Towards a sustainable Heathrow

A focus on waste

Towards a sustainable Heathrow
Heathrow’s waste

In this briefing, we explain our approach to managing Heathrow’s waste – which activities generate waste, what kinds of waste we create, and how it’s disposed of. It supplements the data in Heathrow’s Sustainability Performance Summary, available at www.heathrowairport.com/sustainability.

Heathrow’s waste footprint

Operational waste

Running Heathrow generates around 110,000 tonnes of waste each year, a similar volume to that generated by all the households in a typical London borough.

Roughly three quarters of Heathrow’s waste is managed by individual companies operating at the airport. The remainder is managed centrally through Heathrow Airport Limited’s waste contract.

In 2010, Heathrow’s waste contract managed over 26,000 tonnes of waste, including:

<table>
<thead>
<tr>
<th>Waste type</th>
<th>Tonnes</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>General waste</td>
<td>15,400</td>
<td>59.1</td>
</tr>
<tr>
<td>Paper, cardboard</td>
<td>5,400</td>
<td>20.7</td>
</tr>
<tr>
<td>Other recyclables</td>
<td>4,140</td>
<td>15.9</td>
</tr>
<tr>
<td>Hazardous waste</td>
<td>196</td>
<td>0.7</td>
</tr>
<tr>
<td>Green waste</td>
<td>944</td>
<td>3.6</td>
</tr>
<tr>
<td>Total</td>
<td>26,080</td>
<td>100</td>
</tr>
</tbody>
</table>

The reduction in the amount of waste which is sent to landfill continues, with less than 1% of our waste being sent to landfill by mid 2011. These improvements are largely due to a new Energy from Waste plant becoming available.

However, since late 2010, recycling performance has deteriorated. This trend has continued into 2011, with our mid-year recycling rate currently just over 28% (see pages 5 and 6).

Infrastructure waste

Heathrow is constantly changing.

We generate waste through infrastructure projects involving demolishing, constructing and refurbishing old buildings, aircraft stands, taxiways, roads and tunnels.

In 2010, 5,902 tonnes of mixed waste were reported across Heathrow’s construction and refurbishment activities.

In addition, 94,626 tonnes of waste were generated through demolition activities to make way for the new Terminal 2. 99% of this was recycled (see page 5).

We’ve achieved high rates of construction recycling in recent years, as illustrated below.
### Heathrow’s waste generation and disposal

In 2010, Heathrow operations generated around 110,000 tonnes of waste. Around 25% of this was managed through Heathrow Airport Limited waste contract, the remainder by individual companies operating at the airport. In addition, 100,500 tonnes of demolition and construction waste was generated at Heathrow and managed by Heathrow Airport Limited’s construction waste contract.

#### Waste generation and disposal chart

<table>
<thead>
<tr>
<th>Waste type</th>
<th>Waste stream</th>
<th>Disposal method</th>
<th>Waste hierarchy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper/magazines</td>
<td>Segregated recyclables: Office Paper / Newspaper / Magazines</td>
<td>Segregated recycling</td>
<td>Recycling</td>
</tr>
<tr>
<td>Cardboard</td>
<td>Infrastructure waste: Cardboard / Metal / Wood / Glass / Plastic</td>
<td>Hazardous materials recycling facility</td>
<td>Recycling</td>
</tr>
<tr>
<td>Metal</td>
<td>Hazardous waste: Batteries / Oil &amp; lubricants / Fluorescent tubes / Concrete / Fixtures, fittings &amp; materials</td>
<td>Hazardous waste</td>
<td>Recycling</td>
</tr>
<tr>
<td>Wood</td>
<td>Food waste: Food, International catering waste (category 1) / Other food waste (category 3)</td>
<td>Energy from waste</td>
<td>Energy recovery</td>
</tr>
<tr>
<td>Glass</td>
<td>Green waste: Green waste</td>
<td>Landfill</td>
<td>Disposal</td>
</tr>
<tr>
<td>Plastic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Batteries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil &amp; lubricants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluorescent tubes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixtures, fittings &amp; materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tyres</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rags</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aerosols</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green waste</td>
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<td></td>
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</tbody>
</table>
Segregating Heathrow’s waste streams

Segregating waste makes recycling easier. For maximum efficiency, it’s important that waste is also segregated as soon as possible and remains so throughout storage and transfer.

Segregation

To enable more recycling, we liaise with airlines, retailers and other airport tenants to segregate waste as close to its generation point as possible. This relies on waste producers separating different waste streams before collection.

Of course, segregation at source is not always possible. So Heathrow’s waste management provider has invested in a new materials recovery facility. This enables us to separate and recycle materials after collection, removing contaminants such as food or non-recyclable plastics.

We manage the following waste streams through Heathrow’s waste contract:

**Dry mixed recyclables**

In 2010, over 5,000 tonnes of recyclable materials were segregated at source including: 350 tonnes of office paper, 2,790 tonnes of newspapers and magazines, and almost 2,000 tonnes of cardboard.

A further 1,564 tonnes of mixed recyclables from Terminal 5 were recycled through the materials recovery facility.

In 2011, we’re aiming to increase the amount of waste recycled from Heathrow’s other terminals by 5 – 9% through better collection arrangements.

**Food**

In 2010, 275 tonnes of food waste were collected and sent to a nearby facility for conversion into soil conditioner.

As the process requires that food waste is not contaminated by other waste, we’re working with our tenants to improve segregation. During 2011, we aim to double the quantity of food waste we collect. We expect a 3.5% to 5% improvement in recycling within Heathrow’s terminals as a result.

**Green waste**

In 2010, Heathrow recycled 944 tonnes of green waste generated through activities such as grass cutting and shrub trimming. This produced 598 tonnes of compost, which was reused around the airport.

**General waste**

General waste is transferred to a nearby Energy from Waste facility, where it’s incinerated, generating electricity in the process. Any residue metal that remains after incineration is recycled as an aggregate.

In 2010, 12,696 tonnes of waste were sent to this facility – almost 51% of the total waste managed through Heathrow’s contract.

**Hazardous waste**

Hazardous waste includes oils and lubricants, fluorescent light tubes and flammable gases from aerosols left at security. In 2010, 78% of the 196 tonnes of hazardous waste managed through Heathrow’s waste contract were recycled.

Principles of waste management

All UK businesses that produce or handle waste must work within the revised European Union Waste Framework Directive (2011).

This means we must manage and dispose of waste by following the principles of the ‘waste management hierarchy’, shown below.

The waste hierarchy

This hierarchy is central to our waste strategy and a requirement of UK law.

So, where waste prevention is unavoidable, we aim to reuse or recycle materials. And where this is not feasible, we focus on energy recovery through incineration. Disposal to landfill is a last resort.
Managing Heathrow’s waste

In this briefing, we describe our approach to managing waste using a model based on what we, as Heathrow’s owner, ‘control,’ ‘guide’ and ‘influence’.

- We control the management of waste which is generated through our own operations and managed through Heathrow’s waste contract.
- We guide the management of waste generated by third parties at Heathrow but managed through Heathrow’s waste contract.
- We influence the management of waste generated by third parties at Heathrow and managed through their own waste contracts.

**Waste targets**

**Heathrow’s waste contract**

We aim that, by 2020, no waste managed through Heathrow’s waste contract will be sent to landfill and that 70% of this will be recycled.

In 2010, we set a target to increase recycling of both general and landscaping waste handled by the airport to 50%.

This target was not achieved, with the recycling rate reaching 38% by the end of 2010. This was due to the risk of contamination of airport waste by international catering waste (see pages 5 and 6).

We are once again aiming to recycle 50% of this waste by the end of 2011.

**Infrastructure waste**

In 2010, we set a target to recycle at least 85% of construction waste. We exceeded this target with over 96% of construction waste recycled throughout the year.

We have retained our target to recycle 85% of construction waste through 2011 and are reviewing whether we should raise this target.

<table>
<thead>
<tr>
<th>Control</th>
<th>Guide</th>
<th>Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Airside</strong></td>
<td>Landscaping</td>
<td>Aircraft cabin cleaning</td>
</tr>
<tr>
<td><strong>Landside</strong></td>
<td>Office administration</td>
<td>Car park management</td>
</tr>
<tr>
<td></td>
<td>Engineering</td>
<td></td>
</tr>
<tr>
<td><strong>Terminal</strong></td>
<td>Security operations</td>
<td>Retail and catering</td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td>Construction and demolition</td>
<td>Construction design innovation</td>
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</tbody>
</table>

This table summarises how we control, guide and influence waste management across Heathrow.

By 2020, we aim to recycle 70% of waste managed through Heathrow’s waste contract.
Controlling the management of Heathrow’s waste

We control how waste is generated through our own operations at Heathrow – and how Heathrow’s waste management contractor handles and processes it.

**Landscaping**

Our on-airport landscaping activities – primarily grass cutting and shrub trimming – generate green waste which is composted on-site. We use this compost to improve the appearance of Heathrow’s landscaped areas.

During 2010, we produced 598 tonnes of compost from green waste, all of which was reused at Heathrow.

**Office administration**

Our offices generate waste such as paper, cardboard, toner cartridges and food. In 2010 we recycled 350 tonnes of office paper through Heathrow’s waste contract.

In 2011 we aim to extend our existing office paper collections and recycle a further six tonnes per month.

We introduced a new waste management process at our head office in June 2011, which involves:

- Introduction of mixed recycling collection facilities
- Separate collection of white office paper
- Improved food waste collection from the staff restaurant
- Cup banks to collect recyclable coffee cups.

Four months into the trial, we had recycled 5.6 tonnes of mixed recyclables, 2.6 tonnes of office paper and 1.2 tonnes of cardboard.

**Engineering**

We generate waste such as wood, metal and hazardous material through activities in our engineering and vehicle workshops.

In 2010 we generated over 6.5 tonnes of fluorescent tubes and more than 130 tonnes of petrol, oils and lubricants. We will further improve our systems for recovering hazardous wastes such as used batteries, to ensure continued compliance.

“\nAs engineering waste is potentially hazardous, we follow strict processes to segregate at source and enable recycling.\\n---\\nSteve Chambers, Director of Engineering, Heathrow Airport Limited\\n”

**Security operations**

Passengers are prohibited from carrying significant volumes of liquids and hazardous substances in their hand luggage when they fly.

This leads to a large number of items, such as drinks bottles, aerosols, toiletries and cigarette lighters and sharp objects, being left at airport security.

Hazardous components of this waste (mainly aerosols) are separated at source and disposed of via a hazardous waste transfer station. The remainder are transferred to the nearby Energy from Waste facility.

Recently, we have trialled a sorting process to enable plastic bottles disposed of by passengers passing through security to be recycled.

We found that around 50% of the weight of this waste is liquid, and 15% is reusable plastic. We’re extending this process across our airport throughout 2011.

During a one month trial, we recycled 660 kg of paper from our head office at Heathrow.

As sculpture made of waste coffee cups from Heathrow’s head office canteen as part of recycling campaign.
Guiding the management of Heathrow’s waste

We guide how companies operating at Heathrow generate waste, which is then managed through Heathrow’s waste contract.

Aircraft cabin cleaning

Over 80% of aircraft cabin waste is potentially recyclable, e.g. papers, glass, cans and plastics. The rest is mainly food and beverage waste, which, if of international origin, is subject to strict regulations and is not recyclable.

Segregating these waste streams on-board the aircraft and in storage can facilitate recycling. However, rapid aircraft turn-around times and constraints around waste storage make this challenging.

In 2010, due to the risk of contamination of cabin waste with international catering waste, we decided to stop recycling cabin waste. Instead, all cabin waste is now transferred to the Energy from Waste plant for incineration.

We’re working with airlines, their cleaning companies and other UK airports to agree clear, risk-based guidance that would enable at least a proportion of cabin waste to be recycled, while still applying adequate animal health risk controls.

Retail and catering

We provide facilities to segregate and collect retail and catering waste for recycling. In 2010, this included food waste, cardboard, clean white paper and, in Terminal 5, mixed recyclables. We also introduced collections of used cooking oil from Heathrow’s catering outlets, which is reprocessed into biodiesel.

During 2011 we plan to:

- Introduce collections of mixed recyclables in Terminals 1, 3 and 4, with the aim of adding 50 tonnes per month
- Expand our current food waste collection to capture a further 25 tonnes of food waste per month
- Increase cardboard collection by promoting our retailer returns service and providing information on recycling facilities
- Continue to improve and expand the arrangements for collecting cooking oil for reprocessing into biodiesel.

Infrastructure waste

We guide the recycling behaviour of contractors. Heathrow’s construction waste management and logistics contract enables construction contractors to meet the contractual recycling obligations we place on them.

The main infrastructure developments that generate waste involve demolition and construction activities.

Demolition waste includes masonry, concrete, stainless steel, aluminium, structural steel, glass and cables.

Construction waste includes mixed inert building materials, excavated materials, metals, plasterboard, timber, insulation materials, packaging and used containers.

Turning old buildings into new ones

Heathrow’s buildings, runways and pavements are hard-wearing. But, with 180,000 passengers and 1,200 aircraft passing through every day, they sometimes need replacing.

Throughout our construction work, we make every effort to send materials for recycling, rather than to landfill. For example, when demolishing the 55-year-old Terminal 2, we recycled or reused 99% of demolition waste. The only materials we couldn’t recycle were hazardous ones, like asbestos.

The recycled building materials are used for construction projects across the UK. Much of the concrete, for example, goes into new motorways, roads and pavements.

Runways and taxiways use especially high quality concrete – a valuable resource. So, when we replace these surfaces, we remove the old concrete and send it to a special off-site facility for crushing. This produces a material we can reuse in new surfaces.

99%

Over 99% of demolition waste from Heathrow’s old Terminal 2 was recycled.
Influencing the management of Heathrow’s waste

We influence how the aviation industry manages waste, and how third parties generate and handle waste at Heathrow through their own waste contracts.

Aircraft catering

The UK Government’s Animal By-Products Regulations set out clear guidance on managing waste that contains animal by-products due to the risks of animal infection.

International catering waste from flights starting outside the European Union is defined as ‘Category 1’. This requires airlines and their catering providers to segregate this waste from other aircraft waste and dispose of it either by incineration or at a specialist landfill facility.

At Heathrow, international catering waste is removed by the airline’s catering suppliers. Heathrow does not provide facilities for its collection on-airport.

Construction design innovations

Recycling rates for Heathrow’s construction projects are high. However, our approach to managing construction waste is increasingly focused on waste prevention.

We encourage Heathrow’s construction suppliers to innovate by considering opportunities for modular design and off-site fabrication. This helps, us to influence the amount of waste produced through improved product quality and uniformity, dimensional standardisation and manufacturing in controlled environments.

Other off-airport waste

A considerable number of business activities take place outside of the airport boundary to service Heathrow’s operations. Recent research identified over 525 airport related companies located off-airport, but within Heathrow’s local catchment area. Represented sectors include hotels, airlines and airline support as well as car parking, transport and freight services.

Our current understanding of the volume and type of waste generated by these companies, along with the disposal method, is limited. However, through the newly-formed Heathrow Sustainability Partnership, an opportunity exists to better co-ordinate and improve waste management throughout off-airport companies.

Car park management

APCOA Parking Ltd manage many of Heathrow’s car parks. The waste they generate at these car parks is handled directly by APCOA’s own waste management contract.

APCOA issues around 8 million car park tickets at Heathrow every year. Previously, magnetic strips within the tickets prevented recycling.

Following collaboration between Heathrow and APCOA, changes were made in order to facilitate more recycling.

For example, by switching from magnetic strips to bar codes tickets, APCOA’s car park tickets are now recyclable. Investments in vehicle licence plate technology will eventually lead to the need for tickets – and the production of waste – to be completely eliminated.

In addition, Heathrow’s introduction of car park recycling bins enabled APCOA to trial waste collection arrangements to segregate mixed recyclables from non-recyclable general waste. This enabled us to recycle parking tickets and general car park litter.

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80% Over 80% of cabin waste is potentially recyclable

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\[^{1}\text{Heathrow related employment, Optimal Economics, 2011.}\]

\[^{2}\text{Defined as the five local boroughs surrounding Heathrow: Hillingdon, Hounslow, Ealing, Spelthorne, Slough.}\]

\[^{3}\text{www.heathrowairthought.com}\]
Heathrow’s vision is to be ‘Europe’s hub of choice’. Delivering this vision relies on Heathrow being managed sustainably. This means enhancing the airport’s social and economic benefits and reducing its negative environmental impacts.

Achieving the right balance between those impacts, and aligning with the UK Government’s sustainable development principles, will help Heathrow to earn the trust of its many stakeholders and achieve our vision.

Our sustainability commitments are to:

1. Enhance the local, regional and national economic and social benefits of Heathrow.
2. Seek to prevent, reduce or offset Heathrow’s significant effects on the environment and local communities, and work with others to ensure that the airport plays its role in respecting environmental limits.
3. Provide good conditions of employment, respect diversity and equal opportunity, and provide a safe, healthy and secure airport for staff and passengers.

Where we do not directly control Heathrow’s impacts, we will work in partnership with stakeholders at and around Heathrow to improve performance. We will also work constructively to influence the development of appropriate government policies.

We will:

• Ensure that our business strategies integrate the sustainability issues that are material to our business.
• Define objectives and goals in consultation with our stakeholders and will deliver these through action plans and performance targets embedded within our business functions.
• Measure and review progress against these targets and communicate performance transparently.

About this briefing

This document is part of a series of briefings which outline our approach to developing a sustainable Heathrow.

The series replaces the annual Corporate Responsibility Report we have previously published and is designed to provide an accessible, frequent insight into key sustainability issues.

In 2011, the series will cover:

• 2010 Sustainability performance summary
• Economy
• Waste
• Safety

In 2010, the series covered:

• 2009 Sustainability performance summary
• Climate change
• Noise
• Air quality
• Education, employment and skills

Detailed information on the issues contained in these briefings as well as our wider sustainability programme is available at heathrowairport.com/sustainability

About BAA

UK airports
BAA owns and runs Heathrow, Stansted, Southampton, Glasgow, Edinburgh and Aberdeen airports.

Rail
BAA owns and operates the public rail service Heathrow Express and jointly owns Heathrow Connect.

Information relating to BAA and the airports it owns is available at baa.com

Contact us

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