



Eden Local Agenda 21 Cumbria Green Build Fortnight 2007

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Cumbria Rural Enterprise Agency

Presentations, seminars and guided tour. CREA HQ, Redhills, Penrith



The seminar involved presentations by the environmental team at CREA, who explained that it chose to construct a sustainable building for reasons of environmental protection, common sense, economics corporate responsibility and for the future. The presentation covered the generation of renewable power from photovoltaic cells, solar water heating, ground source heat pumps, passive ventilation and the use of sustainable materials.

Cox and Allan from Kendal were awarded a Master Builders regional prize for the CREA building.

The ground source heat pump was supplied and installed by Geowarmth



Solar photovoltaic panels supplied and installed by Sundog

Daniel Thompson, of **Geowarmth**, explained how the ground source heat pump extracts heat from the ground to provide all of the building's space heating demand (see separate entry for Geowarmth).

Andy Mason, of **Sundog Energy Ltd**, who designed and installed the photovoltaic array to supply solar electricity to the building. Andy explained the basic workings of the system and also gave an introduction to small wind turbines which generate electricity and, to solar thermal panels which provide heated water (see separate listing for Sundog Energy Ltd)

The presentations showed how much can be achieved if the decision is made to 'go green' and how perceived problems can be readily overcome. Once installed the benefits are clear and long term.

CREA Building Principal Sustainability Features

- Well insulated office building which takes account of warm & cold weather.
- Sustainable building materials



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- Photovoltaic panels producing electricity.
- Low energy lighting and maximum use of natural light.
- Solar Thermal Panels to heat water
- Ground source heat pumps providing 'free' under floor heating
- Wind Catcher technology, to provide "power free" air conditioning.

While at the CREA building, the assembled audience were also very fortunate to hear John Mills of Penrith Coop give a presentation on the Penrith store renovations. These include the installation of photovoltaic panels and wind turbines to provide electricity, passive solar shading blinds and a carpet made out of recycled plastic bottles.

Contact Details:

- **Michael Hamer**, Cumbria Rural Enterprise Agency, 01768 891555, michael@crea.co.uk, www.crea.co.uk.
- Daniel Thompson, Geowarmth Ltd, 016974 76370,
- Penrith Coop John Mills 01768 860761
- Countryside Consultants (Architects & Planners) Ltd, Alston, Cumbria www.countrysideconsultants.co.uk – building design
- Cox & Allen, Kendal, Cumbria; www.coxandallen-builders.com – building contractor
- Floorwarming (UK) Ltd, Carlisle, Cumbria www.floorwarming.co.uk – underfloor heating
- Geowarmth, Carlisle, Cumbria www.geowarmth.co.uk – ground source heat pump (see separate entry for Geowarmth)
- Grisedale Solar, Congleton, Cheshire www.apollosolar.co.uk – solar thermal panel
- Hughes Beatty, Penrith, Cumbria www.hughesbeatty.com - plumbing
- John Bodger Chartered Architect Ltd, Penrith, Cumbria – renewable energy consultancy
- Michael Haymes Partnership Ltd, Carlisle, Cumbria – quantity surveyors
- Monodraught Ltd, High Wycombe, Buckinghamshire www.sunpipe.co.uk – windcatchers & sunpipes
- Sundog Energy Ltd, Penrith, Cumbria www.sundog-energy.co.uk – photovoltaic panels (see separate entry for Sundog Energy Ltd)



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Forthcoming CREA developments

The adjoining food technology centre is currently under construction, and will make best use of passive technologies such as light pipes and renewable technologies including air source heat pumps, and the use of grey water for toilets etc. In early 2008, the centre will allow local food producers to rent short term production line facilities, reducing the need to export food from Cumbria for processing and packaging, and so reducing food miles.



Other CREA Services



CREA's Environmental Project delivers an Environmental Awards scheme, the Cumbria Business Environment Network (CBEN), and offers free environmental advice to businesses, under the Environmental Business Support Service. It helps businesses save money, protect the environment, and raise their public image (Corporate Responsibility). In addition it has high quality meeting rooms available for rent.