

eauc case study

CLASSIFICATION:
Sustainable Construction
SUB CLASSIFICATION:
Operational

TITLE:

The EC0space Project at Lauder College

DATE:

October 2007



INSTITUTION PROFILE

FE

Over 10,000 full and part-time students

600 staff

City

Buildings across 3 sites

SUMMARY

Lauder College has built a unique and exemplary construction workshop (EC0space) and training centre for educating students in environmental best practice for the construction industry. With a BREEAM Excellent rating it provides a learning environment that integrates learners with additional needs with other learners in the new A.S.P.I.R.E. Centre (Additional Support Programme in Real Environments).

EAUC COMMENT

Apparently the first of its kind in Scotland, the outcomes from this project has lessons for us all. It has highlighted that many of the problems experienced have not been due to the sustainability specifications and that the benefits of embracing the challenges far outweigh ignoring them.

PROJECT PARTNERS

ESEP (ERDF Funding); Turner & Townsend, Project Managers; Muir Construction, Main Contractor; RMJM Architects; and Scottish Funding Council.

THE PROBLEM

The College lacked the space and facilities needed to deal with the increasing demand for new construction apprentices in Fife and wished to meet this demand by constructing a building with high sustainability credentials. In addition the facility for learners with additional support needs was not of good quality.

THE APPROACH

The College's outline brief made specific reference to sustainability requirements requesting locally sourced, natural material; that waste be minimised; the environmental impact of the project be established; all products used within the new building be assessed for the significance of their environmental impact before being purchased and that a BREEAM Assessment be carried out. The development encouraged reduced travel by re-using 75% of the excavation material on-site. It promoted biodiversity through the sedum roof and the use of FSC Douglas Fir timber and promoted healthy working environments through the use of environmentally friendly paints.

GOALS

The main goals were to:

- Develop an exciting modern facility to train future crafts people;
- Demonstrate best practice in waste reduction, re-use of materials, procurement of renewable resources and energy use minimisation;
- Provide up to date technologies, ICT learning tools;
- Incorporate sound sustainable and environmentally friendly measures; and
- Demonstrate value for money over the life cycle of the building, using sustainable and environmental measures.

OBSTACLES AND SOLUTIONS

- Difficult to obtain competent quotes from sub-contractors
- Contractors and sub-contractors were unfamiliar with sustainable construction technology and design
- Difficult to price unfamiliar materials
- Difficult to source local materials
- Maintain integrity of original project specification without increasing costs
- Main contractor worked with known suppliers to assist with compliance on sustainable features.
- Developed partnership approach, contractors embraced this willingly. Engaged modern apprentices and other students and staff in the project such as the raising of the frame.
- No solution found – building was much more expensive than many suppliers/sub-contractors anticipated.
- 95% of suppliers were within a 50-mile radius of the College
- Shared financial savings with partners

PERFORMANCE AND RESULTS

The building includes a number of different types of monitoring devices including a Building Management System which will be used to monitor the behaviour of the new sustainable building in relation to other buildings and sites. The building has demonstration points incorporated within the design, allowing parts of the infrastructure and the mechanical and electrical functions to be observed, which is particularly useful for the teaching of construction and related subjects. The College achieved a BREEAM Excellent award.

Feedback from staff and students has been positive. It has created a pleasurable environment in which to teach and learn.

LESSONS LEARNT

The exercise has been hugely beneficial to the College, and the sector. The difficulties carefully managed and overcome in the early days of the project were straightforward compared to later “routine” issues. Mechanical and electrical installations played a very significant role in the development of the project and issues not anticipated to be problematic caused cost over-runs, project over-runs and project management challenges.

Several months after the completion date, the snagging of the building continues. Few if any of the issues relate to sustainable resources, all relate to general construction issues. In other words, “greenness” was not the biggest challenge!

FURTHER INFORMATION

Janet McCauslin, Assistant Principal, Lauder College

jmccauslin@lauder.ac.uk

Lauder College - www.lauder.ac.uk

ECOSpace website - www.lauder.ac.uk/homepage/ecospace.cfm/area-710

RMJM, Architects - www.rmjm.com/index_flash.php

Scottish Funding Council - www.sfc.ac.uk

Scottish Executive European Structural Fund

www.scotland.gov.uk/Topics/Business-Industry/support/17404/8392

Turner & Townsend, Project Managers - www.turnerandtowntsend.com

Muir Construction (part of Muir Group) (main contractor) - www.muirhomes.co.uk



**The Environmental and Sustainability
Champion within Further and Higher
Education in the United Kingdom.**

The EAUC provides training, advice and support to our members as well as providing a forum for best practice in the sector.

To join phone **01242 714321**

**www.eauc.org.uk
info@eauc.org.uk**

Disclaimer:

Although every reasonable effort has been made to ensure that the information contained in this document is accurate the EAUC, the contributing institutions, the funding and the endorsing bodies do not warrant its accuracy and disclaims any liability for its use.