Award Category: **Most Sustainable Construction**

Project: **Woodside Leisure Centre, Watford**

Client: **Watford Borough Council**

Architect: **Studio E Architects**

The Watford Woodside Leisure Centre project was completed in March 2008 and involved the regeneration and extension of an existing 1970's sports centre. It demonstrates how low-energy design can be incorporated into refurbishment projects while achieving low energy aspirations. The decision to 'regenerate' rather than demolish the existing centre enabled the 'recycling' of the existing building's steel frame, concrete substructure and external envelope, allowing the construction of a larger and more sustainable facility.

The design principles were lean and green: energy demand is reduced through passive and best-practice measures before energy is provided from low/zero carbon sources. For example a heat transfer system recycles heat from used shower water and pool water backwash, thereby significantly reducing hot water demand. Where possible the potential of the sun and the earth have been harvested to provide as much as possible of the remaining energy needs; 42% of the overall annual heating demand is extracted from the ground, via a ground source heat pump, while rainwater harvesting has reduced the WC water demand by 60%.

Overall, resource efficiency at Watford has reduced carbon emissions by at least 270 tonnes p.a. and the building is expected to outperform building regulations by at least 35%, giving lasting energy and cost savings.

Judges comments:

"Traditionally leisure centres are energy-intensive facilities because of the energy needed to regulate pool temperature and air condition fitness suites. Woodside is a rare low-energy example of a leisure centre, proving that it is possible to re-think design in a way that is greener without sacrificing user comfort."