

# Sustainable Redevelopment – Unilever House

## Introduction

Bovis Lend Lease transformed the 1930's Grade II listed Unilever House in London's Blackfriars through a carefully planned sustainable refurbishment that was completed in 2007. From the outset, all parties including the developer, Stanhope; the client, Unilever; the construction manager, Bovis Lend Lease and its supply chain partners had a strong commitment to sustainability.

The project sustainability credentials were independently verified by a BREEAM for Offices assessment, and achieved an Excellent Rating at Design and Procurement stage.

## What we did: waste management

### Avoiding Landfill and Encouraging Reuse

A key aspect of this project was to minimise waste generation and maximise opportunities for reuse or recycling. Bovis Lend Lease worked closely with KPF the architects, demolition contractor McGee and English Heritage to develop an innovative and complex demolition schedule. This schedule ensured the effective protection of all the heritage features, for reuse in the building and the assessment of all demolished materials for their potential for re-use, recycling or donation. This involved assessing all materials, from carpet tiles and furniture, to concrete and timber flooring.

Part of the demolition included the deconstruction and packaging of a 1930s lecture theatre for donation to the Isle of Wight Heritage and Field Studies Centre, who provide facilities to host educational field trips from inner city schools.

### Recycle and reuse

The project achieved a recycling/reuse rate of 87%, the majority of which was hardcore, concrete, metals and timber.

Concrete was removed by McGee and delivered to Day Aggregates, where it is crushed for reuse in the industry. During the demolition phase 18,818m<sup>3</sup> of concrete was recovered and recycled and 9,007 tonnes of steel and 5,491m<sup>3</sup> of original flooring was reused.

Although not part of the Grade II listing consent conditions, a large quantity of high quality parquet flooring was discovered under the carpeted floors of the old Unilever House. This was systematically stripped, palletised and stored for reuse within the new building. Some of this material was re-manufactured into table tops, which now reside in Lend Lease corporate headquarters at 19 Hanover Square, Mayfair.

Greenworks, a not for profit charity based in South East London, was engaged to remove any remaining and unwanted furniture. This was taken to a local warehouse where it was checked and cleaned up for donation to schools and charities throughout London. In addition, furniture was donated directly by the project staff to three local schools.

Keen to maximise recycling on the project, the Bovis Lend Lease project team also instigated recycling of office wastes, working with an organisation called Loop (a London based recycling company) to recycle all waste paper and toner cartridges.

## Reducing the impact on global and local communities

Engagement with the local community was enabled by the use of an innovative project website ([www.buildingunilever.com](http://www.buildingunilever.com)) which was specially created to meet the needs of the community. It provided a method of communicating how the project was progressing and removed the need for endless paper newsletters and interim notices. The project also participated in the Open Site weekend (part of the Open House London Initiative) to communicate the benefits of recycling buildings in this way to the wider public.

Another aspect of minimising the project's impact on the local community was pioneering the use of a Consolidation Centre in London. Working with Transport for London the project team helped establish the London Construction Consolidation Centre (LCCC). The centre was funded by Transport for London (who provided £1.85m) and Stanhope and Bovis Lend Lease (who provided £1.35m) to establish the facility. It was managed by Wilson James.

The centre, a few miles outside of the congested City of London, enabled the storage of materials and allowed them to be taken to the site when required with other materials reducing the need for single journeys with lorries only partially full. It provided a crucial aspect in controlling deliveries, improving materials handling and reducing waste on this tight, city centre site.

The centre was subsequently utilised by three other Bovis Lend Lease developments: Basinghall Avenue, Coleman Street and Bow Bells House.

Positive benefits from using the consolidation centre included:

- The reliability of goods being delivered undamaged in the right quantity and at the right time was increased to 94%, compared to the industry average of around 50%.
- Congestion was eased. There was a reduction in construction traffic trips into Central London of at least 70%.
- Drivers saved on average two hours per journey, by cutting out the need to drive into Central London and reducing the time waiting on site for unloading.

To assist in the initiative the original Unilever House compactor was reused and installed in the consolidation centre for the compaction & removal of packaging waste, reducing environmental impact of its disposal and cost.

High quality welfare facilities were provided to all operatives the demolition and construction works. This included employing a gourmet chef from the former Unilever House restaurant to provide excellent food to the operatives, as well as continuity of employment for the restaurant personnel.

## Changing the mindset about waste

Everyone of our supply chain together with members of staff were provided with site specific inductions including a specific video introducing every employee to the Unilever House project sustainability aspirations. This theme was carried throughout the project, with sustainability featuring in all decisions that were made. Provide an example

In order to drive the sustainability message further operatives from all trades were invited to participate in a waste minimisation training and awareness programme called NoWaste.

The programme provides a series of tools and techniques to help reduce waste on site. Waste reduction training was offered to everyone through elements of the induction programme, training and awareness raising for trade contractor managers, and regular toolbox talks for trade contractor partners such as Byrne Bros, Axima and Wilson James.

Operatives were encouraged to provide their own ideas for reducing waste and create their own action plans. Ideas were logged during toolbox talk training, or by using special forms distributed at the site entrance. These were all fed back to a NoWaste coordinator for evaluation and feedback. All people providing their responses received a certificate to recognise their contribution. The best ideas implemented received a voucher for a "NoWaste meal" at the project restaurant, and were featured on a Plasma Screen at the site entrance. A draw for the most effective initiative to reduce waste was also held, with the prize of a mountain bike donated by the Stanhope.

In addition, the NoWaste learning content was used to support skill development in partnership with other initiatives: with Building London Creating Futures to provide training for individuals to achieve their first NVQ in waste management operations; with ConstructionSkills in piloting construction project-wide training; and also with the Islington Enterprise Agency in support of their smaller construction companies programme, BuildUP.

Here's what some of the participants had to say about the programme

*"ConstructionSkills supports a partnership approach in helping all construction workers in their lifelong learning, especially in the area of sustainable construction. The Nowaste project, while focusing on waste, engages the entire workforce in developing aspects of their sustainable construction skills."*

Pat Bowen, Development Analyst, ConstructionSkills

*"Stanhope takes its corporate responsibilities seriously and one of these is working in partnership with our trade contractors for a more sustainable community. We welcome the opportunity to take part in a programme that enables everyone to contribute towards sustainable construction."*

Mike Knowles, Project Director, Stanhope

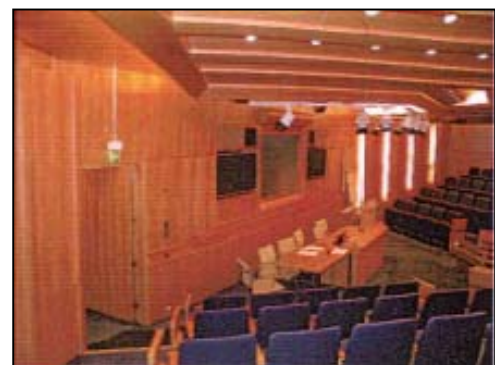
## Award winning

The NoWaste programme was recognised by winning the award for Waste Initiative of the Year in 2006 by Building Magazine at their Sustainability Awards and National Champions in the Waste Management (Construction Sector) at the Green Apple Awards in 2005. Our efforts to minimise waste at Unilever House were also recognised with a Major Commendation from the Business Commitment to the Environment Awards in 2007.

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A recycled chef from Unilever House!



The lecture theatre, before careful stripping & removal took place for donation to the Isle of Wight Heritage & Field Study Centre



The site restaurant, set up using equipment salvaged from the redundant Unilever House catering facilities, and serving the best food in the industry!



Day Aggregate's concrete crushing facility where Unilever House demolition concrete was reprocessed for reuse within the industry



Segregated steelwork from the demolition of Unilever House (main building) prior to recycling