

Case study: Recycled content in construction

Opportunities in university buildings

Strathclyde Institute of Pharmacy and Biomedical Science
University of Strathclyde, Glasgow



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Measuring and improving the percentage of recycled content used on a construction project is a simple way of demonstrating sustainability and materials efficiency.

Institutions (including their developers and contractors) can differentiate themselves by quantifying project performance and adopting the top 5–10 product substitutions that deliver higher recycled content at no extra cost.

In November 2006, the Scottish Government requested that all public bodies in Scotland set a minimum 10% recycled content target in all new construction tenders over £1 million. The Scottish Further and Higher Education Funding Council (SFC) took this forward by issuing a 'Recycled Content in Construction' circular to institutions in December 2007 which described reporting requirements.

Benefits for institutions include:

- compliance with Scottish Government and SFC requirements;
- satisfying local planning and development authorities;
- demonstration of Corporate Social Responsibility; and
- contributing to environmental policy goals, including landfill diversion.

Project details

As part of the Environmental Association for Universities and Colleges (EAUC) Campus Sustainability Programme (CaSPr), the new Strathclyde Institute of Pharmacy and Biomedical Science has been assessed for recycled content using the WRAP Net Waste Tool.

The EAUC exists to support its members in delivering improved environmental and sustainable performance in universities and colleges, while CaSPr has provided targeted support to the Scottish Further and Higher Education Sector.

Estimates for recycled content
(as a % of total value of materials)

Base case:

15.95%

Achievable with top 5 'Quick Win' substitutions:

17.11%

Good practice at no extra project cost:

17.37%

The building

When complete, this new building for the University of Strathclyde will provide a pioneering, world-class centre for teaching and research, with a particular focus on drug discovery and development.

The 8400m², seven-storey concrete-framed building will provide accommodation for 900 users. It will be clad in a combination of trespapanelled rainscreen cladding with glazed curtain walling, and aluminium tiled rainscreen cladding with curtain walling strip windows to the main occupied levels, while a composite insulated aluminium panel will enclose the plant room areas.

The analysis

Competing mainstream brands commonly used in construction can have markedly different levels of recycled content. Substitution of one product for another can often result in considerable increases in the overall recycled content of a project.

Sheppard Robson, the architects for the project, carried out the analysis of the building using detailed design information.

The results of this analysis show that the top 5 competitive substitutions (or "Quick Wins") are:

Product type	% recycled content in product	
	Base case	Quick Win
Rubber floor finish	0%	40%
In-situ concrete frame	44%	48%
Reinforced in-situ concrete slab	32%	37%
Rain screen cladding	25%	50%
Plasterboard partitions	36%	84%

This analysis has demonstrated that higher levels of recycled content can be achieved at no extra cost through better informed selection of common building products, and that meeting a requirement such as 10% is readily achievable.

For more information, visit the procurement pages on our web site at:

www.wrap.org.uk/construction

Here you can access:

- a range of other case studies;
- procurement guidance and model wording;
- product details;
- the web-based Net Waste Tool for assessing recycled content and wastage; and
- guides to Quick Wins.

For information on the EAUC and CaSPR, go to:

www.eauc.org.uk

www.eauc.org.uk/campus_sustainability_programme

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**Waste & Resources
Action Programme**

The Old Academy
21 Horse Fair
Banbury, Oxon
OX16 0AH

Tel: 01295 819 900
Fax: 01295 819 911
E-mail: info@wrap.org.uk

Helpline freephone
0808 100 2040

www.wrap.org.uk/construction