Best Practice Case Study - Woolwich Civic Offices

INTRODUCTION

Providing new, improved buildings and facilities often involves the demolition of existing structures. The materials that make up that structure often have a value of their own.

As sustainability moves higher up the agenda, the reclamation of building materials is becoming an increasingly high-profile issue.

Reclamation is more favourable than recycling as it allows the materials to be re-used in their current form, rather than using energy to reprocess those materials for different uses.

PROJECT
Woolwich Civic Offices

LOCATION
Woolwich, London, SE18.

CLIENT
London Borough of Greenwich

PROJECT DESCRIPTION
The development includes the demolition of existing buildings to be replaced with new civic offices, library and integrated service delivery centre in Woolwich, London.

KEY LESSONS:

- **Materials reclamation can be achieved safely with minimal impact on cost or program**
- **Identify materials with reclamation value as early as possible**
- **Work with your demolition contractor and emphasise the reclamation of materials in preference to recycling.**

THE PROBLEM

As part of the development to provide a new Civic Centre, in Woolwich, London; Wates were responsible for removing the existing buildings. The majority of the buildings were concrete frame with London Stock Brick walls and traditional slate roofs.

The client and project team were keen to promote sustainability throughout the project works and as part of Wates' commitment to eliminating waste to landfill, they began to look for different options for managing the demolition program.

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THE SOLUTION

With the help of the demolition contractor, General Demolition, the team quickly developed a plan that could be delivered on time, to budget, which promoted sustainability principles and could be delivered in the tight urban location.

A pre-demolition inspection identified the main materials present within the existing buildings. This was used to develop a plan to reclaim those materials with value. The final plan involved the reclamation of roof slates and London stock bricks. Timber, metal, parquet flooring and PVC windows were segregated and sent for recycling at General Demolition's Environmental Resource Park. Concrete and general rubble were recycled and used on site.

THE ACTION

The demolition plan has been implemented and where materials could be re-used on site, they were not transported elsewhere.

The London stock bricks are separated and cleaned before being palletised, roof slates are carefully removed and those which are suitable for re-use are loaded into crates. The bricks and roof slates are then transported off site ready for sale through building reclamation yards.

Scrap metals and recyclable timbers were segregated and removed for recycling. Parquet flooring and PVC windows were carefully removed and transported off-site for either re-use or recycling.

The building frame was crushed on site and the recycled aggregates used to form a piling mat as part of the new-build works.

THE RESULTS

Implementing the plan has meant that a huge proportion of the materials present within the existing structures has been reused. In total,

- 100 pallets of London Stock Bricks reclaimed
- 10 pallets of roof slates reclaimed
- 5600 tonnes of concrete recycled into aggregate and used on site
- 350 tonnes of metal recycled off site

Unfortunately, not all of the bricks, concrete and other materials could be reclaimed, these were crushed and put to use on site.

By planning the demolition to maximise the value of the reclaimed materials, the process has been carried out at comparable price to traditional demolition. With careful planning, the resulting method has also been completed within program and safely.

FUTURE DEVELOPMENT

From the experience gained at Woolwich and other similar projects, Wates are developing internal best practice guidance to allow us to implement these measures on projects whenever practical. We are also talking to a number of the reclamation and demolition companies in our supply chain to understand the key factors which will allow us to move the demolition of buildings up the waste hierarchy of Reduce – Reuse – Recycle.

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