

ABBERTON VISITOR CENTRE

Layer de hayes, Colchester,
Essex

SERVICES: MECHANICAL & ELECTRICAL ENGINEERING DESIGN

CLIENT: ESSEX WILDLIFE TRUST / NORTHUMBRIA WATER

PROJECT DESCRIPTION:

PrestonBARBER worked closely with award winning 'Green' architects, EcoArc, to provide a new zero carbon Visitor and Education Centre for Essex Wildlife Trust. The centre is being funded by Northumbria Water as a replacement to the existing visitor centre.

The super insulated building is being provided with an air source heat pump serving underfloor heating, a wood burning stove to the main circulation / exhibition area and solar thermal panels. Heat recovery ventilation units are to be installed to the Education Room and the office. We undertook detailed daylighting analysis to model the daylight factors that would be achieved throughout the day / year to the central exhibition space and offices. As a re-



sult of this modelling exercise, the building was positioned to achieve optimum daylighting - and obviously reduce the reliance on artificial lighting. The original scheme included a Proven Energy wind turbine and PV panels which were sized in order to offset the estimated annual consumption of the building (using Part L2 SBEM calculation software). The complexity of the building shape and the nature of the finishes presented significant problems that had to be taken into account when designing the services for this building. In addition, the clients requested that the services were 'as simple as possible' to minimise user interface during everyday operations and for future maintenance.

The building is due to be completed in July 2011.

SERVICES PROVIDED:

Mechanical

- Air Source Heat Pumps
- Underfloor heating
- Domestic Water Services
- Natural Ventilation

Electrical

- General & Decorative Lighting
- Small Power Installation
- Daylight modelling
- Fire Alarms & IT Installation

Sustainability & Renewables

- PV & Solar Thermal Panels
- Wind Turbine (Feasibility only)
- Air Source heating pump
- Rain water recycling

COMMUNITY SECTOR VISITOR CENTRE

TYPE: NEW BUILD

VALUE: £1.0M

DESIGN TEAM:

Architect -

EcoArc, Cumbria

Structural Engineer -

Hannah Reed, Cambridge

Project Manager -

Hannah Reed, Cambridge

Main Contractor -

T J Evers



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LOW CARBONCONSULTANTS



Competent Person Scheme
Building CO2 emissions rate calculation - Hevacomp
Certificate Number ERC3057