URBAN ECOLOGY: PEOPLE, PLACE, PROCESS

CONFERENCE PROCEEDINGS

ARCHITECTURE AND SUSTAINABILITY IN NEW DANISH SOCIAL HOUSING – FROM THE EXTRAORDINARY TO THE ORDINARY

Presenter: Rie Oehlenschlaeger

Organisation: Danish Centre for Urban Ecology

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THE LIGHTHOUSE ON SUSTAINABILITY

Architecture and Sustainability in New Danish Social Housing – From the Extraordinary to the Ordinary

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Overview
In order to improve sustainability in the built environment it is paramount that we focus on the professional building industry. Many sustainable buildings are currently built within the private sector and as such are viewed as 'special' projects.

An initiative to improve the environmental quality of social housing in Aarhus, Denmark, resulted in The Danish Centre for Urban Ecology being commissioned as advisors for the housing organization, Ringgaarden, together with engineers Carl Bro A/S, to develop an international architectural competition. Sustainability was the focus and the brief was to create 130 housing units in Lystrup, a suburb of Aarhus. The project was developed under the Sustainable Housing in Europe (SHE) initiative comprising members from Portugal, France, Italy, Greece and Denmark.

The partners in the Danish project defined a set of architectural and environmental targets for the housing scheme, with reference to the 'Action Plan for a Sustainable Building Sector'. This underlined the criteria on which those entering the competition would be judged, while evaluating qualities for the best outcome. The Danish standard of BR95 (Building Regulation 1995) is 62kWh/m2/year for heating and ventilation in relation to two-storey housing. In the competition, the energy target for heating and ventilation for group A was 15kWh/m2/year, or of a 'passive house standard'.

This target was reached by a majority of the competing firms. The environmental profile of the entries were evaluated by the Danish Building Research Institute, the engineer firm Carl Bro A/S and The Danish Centre for Urban Ecology with the evaluation tool BEAT 2003, plus a thorough eco-index calculation and an holistic evaluation.

The results of the competition demonstrated a wide range of initiatives to minimize the environmental impact of construction of the housing scheme. Considerations included a choice of building materials and construction details, while major emphasis was placed on heating, ventilation and insulation principles. The winning designs were by the architectural firm Schmidt, Hammer and Lassen and the German firm Herzog and Partner from Münich. As a result 130 housing sustainable housing units will be built in 2005, this is the first passive social housing scheme in Denmark.

The challenge was offered to some of the best architects in Europe – and the results proved that, when pushed, the building industry is able to embark on environmentally friendly construction more easily than is often thought, and much more than what is put into practice.

For further information, please go to:
www.dcue.dk
www.she.coop/english/index_eng.asp
www.byggepanel.dk

Photography: Renzo Mazzolini

Organisation Profile: The Danish Centre for Urban Ecology
The Danish Centre for Urban Ecology is a national body that gathers and analyses information on urban ecology. The Centre was founded by the Ministry of Housing and Urban Affairs, the Ministry of the Environment and Energy and the Municipality of Aarhus in 1997.

The Centre promotes an interdisciplinary approach and employs professional sustainability consultants from the following areas:
- Urban nature and planning
- Building
- Consumption Patterns

The Danish Centre for Urban Ecology has been involved in various projects including:
- 'Build with Concern for Sustainability': a series of programmes for Danish television
- 'High tech – Low tech': a conference and exhibition relating to sustainable building methods and materials, for the Ministry on Housing and Urban Affairs
- 'Ecology in Schools': a campaign to promote sustainability in the public school system.

The Centre publishes a quarterly journal 'Danish Urban Ecology', which is supplemented by an electronic newsletter six times a year. It also runs several internet databases relating to sustainability issues and developments in urban design:

For more information, please go to:
www.danskbyokologi.dk
www.lokalagenda21.dk

Presenter Profile: Rie Oehlenschlaeger
Rie Oehlenschlaeger graduated with a degree in building architecture, from the Aarhus School of Architecture in 1976. From 1976 to 1987, she was a practising project architect. Oehlenschlaeger then went on to become assistant lecturer at Aarhus School of Architecture in 1987, where she taught sustainable architecture and aesthetics until 1997.

Between 1993 and 2003, she and a colleague ran a private architectural firm, where they focused on sustainable solutions within the Danish building tradition. Since 1997, Oehlenschlaeger has acted as a consultant on architecture and sustainability for The Danish Centre for Urban Ecology. She is a member of the Danish Building Panel and the Federation of Danish Architects. Oehlenschlaeger is also responsible for developing the Danish database on sustainability in buildings: www.danskbyokologi.dk

DESIGN: WWW.SKRATCHDESIGN.CO.UK

Sust.: The Lighthouse on Sustainability aims to raise awareness of sustainable design in architecture. It was devised by The Lighthouse: Scotland's Centre for Architecture, Design and the City on behalf of the Scottish Executive and in support of the aims of the Policy on Architecture. It is funded by the Sustainable Action Fund.

www.sust.org

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THE SCOTTISH EXECUTIVE'S POLICY ON
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