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# The Mayor's vision for London's waste



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# The Mayor's vision for London

The Mayor's vision for London is that London becomes the best big city on earth – expanding opportunities for all its people and enterprises, achieving the highest environmental standards and quality of life, and leading the world in its approach to the urban challenges of the 21st century.

The Mayor wants London to be a city that becomes a world leader in improving the environment locally and globally, taking the lead in tackling climate change, reducing pollution, developing a low-carbon economy, consuming fewer resources and using resources more effectively.

The Mayor wants London to become a world leader in waste management, utilising innovative techniques and technologies to minimise the impact of waste on our environment and to fully exploit its massive economic value. The aim is to reduce the amount of waste generated by the capital, repair and reuse what we can, significantly increase recycling and composting performance, and to generate energy in the most environmentally friendly way possible from rubbish that cannot be reused, recycled or composted.

## **Taking on the challenge**

With a large and growing population, managing London's waste is no small matter. In fact, London produces 55,000 tonnes of rubbish every day, or 20 million tonnes a year. It is a problem that needs to be addressed at a Londonwide level, taking a long-term approach and setting ambitious targets.

The Mayor believes that a holistic view of waste needs to be taken. To tackle the issue of managing London's waste, he is taking a two-pronged approach. Firstly, he will produce a Municipal Waste Management Strategy (MWMS) which will set out his policies and proposals for the management of London's municipal waste (the household waste and business waste collected by local authorities), up to 2031. The Mayor has a legal duty to produce such a strategy, and it will guide the decisions of the boroughs and London's waste authorities as they set their own waste management strategies and develop waste contracts.

Secondly, he will produce a Business Waste Strategy (BWS) for London's commercial and industrial waste, and construction, demolition and excavation waste (waste collected and disposed of by waste operators under private contracts with businesses). This waste, be it from shops, restaurants and offices, industrial processes or construction and demolition sites, makes up 80 per cent of London's waste – 16 million tonnes a year. Although the Mayor does not have a legal duty to develop a strategy for this waste, he believes we should look at all of London's waste in order to gain the greatest benefits for London economically and have a real impact in climate change terms.

The Mayor has already put the foundations in place for this approach. His spatial development plan for London, The London Plan, has planning policies for all waste, including:

- Working towards “zero waste to landfill” by 2031

- Setting new recycling and composting targets
- Promoting waste management activities achieving the greatest possible environmental benefits in terms of climate change
- Managing as much of London's waste within London as practicable.

The London Plan is currently under review and key policies and proposals have been set out in *The London Plan – consultation draft replacement plan*, October 2009. This can be found at [www.london.gov.uk/shaping-london/london-plan/docs/london-plan.pdf](http://www.london.gov.uk/shaping-london/london-plan/docs/london-plan.pdf).

### On the cusp of change

The world of waste is changing. The past 20 years has seen the public, private and third sector invest considerable amounts of time, money and effort into changing the way we think about and manage our waste.

While we have been moving away from a culture of waste disposal and indiscriminate incineration, to one of recycling, we must now move to a culture of waste minimisation and reuse, high quality recycling and low-carbon energy generation. With climate change at the forefront of everything we do, the impact of our wasteful behaviour is becoming ever more apparent.

Too much waste is being sent to landfill – about 30 per cent of all waste and nearly half of municipal waste. Sending waste to landfill is costly, and releases harmful greenhouse gases (mostly methane) into the environment, contributing to climate change. London's waste sent to landfill produces approximately

1.7 million tonnes of greenhouse gases a year, expressed as a carbon dioxide equivalent figure.<sup>1</sup>

Landfill taxes are also rising, making it increasingly expensive to deal with waste in this way. Those taxes are due to go on rising until at least 2013, when it will be considerably more expensive to landfill waste than it is to recycle it, even taking the higher collection costs of recycling into account. It is estimated that the cost to London of landfilling waste from all sectors will be in the region of £900 million per year<sup>2</sup> by 2013. Many businesses, particularly, may not realise that the true cost of waste can be far greater than just landfill disposal costs. It is estimated that the actual cost of waste to businesses can be as much as 4.5 per cent of annual turnover, due to other hidden costs in the supply chain such as rising cost of materials that are subsequently wasted and producer responsibility costs for items such as packaging and electrical and electronic equipment.<sup>3</sup>

London is recycling more than ever before, but it still falls behind many other international cities. Overall, London recycles just 57 per cent of its waste, compared with 72 per cent in San Francisco, for example.

That 57 per cent takes into account some quite high rates of reuse and recycling in the construction industry, which recycles over 80 per cent of its waste. Commerce and industry recycles around 42 per cent of the waste it produces but only 25 per cent of municipal waste is recycled in London – less than in any other region in England.

Londoners have made impressive improvements in recent years – raising the level of municipal waste recycling threefold since 2000/01, from eight per cent to 25 per cent – but still more can and should be done.

The size of the problem presents both challenges and opportunities. If managed in the right way, waste could be used to create value and income for London.

### **The way ahead**

A number of themes are guiding the Mayor's approach to waste management, producing specific policies for both the MWMS and the BWS. These are described below.

#### *Prevent and reduce waste and put a greater emphasis on reuse*

Reducing waste is the most cost-effective way to both reduce the greenhouse gas emissions associated with waste management, and cut the cost. To achieve this, the Mayor is looking at a range of measures, to address the waste produced by consumers and businesses. They include encouraging "smarter" shopping habits, calling on businesses to reduce the amount of unnecessary packaging used in product design, and supporting local and regional campaigns to promote the behaviour of reducing, reusing and recycling, and to encourage greater resource efficiency in businesses.

Reusing waste is the next step. Not only does this have the advantage of keeping waste out of landfill, it also helps to reduce emissions by cutting down on the need to manufacture new products. This will be addressed by helping to

develop a 'reuse network' across London, to provide practical support to the many small voluntary and community groups that currently operate in this area and which could be further extended to include the private sector.

#### *Reducing the contribution of London's waste to climate change*

Underlying all that the Mayor is aiming to do on waste is the principle that the greatest environmental benefits should be sought at all times, in particular reducing the climate change impact of waste. The Mayor has produced a hierarchy setting out how this should be determined in both the MWMS and BWS.

At each stage of dealing with London's waste, those responsible for managing it should try the best possible method of treating it first, moving down the hierarchy to the next option if that is not possible. In practice, that means preventing or reducing waste first, then reusing as much as possible, to produce the best environmental outcomes for London.

Following that, recycling or composting (including anaerobic digestion of organic waste) offers the next best option for managing waste. To maximise these activities, pre treatment technologies including autoclave and mechanical biological treatments are offering the greatest potential to recover recyclable materials from mixed waste.

What is left, after recycling or composting as much as possible, should then be used to generate renewable energy in the most efficient way, using waste heat generated in the process where possible. Particular

opportunities exist for using new technologies, such as anaerobic digestion, gasification and pyrolysis that can achieve higher efficiencies than mass burn incineration.

The Mayor will establish a baseline lifecycle greenhouse gas emission performance standard for the management of London's municipal waste. This standard is to be applied across all municipal waste management activities in the development of new waste contracts, from the collection, transport, treatment and finally, the disposal of municipal waste. Businesses developing merchant waste collection and treatment capacity will also be encouraged to follow this approach. A standard lifecycle greenhouse gas performance will recognise wider environmental issues, including the mitigation of local air quality impacts, and will apply to all waste activities through the planning process to achieve a positive carbon outcome. Waste planning applications will be dealt with through London Plan waste policies.

#### *Unlocking economic opportunity by supporting entrepreneurial approaches to managing waste*

A fresh approach to waste is needed to take London into a new era in waste management. For too long, waste has been seen as a burden – a cost to be minimised. But that has meant that London – its businesses and its waste authorities – has not been in a position to realise hardly any of the economic value that can come from waste.

As the market for recycled goods develops, recyclable materials take on a value. The residual waste also has a value when used to generate energy.

To date, many waste authorities have not fully participated in these areas, choosing instead to outsource their waste functions. Outsourcing services means outsourcing risk and therefore providing fiscal certainty. However outsourcing risk can be expensive and any potential revenue from the sale of product in the form of recycled materials or energy is lost. The Mayor would like to work with London's waste authorities to fully explore the opportunities for entering into revenue-sharing waste contracts and joint venture arrangements.

Through the Mayor's chairmanship of the London Waste and Recycling Board, the board will make funding available to support waste authorities owning and operating their own facilities treating municipal waste. Chaired by the Mayor, the board has £84 million from central government (£60 million) and the London Development Agency (£24 million) for the period 2009-2012, to promote and encourage a reduction in waste, to increase reuse and recycling and to promote methods of collection, treatment and disposal of waste that are more beneficial to the environment. The London Development Agency's contribution to the board's fund is specifically for the development of business waste infrastructure. The board will fund a review of London's commercial and industrial waste arisings and composition to better understand the economic opportunity London's business waste presents.

#### *More and better quality of recycling or composting*

The Mayor wants 80 per cent of all London's waste to be recycled or composted by 2031.

To achieve this the Mayor will set the following recycling targets for London:

- To recycle or compost 45 per cent of municipal waste by 2015, 50 per cent by 2020, and 60 per cent by 2031.
- To recycle or compost 70 per cent of commercial and industrial waste by 2020, maintaining this performance to 2031.
- To reuse and recycle 95 per cent of construction, excavation and demolition waste by 2020, maintaining this performance to 2031.

The Mayor wants to make sure the best quality recycling material is produced, to ensure there is a strong market for recycling businesses. He wants to work with boroughs to make sure recycling is hassle-free, regardless of which borough or housing type Londoners live in, or where they work. Londoners should be rewarded for their recycling efforts and the Mayor will work with London's waste authorities to introduce incentivisation schemes, such as RecycleBank. The Mayor will ensure that businesses have access to cost-effective waste management services by working with the waste industry and local authorities to help improve awareness of the types of collection schemes available within the London area.

#### *Catalysing waste infrastructure - supporting innovation through risk sharing*

New technologies are needed to make London a world-leading city in the way it handles its waste. Not only does it need to ensure there is investment in new technologies, such as anaerobic digestion, gasification and pyrolysis,

but it also needs greater capacity to make sure more of London's waste is dealt with within its boundaries.

Not only does this help London to achieve greater self-sufficiency, but it also helps to keep some of the economic potential in London. Economic value can be obtained from recyclable materials or in energy generation, and London needs to be in a position to benefit.

To develop this capacity, the London Waste and Recycling Board will look at ways to invest in London's infrastructure through the Board's £84 million fund. The Mayor, through the board's brokerage service, will seek to involve external strategic partners who are able to make financial and in-kind investments to increase the value of the board's fund. The Mayor sees the board as playing an integral role in implementing both the MWMS and BSW, particularly where the development of new waste infrastructure in London is concerned. The Mayor, with London councils, will make a business case to government to extend the board's funding beyond 2012, to ensure the board can continue to play an important role in waste investment in London.

#### *Improving Londoners' quality of life*

The Mayor wants Londoners and visitors to enjoy a consistently high quality of life. One factor effecting quality of life is litter and cleanliness. The Mayor wants to work with all those affected by litter – consumers, community groups, boroughs, the third sector and businesses – to develop a feeling of pride for the areas in which they live and work.

He will also look at specific education campaigns, and work with business and local authorities to tackle dropped chewing gum and graffiti that blight the city's streets.

### What will be achieved?

By dealing with waste in the best possible way – preventing or reducing waste where possible, reusing, recycling or composting first, and then looking for efficient energy generation – greenhouse gas emissions are cut in a number of ways. Firstly, diverting waste from landfill avoids the emissions associated with transporting waste to landfill sites, and allowing it to degrade in the ground. Then, reducing, reusing, recycling and composting avoid emissions involved in manufacturing from virgin materials. Generating energy from waste also cuts down the need to use energy from the UK grid, which draws more

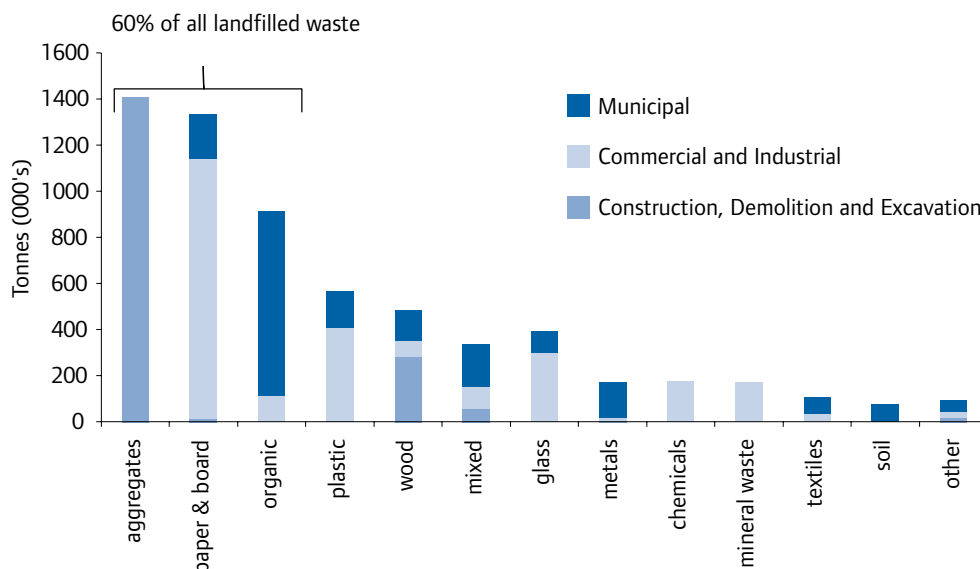
than 80 per cent of its energy from greenhouse gas-producing fossil fuels (coal and gas).

It is estimated that by selecting the optimal means of dealing with waste, London could save up to six million tonnes of carbon dioxide equivalent emissions each year<sup>4</sup>, achieving a significant positive carbon outcome.

There are also considerable cost savings to be made. Figure 1 shows the waste that London sends to landfill, broken down by material and sector. Paper and card, aggregates, and organic waste (food and green garden waste) make up nearly 60 per cent of this waste.

It is estimated that if the majority of these waste materials<sup>5</sup> were recycled, composted or used to generate energy by 2013, London could save in

**Figure 1: London's total waste sent to landfill by material and sector - 2008**



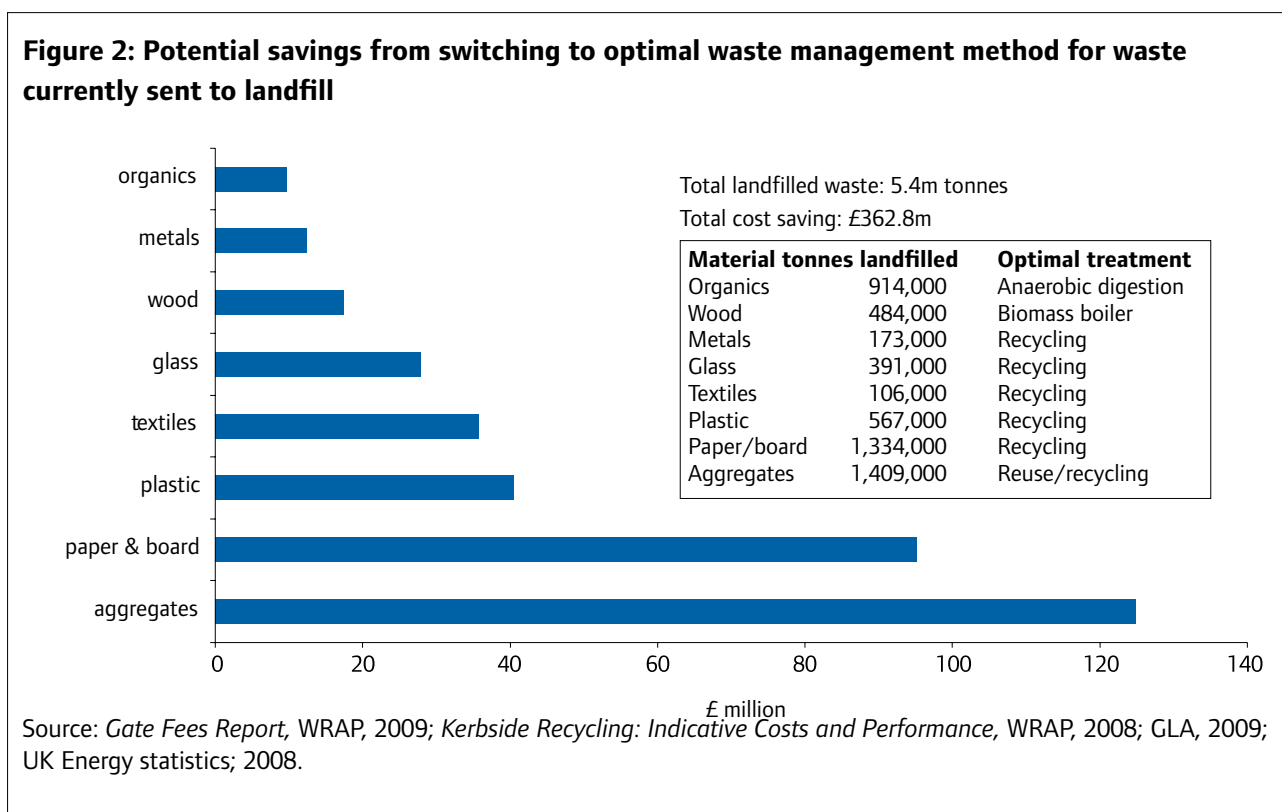
the region of £362 million per year (looking at the entire cost of landfill, including the charges made by waste operators to treat or dispose waste). This figure includes potential revenue from the sale of some recyclable materials, and of renewable energy<sup>6</sup> generated from organic waste and wood waste.

An indication of the cost savings and revenue potential for each material are shown in Figure 2 below.

Calculating the exact cost savings is difficult. Many recyclables have to be sorted before the material can be used, for example, which offsets some of the income that can be generated. Wood can be used to generate energy in

biomass boilers, but the cost savings involved will be lower if the wood needs to be treated before it can be used in this way.

Some of the biggest potential savings (in cost and carbon savings) come from generating renewable energy from London's organic waste. It is estimated that London sends over 900,000 tonnes of organic waste to landfill each year. If this waste was treated by anaerobic digestion to generate renewable energy, it could save approximately 400,000 tonnes of carbon dioxide equivalent emissions per year and £9 million in collection and disposal costs. The Mayor is helping to tackle food waste, making up a large proportion of organic waste, from boroughs and businesses specifically through the Food to Fuel



Alliance. The Alliance aims to convert London's food waste, including used cooking oils, into energy and transport fuel to cut landfill rates and carbon emissions.

### Taking the strategy forward

The Mayor's Draft MWMS is published in January 2009 for consultation with the London Assembly and the GLA's functional bodies (Transport for London, the London Development Agency, the London Fire and Emergency Planning Authority and the Metropolitan Police Authority). The document will be available for the public to access via the web, and wider views on the strategy are welcomed. However, a version of the strategy for full public consultation will be published in mid-2010. The final MWMS will be published in winter 2010.

The Mayor's Draft BWS will be published shortly after the draft MWMS. It will set out a number of non-statutory policies and proposals to help

London's businesses improve how they address the challenge of London's waste. There will be a particular focus on waste reduction and managing resources more efficiently to reduce their economic and environmental impact. The Mayor will consult on his draft BWS with the London Assembly, the functional bodies and London businesses in early 2010, with the final version adopted in late 2010/early 2011.

### In conclusion

The Mayor wants London to be a zero waste to landfill city by 2031. The Mayor believes the policies and proposals in both his MWMS and BWS will put London on the path towards achieving this goal.

The waste industry in the 21st century will throw off its Dickensian image and become part of the new environmental industries – making a positive contribution to economy, the environment and renewable energy security.

### Endnotes

- 1 Greenhouse gases have different global warming impacts. For example, one tonne of methane is 23 times stronger than one tonne of CO<sub>2</sub>. Sulphur hexafluoride is 23,900 times stronger than CO<sub>2</sub>. A CO<sub>2</sub>-equivalent figure is used to represent the warming impact of greenhouse gases.
- 2 Based on current average collection and disposal costs with landfill tax at 2013/14 rate of £72 per tonne for all materials except aggregates where landfill tax is £2.50 per tonne. Refer: *Kerbside Recycling: Indicative costs and performance*, WRAP, 2008; Gate Fees Report, WRAP, 2009.
- 3 Business Link (2009) *Practical Advice for Business: Recycling and Other Waste Options* [Online]. Available at: [www.businesslink.gov.uk/bdotg/action/detail?type=RESOURCES&itemId=1081275138&r.s=e&r.lc=en&r.i=1083609730&r.t=CAMPAIGN](http://www.businesslink.gov.uk/bdotg/action/detail?type=RESOURCES&itemId=1081275138&r.s=e&r.lc=en&r.i=1083609730&r.t=CAMPAIGN) (Last accessed 30 November 2009).
- 4 Based on optimal means of treatment for the eight most common materials: aggregates, organics, paper and card, glass, metals, plastics, textiles, and wood, which comprise approximately 90 per cent of all waste in London.
- 5 Includes aggregates, organics, paper and card, glass, metals, plastics, textiles, and wood.
- 6 Potential energy contribution based on the following: Organics includes the following subsidies (1) ROC subsidy of £90 / MWh @ 0.151 MWh/t = £13.59/tonne. Refer: [www.enviros.com/PDF/BN020RenewablesObligation.pdf](http://www.enviros.com/PDF/BN020RenewablesObligation.pdf) (2) Wholesale electricity price of 8p/kWh @0.151 MWh/t = £12.08/tonne. Refer UK Energy Statistics, 2008. (3) Wholesale gas (=heat) price of 2p/kWh @ 0.259 MWh/t = £5.18/tonne. Refer UK Energy Statistics, 2008

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### Vietnamese

Nếu bạn muốn có văn bản tài liệu này bằng ngôn ngữ của mình, hãy liên hệ theo số điện thoại hoặc địa chỉ dưới đây.

### Greek

Αν θέλετε να αποκτήσετε αντίγραφο του παρόντος εγγράφου στη δική σας γλώσσα, παρακαλείστε να επικοινωνήσετε τηλεφωνικά στον αριθμό αυτό ή ταχυδρομικά στην παρακάτω διεύθυνση.

### Turkish

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### Punjabi

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### Hindi

यदि आप इस दस्तावेज की प्रति अपनी भाषा में चाहते हैं, तो कृपया निम्नलिखित नंबर पर फोन करें अथवा नीचे दिये गये पते पर संपर्क करें

### Bengali

আপনি যদি আপনার ভাষায় এই দলিলের প্রতিলিপি (কপি) চান, তা হলে নীচের ফোন নম্বরে বা ঠিকানায় অনুগ্রহ করে যোগাযোগ করুন।

### Urdu

اگر آپ اس دستاویز کی نقل اپنی زبان میں چاہتے ہیں، تو براہ کرم نیچے دئے گئے نمبر پر فون کریں یا دیئے گئے پتے پر رابطہ کریں

### Arabic

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### Gujarati

જો તમને આ દસ્તાવેજની નકલ તમારી ભાષામાં જોઈતી હોય તો, કૃપા કરી આપેલ નંબર ઉપર ફોન કરો અથવા નીચેના સરનામે સંપર્ક સાધો.

