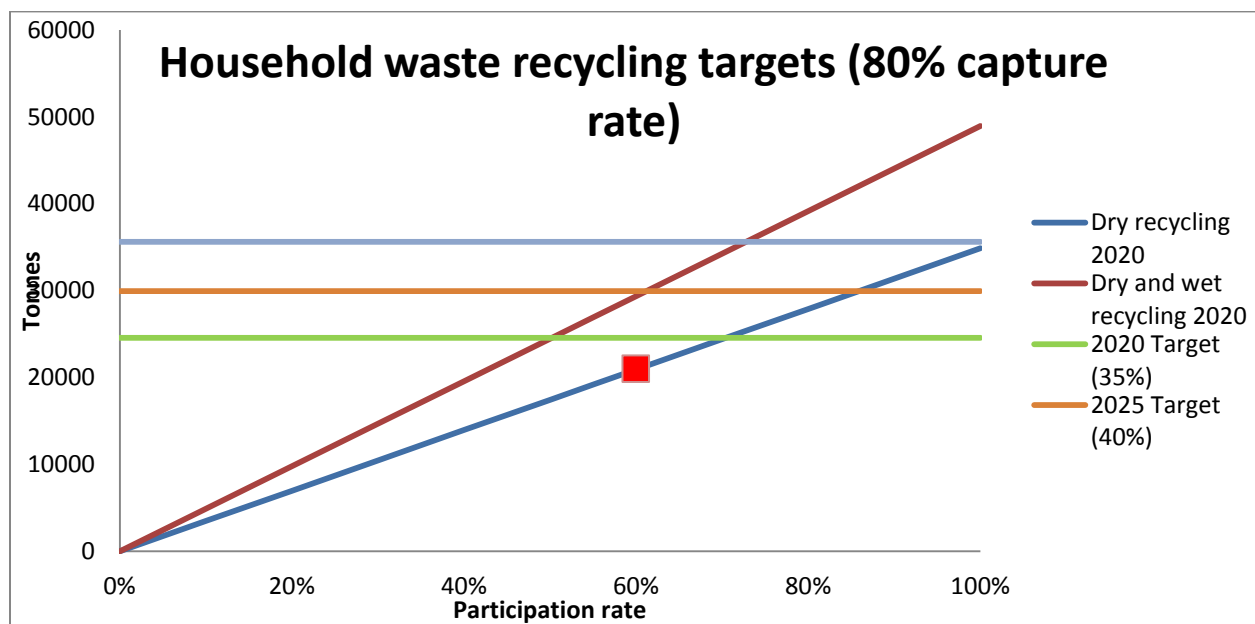
**Bring:** Given the lack of internal and external space for waste storage we have increased the number of bring sites from 75 to 160 since 2003. Bring facilities for textiles, books, small WEEE and batteries have also been introduced. Appendix IV provides details of the bring site facilities.

**On the Go recycling** services include sweeper collections, litter bin recycling, free newspaper recycling, detritus recycling and special events recycling. Recycling facilities for street litter are now common place and over 2000 tonnes of street litter is now recycled each year.

**Communications:** Given the high population turnover and range of products and services competing for the attention of Westminster residents, the Council recognizes the importance of communications and engagement to encourage reuse and recycling rates of high quality and size. In the last decade the Council has invested £200K per annum in this area to provide residents 8-10 ‘opportunities to see’ service information p.a. The scope and scale of communications activity can be found in Appendix VII.

**But what are realistic reuse and recycling targets to set?** The Council has 3 distinct waste streams (household, street and commercial) with differing levels of control in the capture of waste for reuse and recycling. This section details the rationale for the reuse and recycling targets established.

Household Waste

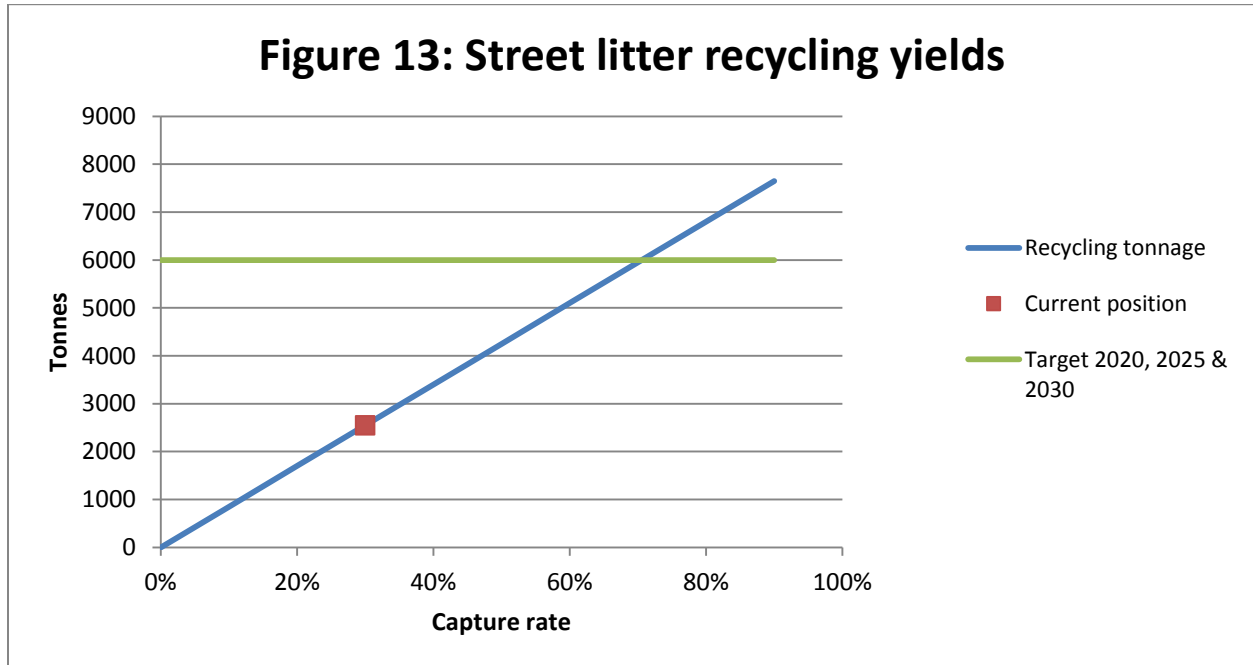


As regards the contribution from households, assuming no change in the range of materials collected and capture rate from today (80%) the participation rate would have to increase from 55% today to 70% (2020), 85% (2025) and 100% (2031) to achieve the targets. If food waste was collected from households (figure 12) 50%, 60% and 70% participation would be required in the target years.

Given the practicalities of identifying and communicating with residents of multiple occupancy properties, the high number of short lets and population churn it is not considered likely that participation rates will ever exceed 75%.

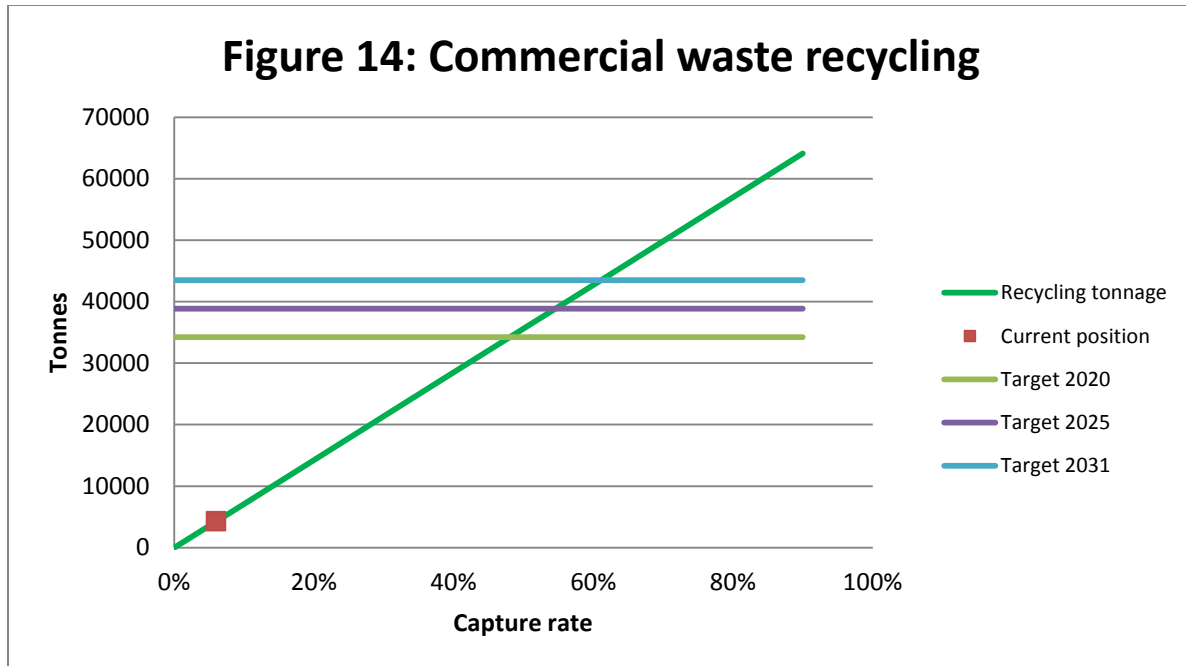
### Street Litter

Figure 13 shows the capture rate required to reach the target set for street litter recycling. Given the scale of existing on the go recycling services and the level of control the Council has over street litter generation a target of 6000 tonnes is considered challenging but achievable.



### Commercial Waste

Assuming no change in commercial tonnages figure 14 shows recyclables capture would have to increase from 10% to 48% (2020), 55% (2025) and 61% (2031) to achieve the set targets. Composition analysis (table 8) indicates over 65% of waste in the commercial stream is currently recyclable.



It is likely that commercial waste service charges will provide a clear economic incentive for businesses to recycle their waste and therefore it is projected that capturing 70% of the recyclable waste is achievable resulting in a 45% commercial waste recycling rate by 2031. (Figure 14) The commercial waste recycling service will be expanded as cost effective to do so.

### Municipal Waste Targets

The tonnages required to meet the reuse and recycling targets are shown in table 13.

Table 13: Reuse and Recycling Tonnages required to reach MSW recycling rates

	Total MSW (,000 tonnes)	Recyclable (53%) Current service. (,000 tonnes)	Recyclable (65%) Food, WEEE, Textiles (,000 tonnes)	35% MSW recycling rate (,000 tonnes)	40% MSW recycling rate (,000 tonnes)	45% MSW recycling rate (,000 tonnes)
2020	185	98.0	120.3	64.8	74.0	83.3
2025	187	99.1	121.6	65.5	74.8	84.2
2031	189	100.2	122.9	66.2	75.6	85.1

To achieve the targets the following improvements in reuse and recycling performance across services would be required. (Table 14)

Table14: Breakdown of recycling tonnages by stream to achieve targets

	2012/13	2020	2025	2031
<b>Household</b>	17758	24575	29950	35625
<b>Street Cleansing</b>	2252	6000	6000	6000
<b>Commercial</b>	4097	34225	38850	43475
<b>Total Reused + Recycled</b>	24107	64800	74800	85100
<b>Total MSW</b>	178354	185000	187000	189000
<b>Percentage Reuse/ Recycling Rate</b>	14%	35%	40%	45%

### What will we do?

**Target 4 - To achieve a municipal waste recycling rate of 35% by 2020, 40% by 2025 and 45% by 2031.**

**Target 5 - To encourage all commercial organizations in Westminster to recycle**

The waste and recycling collections will be reviewed to support a system that better encourages reuse and recycling.

The Council will:

- a. Continue mixed (commingled) collections of dry recyclables as it remains the most technically, environmentally and economically practicable solution.
- b. Continue to encourage residents and business to only put out the materials requested (paper, cardboard, glass bottles and jars, tins, cans, aerosols, plastic bottles, pots, tubs and trays, and paper based cartons) as contaminated recycling increases service costs and can damage sorting equipment. In doing so maximize the material quality collected. In addition to those materials currently collected at the kerbside we will further expand textile and small WEEE collection services as it is cost effective to do so.
- c. Investigate whether removing glass from mixed recycling collections is financially and environmentally the best solution.
- d. Regularly review materials that can be recycled and decide whether it is practically, environmentally and financially viable to expand the range collected.
- e. Expand temporary and fixed **drop off recycling sites** will be expanded as cost effective to do so.
- f. Recycle as much metal, wood, and textiles from bulky waste as practicable.



- g. Increase **On the Go** recycling where practicable. The viability of mechanical separation of street cleansing wastes including special events waste will be investigated as will extending events' organizers responsibilities
- h. Maintain close relationships with these '**gatekeepers**' and incentivize positive behavior as appropriate. The level of support given to recycling services by landlords, porters, cleaners and managing agents is directly proportional to the level of recycling achieved in blocks. We will explore the viability of lobbying for 'Duty of Care' responsibilities to be extended to 'gatekeepers' and encourage managing agents to include support for reuse and recycling services in the duties of porters and cleaners.
- i. Ensure all recycling contracts meet the End Destinations of Recycling Charter established by the Resource Association so where recycling ultimately ends up is transparent.
- j. Review Reuse and Recycling Centre arrangements and improve services as cost effective to do so.
- k. Continue to ensure **new developments** include sufficient space and facilities to encourage reuse and recycling. Our 'Best in Class' Waste Storage Requirements document for developers will be further developed to support achievement of the reuse and recycling targets. It will be a requirement to make recycling disposal at least as equally convenient as residual waste disposal within all new developments.
- l. Work in **partnership** with local organisations, other London authorities and regional bodies including WRAP and LWARB to improve the efficiency and effectiveness of reuse and recycling services.
- m. Continue to reduce the environmental impact of the collection and disposal services as is cost effective. E.g. Favouring closed loop recycling of glass and the collection of high value high embodied carbon materials (eg plastics and metals).
- n. Substantially increase the capacity of the commercial recycling collection service.
- o. Expand commercial food waste collection services and introduce household food waste collection services where cost effective to do so.
- p. Develop a volunteer network to encourage greater local ownership, understanding and participation in reuse and recycling services.
- q. Maintain two mobile recycling centres to capture materials not typically collected from the doorstep (e.g. toys, books, small WEEE, mobile phones), and act as a point of community engagement.
- r. Continue and further develop our extensive communications and engagement activity to stimulate greater participation and capture rates. Ensure the procurement of new waste management contracts is used as an opportunity to

explore new arrangements to support higher reuse and recycling performance and as well as supporting energy recovery of truly residual waste.

**Objective 11 -The Council will continue take appropriate enforcement action against those businesses, visitors and residents who seek to dispose of their wastes irresponsibly.**

**Objective 12 - The Council will develop partnerships with neighbouring boroughs to increase the efficiency and effectiveness of services.**

## 5.5 COMPOSTING: ORGANIC WASTE TREATMENT

### Background

Appendix VIII shows the relative benefits of the different organic treatment technologies. Recycling kitchen waste via in-vessel composting (IVC), anaerobic digestion (AD) or thermophilic aerobic digestion (TAD) helps to reduce greenhouse gas emissions and provides valuable compost and biofertiliser which can be applied to land, replacing inorganic fertilisers and providing a good source of organic matter. AD has a further benefit of producing biogas which can be used to produce renewable energy generating an income that can offset some disposal costs. For this reason AD is our preferred treatment technology for food waste.

Organic waste constitutes 19% (approx. 33,000 tonnes) of all municipal waste. (13K tonnes from households, 19K tonnes from businesses with the remainder street litter)

The efficient segregated collection of food waste from flats is challenging and typically generate lower yields than traditional doorstep collection services.<sup>1</sup> WRAP research showed flats food waste participation was typically 28% compared to 57% for mixed dry recyclables.

Commercial food waste collections have been steadily growing as cost of treatment via composting or AD has lowered in comparison with disposal via EfW and landfill. Hotels and restaurants typically generate large volumes of good quality food waste that can relatively easily be collected and processed.

### Track Record and Impact - Household

Between 2004 and 2010 the Council provided garden waste collections to 11,000 properties once a week collecting 250 tonnes per year. Typically, only 9% of residents served used the service and given financial pressures and no significant environmental benefits<sup>2</sup> of windrowing garden waste against treatment via energy from waste the service ceased in 2010.

Given the increasing cost of transporting waste and regional self sufficiency pressures in 2008 a micro food waste treatment system project commenced. The Council treated household food waste from 1600 properties through a localised IVC scheme on Church Street Estate, NW8 utilising a 'Rocket' Composter. The scheme had a participation rate of 65% and was put on hold in 2011 due to operational difficulties. The scheme treated

---

<sup>1</sup> <http://www.wrap.org.uk/content/recycling-collections-flats-food-waste-collections>

<sup>2</sup> [http://www.wrap.org.uk/sites/files/wrap/Environmental\\_benefits\\_of\\_recycling\\_2010\\_update.3b174d59.8816.pdf](http://www.wrap.org.uk/sites/files/wrap/Environmental_benefits_of_recycling_2010_update.3b174d59.8816.pdf)

65 tonnes p.a. of food from local residents and schools and produced compost for local parks and community gardens.

### **What will we do?**

Food waste makes up 22% of all waste collected and therefore to achieve elevated recycling rates food waste collections are necessary. The Council will introduce food waste collections where cost effective to do so. We will investigate the viability of small and medium scale food waste treatment plants (anaerobic digestion) to generate local heat and power.

The Council does not propose to recommence garden waste collections for the 9% of properties with gardens at present but will continue to review the economic and environmental benefits of doing so.

Garden waste from Council managed parks and gardens can continue to be treated via composting on-site and where the site and capacity permits, the feasibility of treating garden waste from other sources will be considered.

## **Organic waste treatment - Commercial**

### **Track Record and Impact**

The Council commenced a dedicated food waste collection service on a commercial basis to hotels, bars and restaurants in 2013. Early indications are that given the right market drivers significant quantities of commercial food waste could be accessed.

### **What will we do?**

We will expand the commercial food waste service as cost effective to do so with treatment via AD our preferred option. AD offers environmentally superior performance compared to IVC as well as more cost effective gate fees<sup>3</sup>. It is anticipated that the business case for offering commercial food waste collections will only get stronger as disposal prices for residual waste increase significantly after the main disposal contract expires in 2017.

In addition there is a large stream of food waste generated by Westminster's street markets, which has the potential to be captured and treated separately. We will introduce a market waste food collection service where cost effective to do so.

---

<sup>3</sup> <http://www.wrap.org.uk/sites/files/wrap/Gate%20Fees%20Report%202012.pdf>

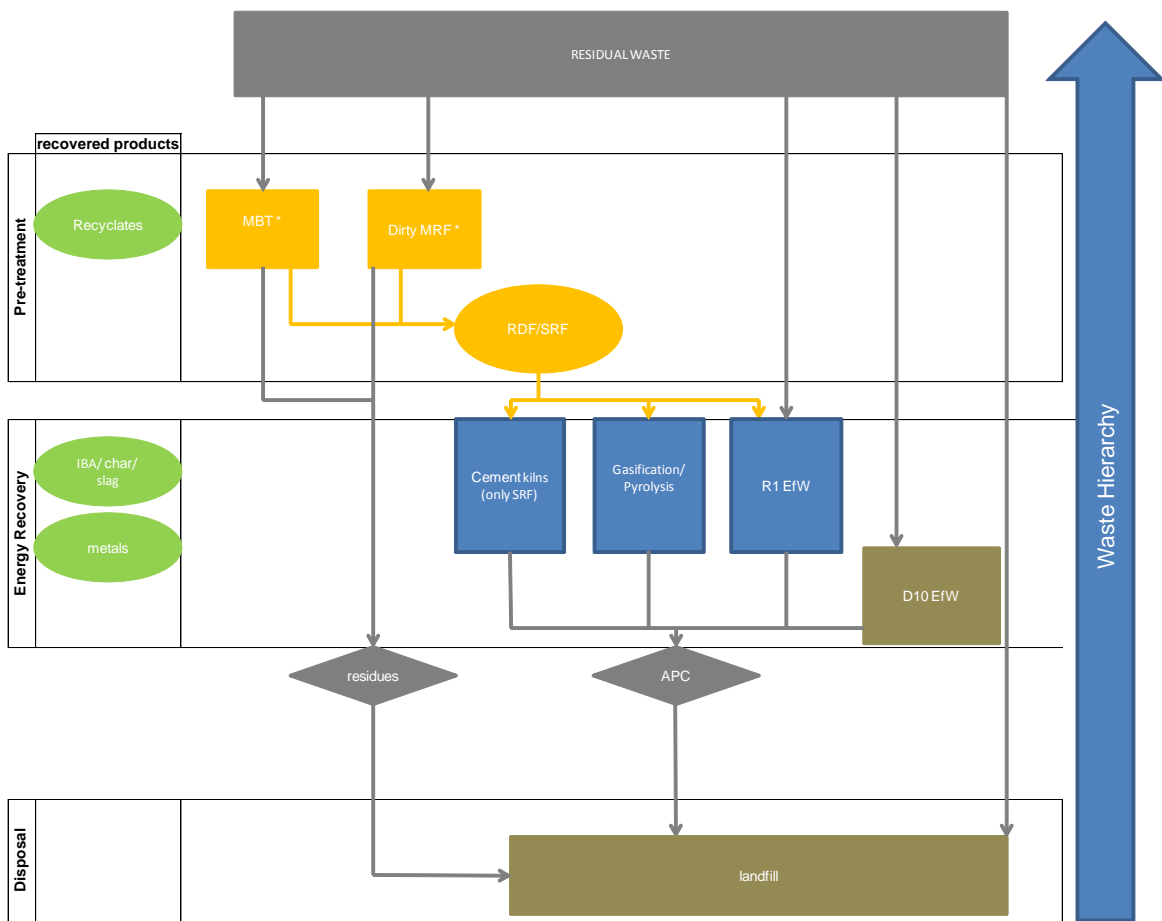
## 5.6 RESIDUAL WASTE TREATMENT/DISPOSAL

### Introduction/Background

There are a number of treatment options/techniques that extract value (either material or energetic) from waste shown and described below. As the waste hierarchy shows (figure 15) the recovery of waste is preferred to disposal as no further benefits are derived from disposal and it becomes an environmental burden.

The range of waste treatment options that recover value from waste are summarized with advantages and disadvantages below. More detailed information on the technologies can be found in Appendix IX.

Figure 15: Residual Waste Treatment options and processes



## Mechanical Treatment ('dirty' MRF) and Mechanical Biological Treatment (MBT)

### Mechanical Treatment (dirty MRF)

Front end sorting uses technology similar to MRF (Materials Recycling Facility) that mechanically removes metals, glass and plastics dependent on the technologies employed. The remaining waste is shredded before incineration.

### Mechanical Biological Treatment (MBT)

Comes in many forms but consists of a front end extraction of recyclables before some form of drying and composting process. Bio-stabilisation/ Bio-drying/Composting Anaerobic Digestion or a combination of the above

Advantages of MT/MBT	Disadvantages of MT/MBT
<ul style="list-style-type: none"> <li>• Reduction in waste sent to landfill</li> <li>• Maximises recovery of recyclable materials</li> <li>• Technologies can be combined on site or on separate sites</li> <li>• Modular systems – flexibility</li> <li>• Allow smaller treatment facilities to be built downstream (EfW)</li> </ul>	<ul style="list-style-type: none"> <li>• If outputs are landfilled, the biodegradable content may be high</li> <li>• MBT reliant on markets for recyclable materials</li> <li>• Markets for SRF/RDF could be volatile</li> <li>• Expensive pre-treatment</li> <li>• Residues require disposal</li> </ul>

## Energy from Waste (EfW)

Burning waste in order to recover the inherent energy (electricity and heat). Burning generates a Bottom Ash (20-30%), metals are removed (3-5%) and ash processed into aggregate substitute. Air pollution control residues (fly ash) (3-6%) go to landfill

Old fashioned mass burn incinerators (D10) just generate electricity the excess heat from converting steam into electricity is wasted. In Combined Heat and Power (CHP) (R1), energy efficiency is increased by utilising the heat for district heating or hot water, or for local industrial use.

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• Proven, established technology</li> <li>• Fewer end products to market</li> <li>• Income from energy sales</li> <li>• No pre-treatment required</li> <li>• Bankable</li> <li>• CHP offers community benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Emissions sometimes seen as a health risk</li> <li>• Poor public perception</li> <li>• Perception crowds out recycling</li> <li>• Need long term, reliable user of heat, within close proximity to the site</li> <li>• Retrofitting CHP systems is very expensive</li> <li>• Destroys material value.</li> </ul>

## Advanced Thermal Treatment (ATT)

There two main types of treatment Gasification & Pyrolysis instead of full combustion (incineration), waste is converted into intermediate states that can be further processed. Gasification breaks down hydrocarbons into a syngas in limited oxygen

- Ash (15-30%) - construction / landfill
- Hazardous waste (2%) - landfill
- Syngas - generate electricity

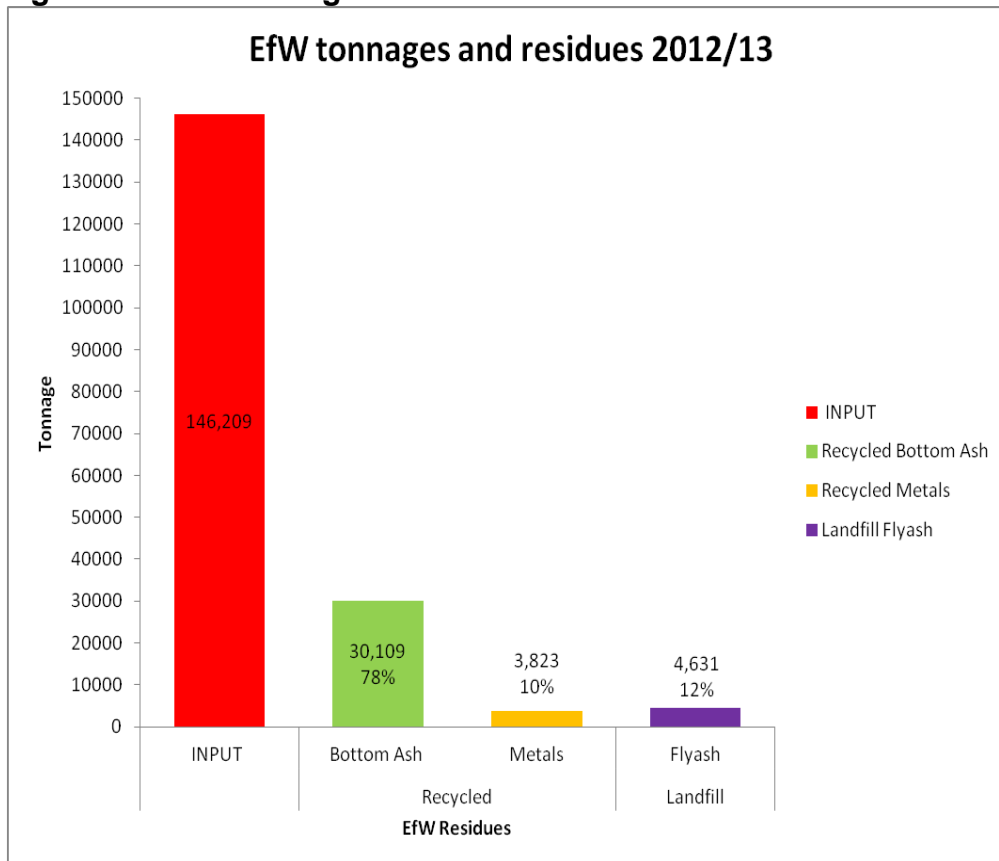
Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• High energy efficiency</li> <li>• Small footprint</li> <li>• Potentially valuable outputs</li> <li>• Flexibility of scale</li> </ul>	<ul style="list-style-type: none"> <li>• New technology (limited bankability)</li> <li>• Lack of due diligence</li> <li>• Concerns over funding</li> <li>• Expensive</li> <li>• Need to carefully pre-treat feedstock.</li> <li>• Poor public perception</li> </ul>

### Track Record and Impact

We have been successful in the last decade in driving waste up the hierarchy (Figure 1). The percentage of waste sent to landfill has reduced from 33% to 3% over the period. 83% of municipal waste is currently sent to R1 rated EfW facilities. (Figure 6)

Ferrous metals and bottom ash from the energy from waste process (34K tonnes) are routinely recycled but not reflected in the reported figures. Figure 16 details the additional materials recycled via the EfW process. If reported the municipal waste recycling rate would be 32% not the 14% currently reported.

**Figure 16: EfW tonnages and residues 2012/13**



## Options Appraisal – Environmental Assessment of Potential Impacts

**Objective 13 – The Council will treat as much waste within Greater London as possible, where cost effective to do so.**

**Objective 14 - The Council will seek to prioritise high performing, low emission, modern, sustainable technologies and operations that achieve value for money.**

Six options for the treatment of residual waste have been identified (Table 15) by the Council. A draft Strategic Environmental Assessment (SEA): Environmental Report (ER) assessing the identified options (Supplementary Report 1) has been completed. The council is 'technology neutral'.

**Table 15: Strategic Environmental Assessment options**

<b>Option</b>	<b>Option Description</b>
1	ASIS (EfW no CHP plus landfill) Under this option, the majority of residual waste will be treated at the SELCHP facility with 7% of going to landfill.
2	MBT/RDF in UK Under this option, kitchen waste will be treated at an Anaerobic Digestion (AD) facility in London. Residual waste will be treated at a Refuse Derived Fuel (RDF) and/or a Mechanical Biological Treatment (MBT) facility in London. Waste which cannot be treated through RDF and MBT will go directly to landfill.
3	RDF (Europe)/ EfW (with CHP) Under this option, kitchen waste will be treated at an AD facility in London while residual waste will be treated at a Refuse Derived Fuel (RDF) facility in the UK and then an Energy from Waste (EfW) Facility in The Netherlands. Bottom ash (BA) being recycled. Fly ash being landfilled.
4	EfW (no CHP) Under this option, kitchen waste would be treated at an AD facility in London while residual waste would be treated at an EfW facility (without Combined Heat and Power). Bottom ash (BA) being recycled. Fly ash being landfilled.
5 –	EfW (with CHP) Under this option, kitchen waste would be treated at an AD facility while residual waste would be treated at an EfW facility (with Combined Heat and Power), Bottom ash being recycled. Fly ash being landfilled.
6	EfW (with CHP and windrow) Under this option, kitchen waste would be treated at an In-Vessel Composting (IVC) facility in Kent. Residual waste would be treated at an EfW facility (with Combined Heat and Power). Bottom ash being recycled. Fly ash being landfilled.

The draft MWMS objectives have been tested against the 14 SEA objectives in order to ascertain their compatibility. The results of the assessment (Supplementary Report 1) indicated all the objectives were either compatible with the SEA objectives or there was no direct relationship with the SEA objective and the MWMS objective.

The Mayor of London has set Greenhouse Gases Emissions Performance Standard (EPS) and Carbon Intensity Floor (CIF) targets for London Boroughs to meet when procuring waste services. In addition to the six options above a further three variants of option 5 were EPS/CIF modelled. They were:



**Table 16: Additional options modelled for EPS and CIF only**

5a	<b>EfW (with CHP and Dirty MRF)</b> Under this option, kitchen waste would be treated at an AD facility while residual waste would initially be treated at a Dirty MRF facility to extract recyclable material before being sent to an EfW facility (with Combined Heat and Power), Bottom ash being recycled. Fly ash being landfilled.
5b	<b>EfW (with CHP, Dirty MRF and Mixed Glass Bring Banks)</b> Under this option, kitchen waste would be treated at an AD facility while recyclable glass collected from high density bring banks and other dry recyclables collected commingled. Residual waste would initially be treated at a Dirty MRF facility to extract recyclable material before being sent to an EfW facility (with Combined Heat and Power), Bottom ash being recycled. Fly ash being landfilled.
5c	<b>EfW (with CHP and increased focus on WEEE and Textiles)</b> Under this option, kitchen waste would be treated at an AD facility while residual waste would be treated at an EfW facility (with Combined Heat and Power), Bottom ash being recycled. Fly ash being landfilled. Greater effort from WCC to capture WEEE and Textile recyclable material.

The results of the modelled options for 2021, 2026 and 2031 are shown in Appendix X. The GLA have set EPS targets of -0.195, -0.217 and -0.240 tonnes CO<sub>2</sub>e per tonne of waste for 2021, 2026 and 2031 respectively and a Carbon Intensity Floor target of 0.4 kgCO<sub>2</sub>e/kWh of energy generated.

As regards the EPS results for the modelled options, Option 3 (-0.215), Option 5a (-0.221), 5b (-0.218) and 5c (-0.2) meet the 2021 targets. Options 5a, 5b and 5c meet the EPS target for 2026 and 2031, the only options modelled to do so.

Concerning the Carbon Intensity Floor results of the modelled options, Option 3 is best performing and exceeds the target by a significant margin (0.223). Options 5a and 5b also meet the CIF target in 2021 with 0.346 and 0.356 kgCO<sub>2</sub>e/kWh of energy generated respectively. These three options also meet the target for 2026 and 2031. The proposed expansion of the heat network in the longer term for SELCHP means options 5 and 5c meet the CIF targets in 2031 but not in 2021 and 2026.

Options 1, 2, 4 and 6 did not meet the EPS and CIF targets for 2021.

Time and resource does not allow the modelling of more options at this time but we have sought to reflect the broad range of waste management disposal options available at present to authorities in London and South East. We do plan to keep identifying and modelling other options and variants to better inform the procurement process due to commence in 2014.

The Council plans to procure services that support achievement of the EPS and CIF targets established within the Mayor's Municipal Waste Management Strategy 2011.

## Residual Waste – what will we do?

**Target 6 – To maximise diversion of BMW from landfill to meet the national and regional targets.**

**Target 7 - To minimize the environmental impact of managing Westminster's municipal waste including meeting the Mayor's CO<sub>2</sub> emissions performance standard (EPS) and carbon intensity floor (CIF).**

**Target 8 - To meet the recovery targets set out in the Waste Strategy for England 2007 67% by 2015 and 75% by 2020.**

**Target 9 - To maximize the treatment of waste within Greater London where**

The Council will seek to procure treatment capacity from the most efficient and cost effective technology available that maximises the recovery of heat and power and recycles the process outputs. The Council does not have a preferred treatment technology/solution for residual waste other than seeking to maximise diversion from landfill.

The next set of reuse, recycling and residual waste treatment contracts (timetable shown on Table 17) affords the opportunity to further develop services to support achievement of the reuse and recycling targets.

## Disposal

**Objective 15 - The Council will seek to send no residual waste to landfill.**

### Background

The disposal of waste should only be used as a last resort for those waste fractions that cannot be reused, recycled and recovered through other options. Residual waste disposal for this strategy relates to landfilling and low energy efficiency incineration (D10).

Under current arrangements there are certain waste types for which landfill is used, for example for certain mineral waste fractions, certain hazardous waste such as asbestos, fly ash from energy from waste flue gas treatment and certain bulky waste fractions.

Landfill tax has increased from £8 per tonne in 2003/4 to £72 per tonne in 2013/14. When the gate fee is added landfill is a very expensive waste management option. Therefore there is a clear economic incentive to divert waste from landfill. Landfill tax increases to £80 per tonne in 2014/15 where a ceiling has been set and therefore this economic incentive looks set to continue in the medium term.

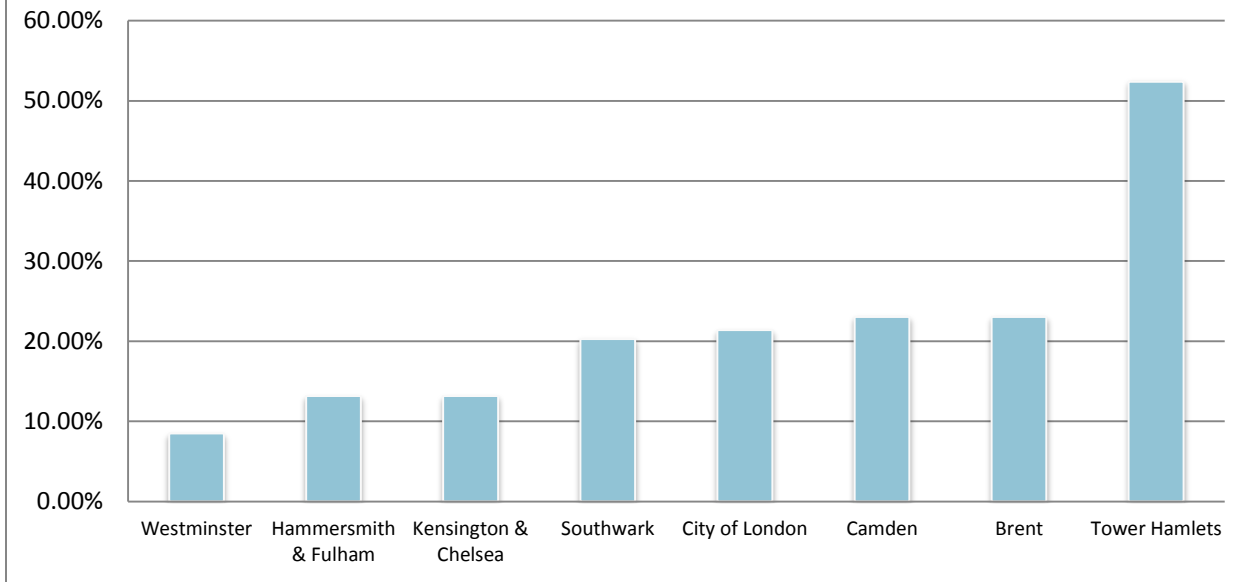
Landfill capacity for London wastes is mainly located in the Home Counties, with the remaining two London landfill sites being exhausted by 2018. The availability of Home Counties landfill capacity is decreasing as sites reach maximum capacity. Mothballing of Home Counties sites are planned between 2016-2019.

The majority of waste collected by the Council is capable of being treated by methods higher up in the waste hierarchy and as such doesn't need to be disposed of to landfill. Landfill should only be used as a last resort, in exceptional circumstances, when other treatment options are unavailable or inappropriate.

### Track Record and Impact

The Council has driven down municipal waste to landfill rates from 33% in 2003/4 to 4% in 2012/13. This is best performing when compared to our near neighbours who sent between 13% and 53%. (Figure 17)

**Figure 17: Near neighbour comparison - Percentage of municipal waste sent to landfill 2011/2012**



### **Residual Waste Disposal – what will we do?**

**Target 6 - To maximize diversion of biodegradable municipal waste from landfill to meet national and regional targets**

We aim to minimise waste to landfill by encouraging reuse, recycling and other cost effective waste treatments. We aspire to send zero waste to landfill by 2026.

We will seek to procure high efficiency waste treatment for the residual stream after reuse, recycling and composting. It is not envisaged that the Council will utilise low efficiency EfW or other facilities that have limited recovery.

## 4.7 OTHER WASTES

**Objective 16 - The Council will develop plans for the responsible management of specialist waste streams.**

The Council will develop partnerships to reuse and recycle oils, paints, and other hazardous waste as cost effective to do so.

### **Hazardous waste**

The Council has a duty to collect and dispose of waste, including hazardous waste, arising within its area under the provisions of sections 45 and 51 of the EPA 1990. The Council is a member of the London Hazardous Waste Collection and Disposal Service, managed by the Corporation of London, which arranges for the collection/disposal of asbestos and chemicals. As with many London Boroughs, there is very little actual demand for this service within Westminster and just 25 collections took place during 2012. The service is by its nature specialist, requiring highly trained staff and specialist equipment. The materials collected (asbestos and hazardous chemicals) are handled, stored, processed and disposed of under strictly regulated conditions and at specialist facilities. The service is available free-of-charge to local residents, schools and registered charities and „at cost,, to local businesses. This service provides an efficient and cost-effective means for the Council to fulfil its statutory duty to collect and dispose of hazardous wastes arising within Westminster.

The Council is committed to working closely with the Mayor and Corporation of London to ensure an expanded collection service continues to effectively and efficiently divert hazardous waste for recycling and safe disposal.

In addition, a service to remove hazardous and clinical wastes fly-tipped on the highway, and an Emergency Service for major incidents, is also incorporated within the Council's Waste Collection, Recycling and Street Cleansing Contract

### **Clinical waste**

Clinical waste generated by households through home treatment and because of medical conditions is collected free-of-charge through the Council's Pest Control section. Collections currently take place on a weekly basis from a small number of residents. Approximately 25 kg of clinical waste is collected each week which is disposed of via licensed specialised companies. In addition to household collections, the Council's Pest Control section also collects clinical waste from businesses for a charge.

Syringes and needles are sometimes discarded in public places due to drug abuse. Waste collection vehicles are equipped with a sharps boxes and appropriate personal protective equipment so staff can safely remove any clinical waste found and will continue to do so.

### **Detritus**

In 2011 the Council began recovering the wet waste from mechanical street sweeping (detritus). In 2012/13 447 tonnes of detritus was treated and separated into various material streams to be recycled; soil/sand, metals, plastic bottles and organic matter. Any remaining residue was sent for incineration.

The Council will treat detritus to maximise recycling, minimise environmental impact as cost effective to do so.

### **Paint**

Paint, as a hazardous waste, can be collected via the London Hazardous Waste Service or brought to the WRWA CA site for recycling/disposal, however, the reuse of paint is more advantageous than treating it as waste.

The Council will therefore review the viability of a paint reuse scheme.

### **Waste Oil and Fat**

Thames Water has estimated in 2010 that 1000 tonnes of fat and oil were disposed of illegally through the Westminster sewer network. Most sewer blockages are caused by cooking fat and oil congealing in the sewers. The Council currently encourage producers of fat and oil to dispose of it through a licensed collection service, which are often free as waste cooking oil and fat can be recovered and converted into bio fuels for vehicles as well as recycled (refined) back into new cooking oil.

The Council will therefore review the provision of cooking oil and fat collection and recycling schemes and work with partners to maximise appropriate disposal.

## 6. Performance Monitoring, Reviews and Risk Management

A Waste Management Strategy Waste Action Plan will be prepared after adoption; setting out how the council will achieve the strategic aims, objectives and targets of the Waste Management Strategy. The Action Plan will be revised, with the strategy, every five years and will be accompanied by a Progress Report every two years, to ensure that the Council progresses to meeting all appropriate waste targets.

The Waste Action Plan will contain the following:

- Time-bound actions and targets to achieve the MWMS objectives
- A description of monitoring and revision procedures
- Costing of proposed actions

As shown in Table 17, existing disposal contracts can end in 2016. At the same time a decision to extend or relet the existing waste collection, recycling, street cleansing and ancillary services contract will also be made. Given the current uncertainty as to what the disposal market will offer, for example, will the mechanical recovery of recyclables from street cleansing waste be available and what are the recycling rates from the new RDF and detritus facilities?, and what funding will be available for waste management services in 2017 given the central grant reductions over the next 4 years, it is planned to publish a waste and recycling services action plan once the new contractual arrangements have been finalised. It is expected that the plan will be finalised in the spring/summer 2016.

The Council's performance will also be monitored through National Indicators (NI's) that are published each year in the Council's Performance Plan. This includes 3 waste specific indicators as follows:

- NI 191: Residual household waste per head – Waste collected, minus material sent for recycling, composting or reuse.
- NI 192: Household waste recycled and composted – Material sent for reuse, reprocessing or controlled biological decomposition.
- NI 193: Municipal waste landfilled – Collected municipal waste sent to landfill, including recycling rejects.

A Risk Management Strategy of the Action Plan will be maintained identifying risks that may affect implementation of the MWMS objectives. If unacceptable risks cannot be avoided or minimised, contingency plans will be implemented to limit the impacts. The risk management strategy will be periodically reviewed and revised as necessary.

Table 17: Outline Project Timetable

Period	Activity		
<b>Summer / Autumn 2014</b>	Cabinet Member approval of revised draft Waste Strategy →	Submit Waste Strategy for formal approval by Mayor of London	
<b>Winter 2014</b>	Soft Market Testing	Draft tender documentation	
<b>Spring 2015</b>	Cabinet Member Key Decision – Tender Documents (via Gate Review Panel) →	OJEU Notice published	
<b>Summer – Autumn 2015</b>		Formal Tender Process	
<b>Winter 2015</b>		Contract(s) Award Decision	
<b>Spring 2016</b>	Deadline for decision on whether to extend existing Veolia and/or Cory disposal contracts (before 15 <sup>th</sup> March 2016 for both)	Development of waste and recycling services action plan.	Decision on whether to extend or re-tender Veolia waste collection and cleansing contract
<b>Autumn 2016</b>	Veolia Disposal Contract Expires (16 <sup>th</sup> Sept.)	Cory Disposal Contract Expires (expires 16 <sup>th</sup> Sept.)	Reconfigure waste collection vehicles for new disposal delivery locations
<b>Autumn 2017</b>	End of one year extension to Veolia Disposal Contract?	New Disposal Contracts Commence?	Veolia Collection Contract ‘First Term’ Expires