Chapter 7: Waste
AIM
London will be a zero waste city. By 2026 no biodegradable or recyclable waste will be sent to landfill and by 2030 65 per cent of London’s municipal waste will be recycled.

INTRODUCTION
Our linear economy (take, make and dispose) is unsustainable. It produces too much waste, with around 7m tonnes coming from London’s homes, public buildings and businesses each year, too much of which goes to landfill and incineration. Of this, only 52 per cent is currently recycled and performance has stagnated. Landfill and incineration are undesirable, costly and an inefficient use of resources. The capacity of landfills accepting London’s waste is expected to run out by 2026 and London’s waste bill is now in in excess of £2bn a year and rising.

Through increasingly clever design of goods and services we are beginning to treat our waste as the valuable resource it is. In order to maximise this we need to reduce waste in the first place and then reuse or recycle as much as possible. What’s left over can then be used to generate low carbon energy, minimising the amount going to landfill.

Cutting waste and recovering value from more of it can provide a number of benefits including jobs, apprenticeships, secondary materials, and affordable low carbon energy. Effective waste management delivering high quality materials to market can give local authorities a reliable high value income stream. This can help to offset costs associated with service improvements. More of London’s reusable items like furniture, fittings and electrical appliances need to be kept in use. Redistributing them to where they are needed can create local work, keep resource costs down and help reduce poverty.

The Mayor will take a circular approach to London’s use of resources that designs out waste, keeps materials in use at their highest value for as long as possible and minimises environmental impact. The actions required to deliver this are:

- firstly, significantly cutting waste and encouraging reuse to minimise the use of virgin resources. Efforts will be focused on reducing food waste and single use packaging as they offer the biggest opportunity for change
- once waste reduction and reuse opportunities have been exhausted there must be a focus on maximising the recycling of materials that are left
- generating low carbon energy from truly residual waste leaving very little waste going to landfill
- ensuring that there is sufficient infrastructure to support these actions within London helping to create opportunities for businesses developing reuse, repair and remanufacturing services

Roles and legal duties
The Mayor is required under the GLA Act to produce a municipal waste management strategy. However, the Mayor is not a waste authority and it is ultimately the waste collection and disposal authorities, businesses and the commercial waste industry that will implement the waste policies in this strategy in collaboration with the Mayor. The Mayor’s role is a combination of exercising regulatory functions (ensuring local authority waste plans, services, strategies and contracts are in general conformity with his waste policies and proposals) and non-regulatory functions.
(funding, research, technical assistance, providing guidance, campaigns and facilitating and supporting good practice). There are 33 waste collection authorities (boroughs and City of London), 12 authorities that are “unitary” waste authorities (combined collection and disposal), four statutory waste disposal authorities and one voluntary waste partnership.88 The waste collection authorities and the waste disposal authorities are referred to as ‘waste authorities’ in this strategy.

In 2011 Defra changed the definition of municipal waste to align with the EU definition, which defines municipal waste much more broadly to be household waste or waste similar in composition to household waste. Applying this definition brings an additional 3.3 million tonnes of waste into scope, regardless of who collects it. This change was made to make sure that the UK is correctly reporting its performance for meeting its landfill diversion targets under the European Landfill Directive. Commercially collected waste is covered in this strategy because of its importance to London’s environment generally.

Taking this approach places no additional legal requirement on London’s waste authorities, who must continue to act in general conformity within the municipal waste management provisions of this strategy, including binding targets for municipal waste in their possession or control.

Municipal waste targets set in this strategy are non-binding in so far as they relate to Commercial Waste Contractors (CWCs). The Mayor expects CWCs to have regard to those municipal waste targets and they will be achieved through additional activity and services by waste authorities, the commercial waste industry and other relevant organisations working in partnership with the Mayor.

To avoid confusion this strategy uses the terms set out in Box 28.

BOX 28: DEFINITIONS OF TERMS USED IN THIS CHAPTER

- “waste” refers to any substance or object which the holder discards, intends to discard or is required to discard
- “municipal waste” household waste or business waste that is similar in composition irrespective of who collects or disposes of it
- “Local Authority Collected Waste (LACW)” refers to all waste in the possession or control of waste authorities. This includes waste collected from households and businesses
- “waste authority (ies)” means a Waste Collection Authority and a Waste Disposal Authority. It includes London’s 33 waste collection authorities (all 32 boroughs and the City of London), those 12 authorities that are “unitary” waste authorities (combined collection and disposal) and the 4 statutory waste disposal authorities
- “Commercially Collected Waste” refers to municipal waste in the possession or control of a body or organisation that is not a waste authority

The London Waste and Recycling Board (LWARB) is also a key delivery partner for his policies. It brings together the Mayor, boroughs, and other stakeholders involved in managing London’s waste with the objective of promoting and encouraging less waste and its sustainable management89 and it must act in accordance with the Mayor’s waste policies. The Mayor through his appointed representatives on LWARB oversees a £20.4m fund from 2017-2020 to deliver against its objectives of reducing waste and increasing reuse and recycling (see Box 29).

88 South London Waste Partnership comprising Merton, Sutton, Kingston upon Thames and Croydon.
The London Waste and Recycling Board (LWARB) was established under the Greater London Authority Act 2007 (the Act). LWARB must act in accordance with the provisions of the London Environment Strategy, dealing with municipal waste management, and act in general conformity with the London Plan, so far as relating to the collection, treatment and disposal of waste.

Through LWARB, the Mayor will:

- **oversee a £20.4m fund between 2017 and 2020**
- **work with waste authorities to identify and implement the best mechanisms for improving recycling performance in flats in a cost effective way**
- **provide £6.4m funding between 2017 and 2020 through Resource London to support local authorities to improve recycling rates and provide high quality and well participated municipal waste recycling services**
- **make the case to central government for additional funding to support London waste authorities to help drive up recycling and reuse performance**
- **invest £7m through London Green Fund 2 in high growth early stage circular economy businesses. LWARB is also investing £1.5m in Circularity Capital, a circular economy growth capital fund, and will invest a further £1.5m in a circular economy accelerator. These funds will look to fund innovative circular economy business across London especially reuse, repair and remanufacturing projects and those using low carbon technologies**
The Mayor’s waste powers: general conformity and power of direction.

In performing their waste functions, waste authorities need to show how they are acting in general conformity with the municipal waste provisions of this strategy. General conformity only applies to local authority collected waste (LACW) activities and cannot bring excessive additional costs to waste authorities. The Mayor has the power to direct a waste authority where he considers their waste activities to be detrimental to implementing the municipal waste provisions in this strategy. His power of direction does not apply to businesses or private waste companies.

The Mayor expects waste authorities to help successfully implement his municipal waste management policies and proposals. These expectations are set out in Box 30 below. This will ensure that a consistent approach is taken to applying general conformity.

**BOX 30: WASTE AUTHORITY EXPECTATIONS**

The Mayor expects waste authorities to do the following in order to show they are acting in general conformity with this strategy’s municipal waste management policies and proposals. They should:

- produce a waste management strategy or plan setting out how their waste activities will:
  - help move waste up the waste hierarchy
  - provide local economic, social and environmental benefits from improved waste management
  - make a meaningful contribution to meeting the Mayor’s targets
- offer the Mayor’s minimum level of household recycling service provision
- make best use of local waste sites identified in local waste plans
- support the phase out of fossil fuel waste transport and boost uptake of low or zero emission alternatives
- use Recycle for London messaging in local awareness raising activities

- to ensure a consistent reduce, reuse, recycle message is delivered across London
- demonstrate how they will, or have put in place positive changes to improve recycling performance identified through Resource London’s borough support programme
- publicly notify its intention to tender a waste contract at the same time as notifying the Mayor. This would be a chance for waste authorities considering new services to consider joint procurement options. These can provide better value for money on ‘like for like’ services and achieve service harmonisation across borough boundaries
- procure waste and recycling services that maximise local economic, environmental and social benefits through demonstrating how they will deliver the Mayor’s Responsible Procurement Policy
- carry out any other relevant activity supporting the Mayor’s policies and targets
Non-municipal waste

The Mayor has no responsibility or powers in this strategy to directly control the management of industrial waste and construction, demolition and excavation waste where it is not in the possession or control of a waste authority. The Mayor, can however, use convening, leadership and advocacy to drive improvements. This non-municipal waste is predominantly managed by commercial waste contractors (CWCs). These waste streams are already highly regulated, increasingly managed onsite and in some cases require specialised management and disposal (for example asbestos and chemical waste). However, given their impact on other objectives for London’s environment, the Mayor considers it important to set out in this strategy the expectations for these waste streams. In addition, the London Plan details policies supporting effective management of these other waste streams as they are generally considered a waste planning issue.

LONDON’S ENVIRONMENT NOW

The key evidence to support the Mayor’s ambitions for London’s waste by 2050 is summarised below. You can find out more about the evidence behind the policies and proposals in Appendix 2.

Total amount of municipal waste produced in London

London’s municipal waste stream is made up of a variety of materials. The main components of municipal waste in London are food and green garden waste (22 per cent) and common dry recyclables paper, card, plastics, glass and metals (60 per cent). The remaining 18 per cent is made up of smaller quantities of materials including textiles, waste electricals (WEEE) wood, furniture and household cleaning chemicals.

Around 7m tonnes of waste is produced each year from our homes, public buildings and businesses. Food waste and plastic packaging including single use coffee cups and plastic bottles combined account for around 30 per cent of this.

London produces around 1.5 – 1.75m tonnes of food waste with a value of £2.55bn a year. This is likely to be a conservative figure given the extensive and diverse food sector employing more than half a million Londoners and turning over £20bn each year. Most of this food waste goes to landfill or incineration producing around 250,000 tonnes of CO₂e emissions, although some of this is offset through capturing heat and producing electricity. Around a third of food bought is thrown away, most of which is still edible. WRAP (Waste and Resources Action Programme) estimates food waste costs households around £50 per month.

Use of single use packaging materials including coffee cups and plastic bottles is growing and putting increasing pressure on local waste management services. WRAP’s plastic market situation report 2016 estimated the UK produces around 2.2m tonnes of plastic packaging with only around half (or 900,000 tonnes) recycled. In the UK, around 825,000 tonnes of plastic bottles are produced a year. This leads to around 125,000 tonnes produced in London.

“Around 7m tonnes of waste is produced each year from our homes, public buildings and businesses.”
There is a significant opportunity to reduce London’s waste bill and environmental impact if food waste and single use packaging were to be cut. Cutting this waste stream by 20 per cent could take about £42m off London’s waste disposal bill.\textsuperscript{24}

**Reuse and repair**
Preparing discarded items for reuse and repair creates jobs. It also provides wider social benefits through the redistribution of discarded items to those in need. Online platforms such as Warpit and Globechain have been used to help local authorities and businesses loan and donate their unwanted items to other businesses and charities. These initiatives have helped to avoid around 1.5m tonnes of items becoming waste and going to landfill, saving around £10m in waste costs, and benefiting over 15,000 people across the UK.

**Recycling**
In 2016 it was estimated that 52 per cent of London’s municipal waste was recycled or composted while around 37 per cent was sent to landfill or incineration. The remaining 11 per cent was managed through other sorting and treatment methods.\textsuperscript{35}

London needs to increase its recycling rate. However, it faces many challenges to achieving high weight based recycling performance including:

- there are 33 waste authorities providing different waste and recycling collection services. This makes it confusing for residents to know what they can recycle, especially when they move to another borough.
- on average 50 per cent of the population live in flats, with some boroughs being as high as 80 per cent. Flats often have a lack of easily accessible sufficient storage space for recycling, and can be expensive for local authorities to service
- London has a highly transient and diverse population with over 100 languages spoken. This can make communicating recycling services difficult
- there are few gardens in London producing less green (heavy) waste for composting compared with other regions
- there is no requirement to provide recycling collection services from businesses.

\textsuperscript{24} Based on plastic bottles and food waste collectively making up around 30 per cent of London’s municipal waste or 2.1m tonnes. Assumes an average disposal cost of £100 per tonne.

\textsuperscript{35} Taken from GLA modelling
Between 2003 and 2010, London’s household waste recycling rate increased from eight to 30 per cent but in recent years this has stalled at 32 per cent (see Figure 40) and remains below the national average (44 per cent).

Figure 40: Regional household dry recycling and composting rates 2015/2016

Source: Defra (2017), Local authority collected waste generation from April 2000 to March 2016 (England and regions) and local authority data April 2015 to March 2016.

Anaerobic digestion
Reducing the amount of edible food we discard is an environmental, social and economic priority. However there will always be unavoidable food waste in the form of scraps, vegetable peelings and bones which should be sent for composting or energy recovery. Such food waste can be used to generate 100 per cent renewable energy using anaerobic digestion. This would save around 175,000 tonnes of CO₂e emissions and save £120m in disposal costs.

Incineration
Incineration of London’s local authority collected waste has doubled from 900,000 tonnes in 2011 to 1.8m tonnes in 2016, producing around 560,000 tonnes of CO₂e emissions. This is mainly due to changes in waste disposal contracts that have led to more waste being diverted from landfill to incineration. London now has the second highest incineration rate across the UK behind the North East at 50 per cent. Modelling suggests London will have sufficient incineration capacity to manage London’s non-recyclable municipal waste once the new Edmonton and Beddington Lane facilities are operational. All London’s incinerators are expected to be ready for heat off take by 2025. Any new energy from waste facilities will need to operate in combined heat and power mode meeting the carbon intensity floor (see Objective 7.3).

Landfill
London’s local authority collected waste to landfill has reduced significantly over the past ten years from 65 per cent to 20 per cent. This improvement was largely due to the EU Landfill Directive which has restricted the amount of biodegradable waste member states can send to landfill. Landfills accepting London’s waste, most of which are located outside London, are expected to reach capacity by 2026. The Mayor wants London to be a zero waste city – one that makes best use of all its waste where market opportunities exist to recover value from it. This means ensuring London sends no biodegradable or recyclable waste to landfill by 2026.

The waste hierarchy
The waste hierarchy is applied from the top down prioritising those activities further up the hierarchy according to what is best for the environment (Figure 41).

Applying the waste hierarchy from the top down generally achieves the greatest cost saving and CO₂e saving benefits.

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96 Based on food waste making up around 18 per cent or 1.2m tonnes of London’s municipal waste. Applies -0.14 tonne CO₂ avoided per tonne food waste to anaerobic digestion emission factor

97 Assuming average incineration and landfill cost of £100 per tonne
Reducing, reusing, and recycling waste and then generating energy from the waste remaining is a direct way to save emissions from landfill. It also avoids indirect emissions that would otherwise have occurred in manufacturing from virgin materials or generating energy using fossil fuels (such as coal or gas). Considering direct and indirect emissions helps us to determine the overall lifecycle CO₂e performance of waste management. Materials sent for recycling have a market value which boroughs can share in depending on their waste arrangements and contracts with external service providers. Reducing waste and moving to a higher re-use and recycling based approach should bring savings to local authorities.

The policies and proposals in this chapter follow the waste hierarchy.

**Figure 41: Waste hierarchy**

<table>
<thead>
<tr>
<th>Stages</th>
<th>Includes</th>
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<tbody>
<tr>
<td>Prevention</td>
<td>Using less material in design and manufacture.</td>
</tr>
<tr>
<td>Preparing for re-use</td>
<td>Keeping products for longer: re-use using less hazardous material.</td>
</tr>
<tr>
<td>Recycling</td>
<td>Checking, cleaning, repairing, refurbishing, repair; whole items or spare parts.</td>
</tr>
<tr>
<td>Other recovery</td>
<td>Turning waste into a new substance or product including composting if it meets quality protocols</td>
</tr>
<tr>
<td>Disposal</td>
<td>Including anaerobic digestion, incineration with energy recovery, gasification and pyrolysis which produce energy (fuels, heat and power) and materials from waste; some backfilling operations.</td>
</tr>
<tr>
<td></td>
<td>Landfill and incineration without energy recovery</td>
</tr>
</tbody>
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**ZERO WASTE LONDON**

**Currently**
The composition below is from Local Authority collected waste, which includes household and some business waste. This will vary between property types, for example, houses and flats, and also where a service varies for that property.

**Zero waste London**
Working together, London’s approach to waste can be transformed, helping to conserve resources and reduce the city’s impact on the local and global environment.

- **Cut food waste by 20% per person by 2025**
- **Reducing plastic bottle and coffee cup waste.**
- **65% of London’s municipal waste recycled by 2030**
- **Using fewer and cleaner lorries to transport waste, for example by consolidating commercial recycling contracts, will reduce congestion and improve air quality**
- **Non-recyclable waste can be used to generate energy to heat homes and workplaces**
- **Mayor’s minimum level of recycling service, i.e. 6 main materials and food waste collections**
- **No biodegradable or recyclable waste will be sent to landfill by 2026**

**Emissions Performance Standard**
Achieving our goals will save (based on a 2015/16 baseline):

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>2025</th>
<th>2031</th>
</tr>
</thead>
<tbody>
<tr>
<td>tonnes of CO2e saved</td>
<td>101,000</td>
<td>169,000</td>
<td>535,000</td>
</tr>
</tbody>
</table>
“The Mayor adopts a ‘circular approach’ to the use of resources in London, ensuring that materials stay in use as long as possible, reducing the amount of virgin materials required and maximising recycling.”

Objectives, policies and proposals

OBJECTIVE 7.1 DRIVE RESOURCE EFFICIENCY TO SIGNIFICANTLY REDUCE WASTE, FOCUSING ON FOOD WASTE AND SINGLE USE PACKAGING WASTE

The Mayor adopts a ‘circular approach’ to the use of resources in London, ensuring that materials stay in use as long as possible, reducing the amount of virgin materials required and maximising recycling. The Mayor wants to prevent materials from becoming waste in the first place by promoting more sustainable, circular business models that design out waste and ensures materials can be easily reused and recycled.

Food waste (including drink waste) and single use packaging accounts for around 30 per cent of London’s municipal waste. In the UK, for every two tonnes of food eaten, another tonne is wasted most of which goes to landfill or incineration. Eight out of the top ten countries the UK imports food from are drought prone. Tackling food waste offers an opportunity to increase the resilience of London’s supply chain, reduce costs of dealing with the waste and reduce associated greenhouse gas emissions. Single use hot drink cups and plastic bottles are an increasing problem. It is estimated that over 40 million cups are thrown away each year in London, many of which are not recycled and are therefore sent to landfill or incineration.
Policy 7.1.1 The Mayor will work with Londoners, waste authorities, government and other stakeholders to significantly cut waste

Proposal 7.1.1a The Mayor will support campaigns and initiatives to prevent food going to waste

The Courtauld Commitment 2025 (C2025) is a key initiative for London and the UK to significantly cut food waste. This is an ambitious voluntary agreement that brings together organisations across the food system, from producer to consumer, to make food and drink production and consumption more sustainable. It sets a target of 20 per cent reduction in food and drink waste and the associated GHG emissions per person by 2025. The Mayor will be a key engagement partner to C2025 and working with WRAP and LWARB will strive to achieve these targets in London.

By 2025, food waste will have reduced by 20% per person.

Proposal 7.1.1b The Mayor will support campaigns and initiatives to cut the use of single use packaging

Through working with LWARB and Resource London, waste authorities and other relevant parties, the Mayor will support campaigns including Recycle for London, Love Food Hate Waste, and Trifocal to help Londoners and businesses to reduce waste. The Mayor will apply lessons and best practice taken from previous programmes such as the GLA’s Foodsave programme. Foodsave worked with 170 business and charities, helping small businesses to save around £6,000 per year from reducing food waste and collectively preventing around 1200 tonnes of food waste going to landfill or incineration.

Plastic packaging blights our streets, finds its way into oceans harming wildlife and takes centuries to break down whilst releasing toxic chemicals. Single use plastic bottles form the most prevalent form of plastic packaging in our oceans and accelerated action is needed to phase out non-recyclable plastic packaging. Some large companies have already responded to this challenge pledging to ensure 100 per cent of its plastic packaging is fully reusable, recyclable or compostable by 2025. The Ellen MacArthur Foundation (EMF) have also unveiled a business backed action plan as part of its New Plastics Economy work to crack down on plastic waste and recycle 70 per cent of plastic packaging globally. The Mayor calls on food and drink businesses to offer incentives for their customers to use their own reusable drink cups and water bottles. The Mayor will also take the following actions to reduce the amount of plastic bottles and single use cups:
investigating the feasibility of a deposit return scheme for water bottles through the government’s litter strategy working group

working with stakeholders including environment groups, Transport for London and LWARB to improve access to tap water through community water refill schemes building on existing schemes

working with the GLA group to reduce plastic bottle sales and improve access to tap water on all our premises

working with the supply chain from manufacturers to retailers and waste authorities to trial and roll out coffee cup recycling bins across London.

Proposal 7.1.1c The Mayor, will support campaigns, initiatives and business models to reuse materials

The Mayor will work with LWARB, Ellen MacArthur Foundation and other partners to develop a circular business programme to increase reuse of materials. This will support entrepreneurs and businesses to adopt, scale up and benefit from circular economy business models in five mains areas: products as a service, sharing economy, prolonging product life, renewable inputs and recovering value at end of life.

The Mayor, through LWARB, will invest funds into developing businesses that embrace the circular approach to resource use especially businesses with reuse, repair and remanufacturing projects and those using low carbon technologies. LWARB will also invest in a circular economy growth capital fund and accelerator to provide support for those companies who will be growing the circular economy in London and delivering the co-benefits of greenhouse gas emission reductions and increased resilience for the city.

The Mayor will work with organisations including the Restart Project, Globechain and Warpit to boost materials repair and help divert unwanted items to useful purposes.
Proposal 7.1.1d The Mayor will lead by example to cut waste and encourage reuse through the GLA group’s operations and procurement activities.

Suppliers to the GLA group will be required to take measures to reduce the waste produced in the services that they provide and increase repair and reuse of products. The Mayor expects London waste authorities to show leadership to reduce waste and increase resource efficiency locally through their own procurement activities, using the GLA’s Responsible Procurement Policy as a best practice standard.

OBJECTIVE 7.2 MAXIMISE RECYCLING RATES

The Mayor wants to achieve an overall 65 per cent municipal waste recycling rate (by weight) by 2030 in London.

Achieving this target will require a significant improvement in both the household and non-household components of municipal waste recycling, from the current rate of 52 per cent. To help achieve this a separate 50 per cent LACW recycling target is set for waste authorities under Proposal 7.2.1a.

Source: GLA Waste model. Household waste and recycling figures taken from Defra waste data flow statistics. Non-household waste and recycling figures are estimates only informed by the Defra C&I waste survey 2009.
Figure 42 shows how London can move from 52 per cent municipal waste recycling rate today to 65 per cent by 2030. This rate will be achieved by increasing recycling from non household waste sources, including businesses, schools and government organisations, from around 63 per cent today to 84 per cent by 2030. Implementing the best set of household waste recycling services identified in WRAP modelling would contribute a ten per cent increase. Waste authorities are encouraged to boost their non-household waste recycling collection services in order to meet the Mayor’s 50% LACW target by 2025 (Policy 7.2.1).

Achieving the 65 per cent overall municipal waste recycling target requires more consistent services to be offered across London. For households these include, separate food waste collections, collecting the same core set of dry recycling materials and measures to reduce the residual waste presented for collection. Introducing separate food waste collections in particular has been proven to boost recycling rates and reduce contamination with dry recycling materials. This also reduces the amount of food people waste, as people become more aware of how much they are throwing away. An intense focus on recycling from flats is also needed.

Implementing the best set of household recycling interventions is estimated to cost waste authorities an extra £107m-£319m. This can be offset by income from business waste recycling services, reduced disposal costs and developing more shared revenue contracts. The South London Partnership has seen savings of over £200m from bringing together their contracts in a more efficient and cost effective way. It means that the same services are now offered to all who live in the partnership’s four boroughs of Sutton, Merton, Kingston-upon-Thames and Croydon.
Policy 7.2.1 Increase recycling rates for local authority collected waste

Proposal 7.2.1a The Mayor will set targets for local authority collected waste, a minimum level of service for household waste recycling collections and hold a contract register of waste authority waste contracts

The Mayor wants waste authorities to collectively achieve a 50 per cent LACW recycling target by 2025 and aspire to achieve 60 per cent by 2030.

To help them achieve these targets waste authorities should deliver the following minimum level of service for household recycling:

- all properties with kerbside recycling collections to receive a separate weekly food waste collection
- all kerbside serviced properties to receive a collection of, at a minimum, the six main dry recycling materials (glass, cans, paper, card, plastic bottles and mixed plastics (tubs, pots and trays))

Waste authorities will need to demonstrate how they will meet the above minimum level of service by 2020 (at the latest) and also look to provide this to flats where feasible. They should also collect other items for recycling from households such as small electrical waste, foil and tetra packs where it makes sense to do so.

Some waste authorities have experienced cost savings and recycling improvements from reduced collection of residual waste, through reducing bin sizes or changing the frequency of collections. The Mayor encourages waste authorities to consider such interventions.

Modelling carried out by WRAP shows that it is feasible to achieve an increase in household waste recycling from 32 per cent today to 42.43 per cent by 2022. The remaining gap to achieve 50 per cent LACW recycling target can be met by waste authorities developing or boosting their business and other non-household waste collection services.

Modelling and research in the evidence base (see Appendix 2) shows where the opportunities are to improve waste authority collection recycling performance. It includes what can be realistically achieved at a borough level and addresses the issue of London’s low performing recycling rate and fragmented collection services.

Achieving the 50 per cent target will inevitably mean some waste authorities achieving higher recycling rates than others recognising that there are local circumstances and challenges, particularly in those boroughs with a high proportion of flats.

The Mayor will hold a contract register to monitor when waste authority contracts come up for renewal. Waste authorities in developing their waste contracts will need to share relevant contract information and notify their intention to procure in the register. The register will be available for all waste authorities to view and therefore provide joint working opportunities. The Mayor will seek views on which contracts are most appropriate for advertising in the register.

Through the contract register and working with LWARB and waste authorities, the Mayor will identify opportunities to promote greater consistency to help harmonise waste and recycling services in London to achieve the best economy of scale and service provision benefits.

Support will continue to be available, through LWARB’s Resource London programme, for waste authorities to model the impact on their recycling rates and identify the mechanisms to achieve a minimum level of service, in a cost effective and accelerated way.

98 In line with market, reprocessors and recycling industry standards
Proposal 7.2.1b The Mayor will support efforts to increase recycling rates in flats

The Mayor will encourage Resource London to provide more support and funding to those waste authorities who are working towards achieving higher recycling performance in flats. Through LWARB the Mayor will seek additional funding to tackle recycling performance in flats.

Proposal 7.2.1c The Mayor, through LWARB’s London Business Waste Recycling (LBWR) service, will support waste authorities to boost commercial reuse and recycling performance.

To meet the Mayor’s 50 per cent LACW recycling target, waste authorities should identify opportunities to improve their own commercial waste recycling services. Boroughs are expected to offer businesses the same household minimum level of service where feasible. Support is currently available through LWARB’s London Business Waste and Recycling (LBWR) service to boost commercial recycling services.

London Business Waste and Recycling is a new start up company owned by LWARB which provides commercial waste marketing and customer facing services on behalf of London boroughs to business. LBWR has been capitalised through a loan from LWARB and all its profits are passed on to the participating London boroughs. LBWR is currently operating in one borough and a further three boroughs are in the process of agreeing partnership arrangements with it. A number of other boroughs have expressed interest in exploring opportunities to work with the business and these will be pursued in the coming year.

Policy 7.2.2 Increase recycling rates for commercially collected waste and reduce litter and fly tipping

The Mayor will work with LWARB, the waste sector generally and other stakeholders to improve recycling services to businesses provided by commercial waste contractors. This will be necessary to achieve the Mayor’s overall 65 per cent municipal waste recycling target by 2030 and will also provide local air quality and street scene benefits by reducing the number of waste vehicles on the road.

Proposal 7.2.2a The Mayor will support efforts to consolidate commercially collected waste services to improve recycling performance, reduce congestion, improve the public realm and improve air quality

There have been recent pilot studies in London in Bond Street BID and New York on consolidating waste services. These look at introducing a single waste contractor to run collections to businesses in a designated area. The pilots were successful in helping to reduce the number of collection vehicles and improve local air quality. Bond Street saw a 94 per cent drop in waste vehicle movements. As a result, TfL has developed a free toolkit helping neighbouring businesses to consolidate their waste collection services to save money and reduce vehicle movements. New York City are now taking this one step further and looking into establishing a commercial waste zone system across the city, where waste collection companies bid to be part of a geographical framework to provide waste and recycling services to business in the city. They want to find out if there is enough inefficiency in how waste is collected and whether collection zones can reduce these by creating benefits like better recycling rates, working conditions and wages.

The Mayor will work with TfL and Business Improvement Districts (BIDs) to promote the waste contract consolidation toolkit and look at the feasibility of a commercial waste framework in London. He will also work with Defra and waste companies to improve commercial waste data ensuring all waste operators in London are using Electronic Duty of Care to record what happens to the waste they produce and handle. This improved data will allow opportunities for consolidated services to be identified more easily.

Proposal 7.2.2b The Mayor will support waste authorities to reduce littering and fly tipping by working with government on the implementation of its Litter Strategy for England

Local authorities are responsible for litter and enforcing and prosecuting small scale illegal dumping of waste (fly tipping). The Environment Agency is responsible for prosecuting large scale offences. Fly tipping in London is a big problem due to the cost of clearance and its negative effect on the streetscape.

The Mayor will work with government and the Chartered Institute of Waste Management (CIWM) to promote duty of care to waste authorities and businesses. The Mayor will use CIWM Right Waste, Right Place campaign to build on any knowledge gaps and help reduce fly tipping and litter in London and will also seek a seat on the government’s Litter Strategy Working Group to ensure London’s needs are taken into account.
OBJECTIVE 7.3 REDUCE THE ENVIRONMENTAL IMPACT OF WASTE ACTIVITIES

Reducing the environmental impact of how London manages its waste is important if London is to become a zero carbon city with a zero emission transport network by 2050. The Mayor wants to make sure that waste authorities are contributing all they possibly can to these ambitions through decarbonising and cleaning up their fleets.

There is also an opportunity to reduce greenhouse gas (GHG) emissions from waste management activities. In 2010 the GLA developed a pioneering emissions performance standard (EPS) to assess the GHG emissions associated with the collection, treatment, energy generation, and final disposal of London’s local authority collected waste.

While the Mayor has a weight based target of 65 per cent of municipal waste being recycled overall by 2030, he is also retaining a carbon based EPS approach that will sit alongside this target. Sending waste to landfill or incineration generates GHG emissions whereas recycling materials avoids GHG emissions that would have otherwise occurred in the manufacturing of virgin materials. A carbon based approach promotes recycling particularly of high carbon and high value materials such as plastic, metals and textiles.

Policy 7.3.1 Reduce emissions from transport of waste

Proposal 7.3.1a Waste authorities must demonstrate how they will transition their waste fleets to low or zero emission options, prioritising the phasing out of diesel

Waste authority waste fleets are expected to comply with the Ultra Low Emission Zone (ULEZ) vehicle exhaust emission standards and to work towards the Mayor’s overall ambition that:

- all new cars and vans (less than 3.5 tonnes) being zero emission capable from 2025
- all heavy vehicles (greater than 3.5 tonnes) being fossil fuel-free from 2030
- zero emission fleets by 2050

Fossil-fuel free can include the use of 100 per cent renewable fuels derived from sources such as food waste and waste oils.

Working with waste authorities, TfL, and the waste industry the Mayor will increase the use of renewable fuels from waste derived sources including biodiesel, hydro-treated vegetable oil and bio-methane, as a transition fuel, in municipal waste fleets.

Policy 7.3.2 Reduce the climate change impact of waste activities

Proposal 7.3.2a Waste authorities in delivering their waste management functions are expected to demonstrate how they can meet the GHG Emissions Performance Standard (EPS)

The Mayor will set a revised EPS for London’s LACW for waste authorities to work towards achieving. Waste authorities should aim to achieve both
the Mayor’s LACW recycling targets and EPS targets although the Mayor’s LACW targets will take priority. Achieving high recycling rates generally offers the greatest opportunity for reducing CO₂e emissions and meeting the EPS. The Mayor will develop guidance on achieving the weight based recycling targets and meeting the EPS. The Mayor has developed an online ready reckoner tool to support boroughs model their waste options against the EPS. This can be found at www.london.gov.uk/what-we-do/environment/waste-and-recycling/waste-policy. Meeting the EPS is best achieved by:

• reducing waste and increasing reuse

• maximising recycling rates, targeting materials with high embodied carbon (plastics, metals, and textiles)

• generating low carbon energy from organic waste (eg anaerobic digestion of food waste)

• using waste derived fuels (as a transition fuel) and other low CO₂ transport options

• making sure only truly residual waste is going for energy generation

• avoiding landfill

In performing their waste functions the Mayor expects waste authorities to set out how their waste activities achieve the following EPS targets:

• 0.069 tonnes CO₂e per tonne of waste managed by 2020/21

• 0.084 tonnes CO₂e per tonne of waste managed by 2024/25

• 0.167 tonnes CO₂e per tonne of waste managed by 2030/31

The Mayor will monitor and report annually on London’s performance against the EPS and work with the Environment Agency to ensure that there are no adverse impacts on the environment including air quality.

Proposal 7.3.2b Waste authorities must demonstrate how solutions generating energy from waste meet the carbon intensity floor (CIF), or put in place demonstrable steps to meet it in the short-term

In addition to developing the EPS, a minimum carbon emissions performance standard was set. Known as the ‘carbon intensity floor’ or CIF, this was developed to help decarbonise London’s energy supply by encouraging clean, efficient
and local energy generation from London’s non-recycled waste. Waste going to energy from waste plants often contains large amounts of recyclable materials that are high carbon and high value. Reducing the amount of high carbon materials particularly plastics and metals going to energy from waste plants will deliver greenhouse gas savings, and reduce the reliance on fossil fuels. This will drive change and investment within boroughs and with facility operators to ensure that truly residual waste is used to generate both heat and power for the benefit of Londoners.

The Mayor will retain, for waste authorities, a target CIF level of 400 grams of CO₂ per kWh of electricity produced from LACW until at least 2025.

Meeting this CIF target effectively rules out the use of traditional mass burn incineration techniques generating electricity only. It supports the take up of highly efficient technologies generating both heat and power. Achieving the CIF target can be done by:

- reaching high recycling rates including plastics, metals and textiles. This reduces the ‘carbon intensity’ of residual waste going to energy generation
- generating energy from 100 per cent organic waste (e.g. anaerobic digestion of food waste). This is deemed to be carbon neutral
- using energy generation facilities generating both heat and power
- using waste derived fuels and other low CO₂ transport options

Steps to demonstrate compliance with the CIF should include but are not be limited to:

- ongoing reductions in the amount of high fossil carbon materials sent for incineration or gasification that could be recycled
- activities resulting in investment in technology or infrastructure improving the overall efficiency of the facility to meet the CIF
- waste authorities and relevant facility operators actively supporting rollout of existing energy master plans to help connect heat infrastructure to local developments

The CIF will be reviewed by 2025, or earlier where appropriate, once London’s heat networks and demand are better understood, with a view to tightening it to around 300 grams per kWh of electricity produced.

The Mayor, through his Decentralised Energy Enabling Programme will work with London’s incinerator operators and waste authorities to identify solutions that can meet the CIF as they develop their waste contracts and strategies. This may include linking thermal treatment options proposed in their contracts with proposals in local energy master plans that support combined heat and power (CHP) opportunities. Opportunities include connecting to existing homes and to new developments delivered through GLA Housing Zones, Opportunity Areas and other major development schemes.

OBJECTIVE 7.4 MAXIMISE LOCAL WASTE SITES AND ENSURE LONDON HAS SUFFICIENT INFRASTRUCTURE TO MANAGE ALL THE WASTE IT PRODUCES

The Mayor wants to retain the economic value of London’s waste within London and ensure that London can manage 100 per cent of its waste within the city by 2026.

In 2015 London managed around half the waste it produced within London. Most exported waste goes to landfill mainly in the South East, and, along with it goes the economic value of recovered materials for reuse, recycling or energy generation. Although waste to landfill has declined by 70 per cent since 2005, London still landfills around 1 million tonnes of waste each year costing...
around £100 million. Landfills accepting London’s waste are expected to close by 2026 and no new capacity planned. To deal with this London needs to firstly reduce waste produced and secondly ensure it has access to sufficient capacity to recover value from more of its waste and remove any reliance on landfill.

The Mayor, through the new London Plan, will set policies for the identification and safeguarding of waste sites in London to enable 100 per cent of London’s municipal waste to be managed within London by 2026.

**Policy 7.4.1 Supporting the use of local waste sites and promoting a circular approach to waste management**

**Proposal 7.4.1a Waste authorities in developing their waste contracts and services will need to identify how to maximise the use of local waste facilities and identified sites for waste**

The Mayor expects waste authorities to consider the use of local waste sites where they deliver clear local benefits helping to keep the value of London’s waste in London.

**Proposal 7.4.1b The Mayor will support the development of new waste infrastructure supporting circular economy outcomes reuse, repair and remanufacture**

Through LWARB the Mayor will encourage investment into new waste facilities where they are needed. The Mayor wants to see London’s waste sites optimised to support circular economy activities like reuse and repair providing environmental and social benefits by creating new jobs and apprenticeships. This will be supported by LWARB’s Advance London work programme which will enable and provide support and funding to businesses that use circular economy business models.

The GLA has developed a GIS map of London’s waste facilities [https://maps.london.gov.uk/webmaps/waste/](https://maps.london.gov.uk/webmaps/waste/). The London waste map, updated on an annual basis, is publicly available to help London waste authorities, its two Mayoral Development Corporations and waste facility operators to identify and access local waste facilities and find suitable sites for new facilities.

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**CONSULTATION QUESTIONS: WASTE**

1. Do you agree that the Mayor’s policies and proposals will effectively help Londoners and businesses to recycle more?

2. Do you support the Mayor’s ambition to ensure food waste and the six main recyclable materials (glass, cans, paper, card, plastic bottles and mixed plastics) are collected consistently across London?

3. Do you think the Mayor should set borough specific household waste recycling targets?

4. What needs to happen to tackle poor recycling performance in flats?

5. What are the most effective measures to reduce single-use packaging in London such as water bottles and coffee cups?

6. Please provide any further comments on the policies and programmes mentioned in this chapter.