

British Library opens new page on waste reduction

The British Library called on WRAP for support to help meet challenging waste reduction targets. Consequently, it has also benefited from savings equating to 100 tonnes of CO2e and cost savings of £112,000 per year.

The British Library at St Pancras was the largest public building built in the 20th century and is still the largest library in the world. For such a high profile facility, employing 800 staff and attracting over 800,000 academics, tourists and other visitors each year, practicing resource efficiency may seem a daunting challenge. However, the library has binding targets in place and, with support from WRAP, has examined all aspects of facilities management to implement measures for improvement.

Jeff Silver, Contract Manager for the library's facilities management supplier, Emprise, explained the reasons behind the commitment to environmental good practice: "As far back as 2007 when I joined the team, the library was keen to establish an ambitious recycling programme. For five years, our combined efforts, flexibility and dedicated teams allowed us to achieve 71 per cent recycling of overall waste. We always offer innovative approaches to our service delivery, so we were regularly looking for ways to increase recycling rates or to recycle different waste streams."

In addition to recycling targets, the library has introduced a waste reduction figure in line with other government sites; by 2015 the aim is to reduce waste by 25 per cent of 2009–2010 figures. Having succeeded in reaching 18 per cent, the challenge was to find new initiatives to achieve the target of 25 per cent. Following an assessment of catering and waste management practices –

Key benefits

- Realise cost savings
- Meet waste reduction targets
- Reduce packaging
- Improved performance

including waste reduction or recycling of temporary exhibition materials – WRAP was able to suggest savings equating to 100 tonnes of CO2e and cost savings of £112,000 per year.

Waste segregation

Two of the major challenges for public-facing recycling systems are bin contamination and staff buy-in; and the British Library was no exception. The WRAP review identified that 75 per cent of the



The British Library employs 800 members of staff and hosts 800,000 visitors from around the world each year

Key actions

- Assess potential for re-use and recycling within exhibition wastes
- Work with appointed contractors to improve performance
- Ensure that new staff are trained in waste management procedures
- Facilitate segregation of waste
- Work with suppliers to encourage take-back of products

content in general waste bins could be recycled or composted, while over 60 per cent was made up of compostable food waste, largely from the kitchens.

The first step to rectifying the situation was to ensure that bins were located in the most suitable areas for ease of disposal. Secondly, signage and training were put in place. Silver explained: "We had a problem with staff separating out the odd item but basically dumping the majority of the recyclable waste into the general waste. I provided signage for all of the kitchens and all the catering outlets, detailing what goes into each bin, and we had stickers to go on the bins themselves. I also put together a Toolbox Talk that the catering manager could use, and had that translated into Spanish for non-English speaking staff.

"Now, when new staff join the library they have the Toolbox Talk and clear signage which tells them what to put in which bin. I also produced a map of the loading bay detailing what goes into each bin. Things have definitely improved."

Jeff Silver,
Contract Manager, Emprise

A waste audit conducted before and after intervention to assess the impact of changes showed a 10 per cent decrease in food waste found in the general waste bins.

Catering

Each day of the year, with the exception of Christmas Day, the on site catering firm Peyton and Byrne serves around 650 meals and oversees more than 62,000 transactions across the six catering facilities which supply

food to members of staff and the library's customers. It also provides catering services for internal meetings, averaging around 700 orders per month.

Food waste was already segregated and disposed of to anaerobic digestion and waste reduction is a priority – the company implements a range of practices to minimise food and packaging waste. These included weekly menu planning and the use of daily order sheets to assist the Executive Chef in planning menus and stock ordering. Front of house staff also receive daily briefing sessions in portion control.

Under the British Library's waste reduction targets, absolute waste must be reduced to 387 tonnes by 2015. Food waste makes up four per cent – or 21,590kg – of this figure. Despite good planning and portion control, plate waste was identified as an issue, while unsold food wastage was found to be at 22 per cent, significantly higher than the three per cent figure for best practice recommended within the catering industry.

The WRAP review concluded that food waste represented 24 per cent of food spend, equating to £38,300 per annum. As much as half of this figure could be avoided, which would save the organisation £19,150 and reduce CO₂e by 45 tonnes.

Plate waste was highlighted as an area for improvement, particularly in the staff restaurant, while food preparation techniques could also be altered to effect change. As a result, in the conference centre



Clear signage, Toolbox Talks and mapping of recycling areas has helped to address staff contamination of recycling containers



Switching to compostable cups has resulted in three tonnes of waste diverted from landfill

for example, where sandwiches were previously trimmed of crusts to make them more aesthetically pleasing, trimming was reduced to two sides in order to create less waste. Similarly, less wasteful alternatives such as ciabatta have been included on the menu while uneaten bread has been made into items such as croutons for incorporation into dishes.

Disposables

The catering team is responsible for procuring over 1.5 million disposable items per year, which in turn, result in 14.6 tonnes of waste. Replacing disposable drinks cups alone would help to cut waste by as much as 4.2 tonnes.

Although ceramic cups were always offered to customers, observations showed that half of the people ordering drinks made use of disposable cups instead. WRAP suggested three options to encourage the take up of re-usable drinking containers:

- Introduction of ceramic mugs and glasses, resulting in a cost saving of £11,638 and payback time of less than two months;
- Introduction of a refillable, branded re-usable cup, resulting in a cost saving of £20,000 and payback time of nine months;
- Discount for customers bringing their own cup, and resulting in a cost saving of £100 and two-year payback time.

The library chose to introduce more ceramic cups, which were rolled out following the refurbishment of the main public and staff restaurants. Spot checks showed a dramatic increase in the number of customers using

ceramic cups was reflected in a £2,954 saving shown in purchase order sheets.

In addition, the disposable cups on offer were replaced with compostable alternatives. Silver said: "The catering sites were getting through 40,000 disposable cups per month. Since the catering company purchased recycling bins for four areas of the library, we have run a trial and, based on figures from weighing the bins, we are seeing around three tonnes of waste that will now go to anaerobic digestion rather than general waste."

Packaging

To service such a large number of diners and consumers requires thorough planning, reliable deliveries, and packaging appropriate to the product acquired. However, even within these confines scope exists for improvement. The Resource Optimisation Review identified a number of opportunities to reduce packaging and costs within the catering service.

Firstly, around 40 per cent of fresh food orders were delivered in wooden, plastic and cardboard crates that could be re-used. WRAP suggested asking suppliers to take back the packaging.

"Wooden crates that the fruit and vegetables come in all get stacked in a specific area and are taken away by the supplier for re-use. We have a skip which used to be at least half-full of wooden crates, but since we've asked suppliers to take them back, we don't ever see wooden crates there anymore."

Jeff Silver,
Contract Manager, Emprise



Plastic tubs with lids have replaced the use of cling film for protecting food in storage



Re-use of exhibition waste has risen to 30 per cent

The British Library has also implemented an initiative to reduce the volumes of cling film used to protect food in kitchen storage; it purchased a collection of plastic tubs complete with lids which can be washed and re-used.

Exhibition waste

One historically challenging feature of the British Library waste management service is its exhibition waste. Hosting two public exhibitions a year, which cost in the region of £130,000, the shows result in extensive and wide-ranging waste streams which include everything from wood and fabric to laminates and paper.

Many of the resulting waste streams are 100 per cent recyclable, but until recently were disposed of via energy from waste. With 22 tonnes of waste generated, at a cost of £3,160, considerable opportunity exists to reduce or recycle material at a lower cost than previously charged.

The key challenges identified through the Resource Optimisation Review included storage space, a lack of consistency in designers commissioned to produce the shows, and a need for speed and cost efficiency. The review suggested a range of initiatives, such as:

- Engaging with the exhibition team to stipulate in contracts that design should be in line with the waste hierarchy;
- Calling for build and deconstruction phases to minimise damage and maximise re-use;
- Securing additional space in the building basement for long term storage and recording the materials

stored to make them accessible for future use;

- Separating waste streams such as wood and metal for recycling.

The resulting cost savings would generate £13,000 through re-use and £948 through disposal costs. Silver said that segregating waste was already having an impact: "The challenge is that different companies tender for the various exhibitions, but they are using a lot more of the materials – wood, display boxes, that kind of thing – from the previous exhibition in the new shows now. I think originally they re-used around 10 per cent of the materials; the most recent example had gone up to 30 per cent, which is a major improvement."

Silver asserts that although many of the actions suggested in the WRAP review have not yet been taken up, the move to improved resource efficiency is still underway:

"A lot of these things can happen in the future; so the review will reduce or divert waste from landfill at the very least, and in the long term it will also reduce costs for the facilities management team, and for waste management which, ultimately, will be passed on to the library."

Jeff Silver,
Contract Manager, Emprise

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