

WASTE NOT WANT NOT

Fergus McCloskey takes a look at how the London Borough of Hackney recovered, re-used and recycled 98% of the waste material created during a recent social housing demolition project



Housing at Codicote Terrace prior to demolition



Recycled Concrete Aggregate (RCA) crushed and left on-site

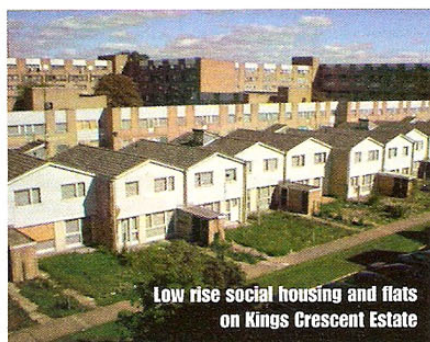
How much waste do you recycle? 10%? Maybe 20% if you're really committed? In a recent pilot scheme carried out in Hackney an incredible 98% of all waste generated in the demolition phase of a regeneration project was either re-used or recycled.

Head of Estate Renewal at Hackney, Bob Snowsill, believes that the inclusion of resource efficiency targets into the framework and methodology of the project provided the discipline necessary to achieve its environmental objectives. "In order to implement resource reduction measures, which often have short-term implications on the cost and timescales of building projects, you need more than just cultural change," Bob explains. "It requires a change to the working practices."

Hackney Homes, the arms length management organisation which manages the Borough's social housing stock, selected the regeneration of the Kings Crescent Estate to pilot a number of new sustainability initiatives promoted by the Council's climate change strategy. The redevelopment of the estate involved the demolition of two blocks of two-storey houses and three-storey flats.

The Borough's commitment to resource efficiency was recognised by the Building Research Establishment (BRE) which selected the project as an exemplar for its Construction Research Efficiency (CoRE) programme. Under CoRE the BRE offers organisations help and support on implementing resource efficiency measures.

With the BRE's help, Hackney Homes set about integrating resource and energy minimisation measures and targets into its operating procedures for the Kings Crescent programme. During the competitive tender process to appoint contractors for the project the selection criteria scored equally on economic, social and environmental factors.



Low rise social housing and flats on Kings Crescent Estate

"Applicants were required to demonstrate commitment to sustainability and a proven track record in good environmental practice," says Bob.

A minimum target of 85% was set for the re-use and recycling of waste material generated during the demolition phase. He adds: "The chosen contractor, Clifford Devlin, was able to demonstrate its environmental credentials and, in particular, extensive experience of managing and minimising waste."

Following a pre-demolition audit carried out by the BRE, Clifford Devlin prepared a Site Waste Management Plan which documented the expected quantities of each type of waste generated and details of the methodology to be used to recover, re-use and recycle the demolition arisings. Since then, the preparation of such a document has now become a legal requirement for all projects that exceed £300k in value.

Following the removal of fixtures and fittings, Clifford Devlin carried out the structural demolition using excavators fitted with breakers and hammer attachments. All waste was sorted and segregated on-site with designated skips provided to collect each waste stream. Skips were provided for glass, ferrous metals, non-ferrous metals, plasterboard and timber. These materials were removed from site to local recycling plants.



The RCA used for landscaping purposes

Bricks and concrete were crushed and left on-site as Recycled Concrete Aggregate (RCA) for use as backfill or landscaping. Only materials such as man-made mineral fibres (MMMF), other insulation and polythene were disposed of as rubbish and removed to landfill.

In total, 98% of the three thousand tonnes of waste generated during the demolition phase was able to be re-used or recycled, a figure far exceeding the minimum requirements set at the tender stage (85%) and surpassing the expectations of the BRE. Senior consultant at BRE, Szilvia Zakar, said: "We were very impressed with Clifford Devlin's performance in exceeding our targets and in particular their ability to recover plasterboard and wood during soft strip. This study demonstrated that with the commitment of those involved, higher rates of recovery and recycling can be achieved than previously thought."

The refurbishment is currently still at the planning stage. Once this is completed the buildings will be independently audited to verify that they comply with Level 4 Code for Sustainable Homes. The results so far however have been so encouraging that most of the initiatives trialled at Kings Crescent will be rolled out as standard practices for all future regeneration programmes in the Borough.

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