



Università di  
Ferrara



Facoltà di  
Architettura



**FASSA  
BORTOLO**  
QUALITÀ PER L'EDILIZIA

## Premio Internazionale Architettura Sostenibile quinta edizione 2008

### *International Prize for Sustainable Architecture 2008 fifth edition*

#### **SEZIONE OPERE REALIZZATE BUILT PROJECTS SECTION**

#### **Vincitore ex aequo Equal Winner**

Heelis, nuovi uffici centrali della National Trust  
*Heelis, The New Central Office for the National Trust*

#### **Progettista Designer**

Feilden Clegg Bradley Studios

#### **Committente Client**

The National Trust/Kier Ventures

#### **Localizzazione Location**

Swindon (Inghilterra)  
*Swindon (UK)*

#### **Realizzazione Date**

2005

#### **Segreteria del Premio**

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## Practice profile

UK practice Feilden Clegg Bradley Studios has an international reputation for design quality, environmental expertise and architectural innovation. Established in 1978, it has grown steadily to its present strength of 25 partners and 109 staff, with offices in Bath and London.

Design quality and the strong social and environmental principles that inform our work were recognised when we were selected as Architect of the Year in both the 2005 Building Awards and the 2004 Building Design Awards.

We were early pioneers in the area of environmental design and we continue to produce solutions that are consistently at the forefront of current thinking.

We were the first architects to receive a Queen's Award for Sustainable Development (2003) and our reputation for environmental design was further recognised with both the Civic Trust's Sustainability Award and RIBA Sustainability Award in 2006 and the Architects' Journal Sustainability Award in both 2006 and 2005.

The project team behind Heelis, the New Central Office for the National Trust was led by Jo Wright (Studio Leader), Peter Clegg (Senior Partner) and Matt Vaudin (Architect).

## Credit

Construction value: £13.2 million  
Commissioned: October 2002  
Completion: June 2005  
Client: The National Trust/Kier Ventures  
Services: Full architectural services  
Structural Engineer: Adams Kara Taylor, UK  
Project Manager: Buro Four Project Services, UK  
Quantity Surveyor: Davis Langdon, UK  
Landscape consultants: Grant Associates, UK  
M&E Engineer: Max Fordham LLP, UK  
Façade Consultant: Montresor Partnership, UK

## General and technical report

Heelis is an exemplar office scheme which is setting new standards in the UK for sustainable workplaces. It has won numerous awards for its innovation and ability to combine a strong environmental agenda with design quality and user comfort.

Sustainability was central to the National Trust's aspirations for their new central office in Swindon. The brief demanded a building to institutional funding standards and budget, with additional funding for innovative measures where a pay back period of not more than 20 years could be demonstrated. Careful management of design and construction resulted in a BREEAM 'Excellent' rating. The building demonstrates that significant improvements in the sustainability of office buildings can be achieved for limited additional cost.

The design team collaborated to develop a matrix setting out the options for improving sustainability by tabulating energy savings and payback periods; this facilitated a simple decision making process by the project board and proved so successful a tool that it has since been implemented throughout the practice.

The form of the building is generated by the desire to provide excellent natural light and ventilation throughout the plan whilst maximising floor plates and connectivity. The roof, in effect the principle elevation, comprises saw tooth pitches oriented due north-south, facilitating daylight and solar collection via roof mounted photovoltaic panels providing 35% (10) of the buildings energy requirement.

The elevations are designed to minimise solar gain, with carefully oriented glazing, cantilevered brick fins and aluminium shading. Rooflights are shaded by the PVs which are cantilevered beyond the ridgeline and the ventilation 'snouts' which eliminate east and west light.

Internally the environment is naturally lit and ventilated: An average daylight factor of 5% at ground floor and 10% at first floor reduces the need to use artificial lighting. When required, the fully dimmable system is controlled via daylight and movement sensors. Natural ventilation is introduced via vents in the elevations and extracts through roof vents: The 'snouts' enhance the stack effect and allow wind from any direction to boost the ventilation. Heat loss through vents in winter would significantly increase overall energy use and a mechanical ventilation system with heat recovery ensures air quality whilst minimising energy use.

The exposed concrete infill to the steel structure provides free cooling and together with night cooling via the BMS controlled external vents eliminates the need for cooling to most areas.

Materials were sourced to ensure sustainability in production, use and ultimate disposal. UK manufactured bricks are laid in lime mortar. Locally cast aluminium (92% recycled) secures the opening vents required for night cooling. Timber from National Trust estates is used in cladding to external courtyards and within the atrium. Wool from Herdwick sheep raised on National Trust farms is used in the carpet, helping to enhance the value of a product hit by the recent foot and mouth crisis. Careful elimination of VOCs has resulted in excellent air quality. The location was selected for its excellent public transport connections: A green travel plan limits the use of the on site car park to car sharers.

We have undertaken a comprehensive post-occupancy evaluation of the building, funded by the awards money we received for the RIBA Sustainability Award, and this has given very positive results.

















