

# Going for gold

The winners of the first ever Greenbuild Awards were announced in May at a ceremony at Manchester's Museum of Science and Industry. Here, we look at all the winning projects and Rebecca Waller-Davies gets an insight into one of the success stories

*The One Show's* Lucy Siegle revealed the winning entries in categories ranging from domestic newbuild to behavioural change. The judges for the awards included Liz Reason (Green Gauge Trust), Kerry Mashford (Technology Strategy Board), Paul Ruysssevelt (Ruysssevelt Consulting) and a team from the University of Salford. All the finalists were on display at Greenbuild Expo at Manchester Central.

## GREENBUILD AWARDS 2013

We will be accepting entries for the 2013 awards from 1st August to 31st December. Please visit [greenbuildawards.co.uk](http://greenbuildawards.co.uk) to download the entry form



# THE WINNERS ARE



## DOMESTIC NEWBUILD WINNER

**Greenwatt Way, PRP Architects & SSE**

This Code level 6 development is a prototype to gain a better understanding of behavioural change in residents' energy use in low-energy housing. It will be monitored in occupation over two years and offers a model for affordable sustainable living, which could be rolled out at a larger scale. The site – which was originally the car park of a 1960s Southern Electric depot – is a research project, but is first and foremost a place to live that has been designed to meet the needs and aspirations of the residents. An energy centre to test different types of renewable energy generation includes air and ground source heat pumps, a biomass boiler, solar thermal panels and solar photovoltaic tiles.

**The judges said:** They were impressed by the learning gained in the project and the commitment to sharing this through highly accessible, plain English reports. [prparchitects.co.uk](http://prparchitects.co.uk)

## DOMESTIC RETROFIT WINNER



**Passfield Drive, Bere Architects**  
This low-energy refurb of a social housing residence was funded by the Technology Strategy Board's Retrofit for the Future programme and employed a whole house retrofit solution to Passivhaus EnerPHit levels of performance.

The Passivhaus Planning Package (PHPP) was used to reveal the causes of the existing building's very high energy demand, and significant reductions of 95% were made by using high levels of external insulation, triple-glazed Passivhaus windows and heat recovery ventilation providing fresh air whilst capturing waste heat from exhaust air.

**The judges said:** This is a good example of the Retrofit for the Future programme showing what can be achieved in the refurbishment of a 1960s property aiming towards an 80% cut in carbon emissions. [bere.co.uk](http://bere.co.uk)

## LEISURE BUILDINGS WINNER



**Mayville Community Centre, Bere Architects**

This Passivhaus retrofit project was designed to use over 90% less energy than before the renovation, halting the drain of precious financial resources to large energy bills. The fabric-first approach to energy reduction involved wrapping the existing brick walls in external insulation, installing triple-glazed windows, a low-energy heat recovery ventilation unit and a low-temperature supplementary radiator heating system supplied by a ground source heat pump. The project shows how this common building typology, a medium-sized Victorian solid masonry building, can be transformed to achieve energy consumption reductions to exceed current UK building



PRP Architects won for its Greenwatt Way project with SSE



Lucy Siegle and Bere Architects

regulation standards and even the UK's 2019 targets for non-domestic buildings demonstrating how refurbishment rather than demolition is a viable and replicable solution.

**The judges said:** They were impressed with this considerate refurbishment of an existing community hall in the context of local authority and other constraints, making it far more comfortable for its regular users. [bere.co.uk](http://bere.co.uk)

## EDUCATION BUILDINGS NEWBUILD WINNER

**The Green Student Village, GB Building Solutions**

This student village at the University of Bradford achieved the highest rated BREEAM Outstanding building in the world. A fabric first design approach was key to producing a truly sustainable scheme. Passive technologies cut energy use in heating and cooling. Mechanical heat ventilation recovery systems maintain air temperature, while the continuous airtight membrane and highlevel insulation reduce heat loss. Windows allow natural light without excess solar heat gain. Solar thermal units pre heat hot water, supplemented by a CHP plant. Every building in the scheme has an EPC rating of A, with typical emission rates of around 21.62kgCO<sub>2</sub>/m<sup>2</sup>.

**The judges said:** They were impressed by commitment to wider sustainability objectives delivering a high quality development that engages effectively with the student residents. [gb-building.co.uk](http://gb-building.co.uk)

## EDUCATION BUILDINGS RETROFIT WINNER

**Kay House Duryard, Exeter University**

This building was originally a



dining and social block that served the surrounding halls of residence and it was decided that the building should be refurbished to provide a base for all types of music and learning activities. The 1950s building had an exposed concrete frame with masonry infill, single-glazed windows and uninsulated flat roofs. All of the services had either already failed or were very inefficient and at the end of their days. An adaptable energy-efficient building was achieved by overcladding and re-glazing the external envelope, being creative with the internal layout.

**The judges said:** An inventive design which provides for a variety of uses and brings a 1950s building up to modern best practice. [exeter.ac.uk](http://exeter.ac.uk)

## WORKPLACE BUILDINGS NEWBUILD



**The Pool Innovation Centre, Aedas**

This BREEAM Excellent, low-energy building provides flexible office space for new businesses in the IT sector for the Combined University of Cornwall. The design of the building focused on achieving high standards of internal environmental quality and comfort utilising natural



GB Building Solutions won for The Green Student Village



The team from Exeter University celebrates winning the prize for education buildings retrofit





Aedas won for its newbuild workplace project in Cornwall



Cavendish Engineers' won for its work with Ofgem



Carillion FM picked up the prize for workplace management

ventilation and daylight. Local materials such as timber and slate feature in this building and renewable energy technologies such as ground source heat pumps, solar thermal collectors and solar photovoltaic panels are incorporated. Additional offsite renewables are planned which will make the building carbon neutral.

**The judges said:** A sustainable new building which will help support the development of the local economy whilst emitting very little carbon dioxide and reporting its performance via the online database CarbonBuzz.

• aedas.com

### WORKPLACE BUILDINGS RETROFIT



#### 9 Millbank, Cavendish Engineers

This striking Grade II heritage listed building is home to approximately 850 Ofgem employees. Since 2000, Cavendish Engineers has provided M&E operational maintenance and engineering consultancy and between 2004 and 2011 the building has successfully reduced its energy consumption by 48%.

In addition to the continuous improvement in energy and facilities management, the building has incorporated over 57 different energy reduction strategies in the last ten years (37 of these include new plant technologies.) For example, PIR motion detectors for light switching and more recently the conference rooms' lighting has been replaced with LEDs. In 2002 it was the first government building to install a combined heat and power (CHP) unit and in 2008 it installed two voltage power optimisers.

**The judges said:** This is a creditable example of what can be achieved in public sector buildings with the persistent application of energy management practices. • cavendishengineers.net

### WORKPLACE BUILDINGS MANAGEMENT



#### Three Piccadilly Place, Carillion FM

This mixed-use and multi-tenanted building was completed in 2009 with a BREEAM Excellent certificate, which the team has been improving on ever since. For the last two years an environmental business adviser has worked on the building, ensuring that the occupants are using it as efficiently as possible. Early in 2011 a BREEAM In Use assessment achieved a Good certificate and this was increased to Very Good by the end of the year, following a programme of improvements. These included water use reduction devices and, more significantly, a rainwater harvesting system from a roof section.

**The judges said:** A team that has never taken its eye off the ball by applying an active management system to achieve year-on-year performance improvements.

• piccadilly-mcr.co.uk

### BEHAVIOURAL CHANGE WINNER

#### University of Bradford

Recognising that sustainability is about people and how they use buildings, the University of Bradford developed the EMU project (Environmental Move for U). Ahead of a move to a new BREEAM Excellent School of

Health building, it wanted to maximise engagement in carbon management and to prepare 150 staff and 3,000 students for a move to a sustainable building, ensuring they understood the sustainable use of the building. The university recognised a need for an engagement project within the old building, which would provide the foundation for success in the new building. The outcome has resulted in staff/students being engaged, informed and educated in the successful and sustainable use of new building whilst achieving unprecedented energy savings. Eliminating seasonal variances and other anomalies demonstrated an average saving of 33% with peak savings reaching 43%. This provides hard evidence of what a behaviour change programme can achieve.

**The judges said:** Preparing 3,000 students and 150 staff for a move to a low-carbon building has maximised energy savings and illustrated what a comprehensive behavioural change programme can achieve.

• bradford.ac.uk

### BREAKTHROUGH WINNER

#### Frankland Tree Services

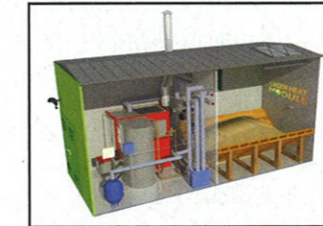
This entry involves an annexe to a residential house which is used as an office for Frankland Tree Services, based in South Manchester. The construction of the building used reclaimed Cheshire Brick and reclaimed Welsh Slate, meaning that it fits with the local rural architecture. The key difference is the timber and its provenance: the entire wood content of the structure and most of its furniture is from amenity trees, neither grown nor felled for their timber. Not only is the wood from local trees but most of its provenance can be traced back to a particular position in a particular garden, park, school or pavement.

**The judges said:** An

innovative method of sustainable materials sourcing for its own HQ made FTS a clear winner, illustrating the benefits of a local approach.

• ftstrees.co.uk

### NEW RETROFIT PRODUCT



### WINNER

#### Green Heat Module, Wood Energy

Launched at the 2011 Greenbuild Expo, the Green Heat Module is a retrofit biomass heating product designed and delivered by wood heating specialists Wood Energy. The product is specifically for application on UK commercial buildings – delivering significant quantities of low carbon heat with the minimum of fuss. Everything needed is included in the automated module so that once the team arrives on site, it can be hooked up to the existing heating distribution system. The product is RHI eligible and can reduce a buildings carbon emissions by between 50% to 100% (excluding electricity), depending on what proportion of the heating load is being met by the carbon neutral fuel.

#### The Salford University

**judges said:** The product had the potential to deliver energy savings in an innovative way. The pod concept has been shown to be effective in a growing number of cases and this extends these benefits through the application of biomass

• woodenergy.com

**The judges also wanted to congratulate Knauf for its Thermoshell product and Moores for its ReAction kitchen. Both entries were highly commended.**



Bradford University won for its behavioural change project



Frankland Tree Services had an innovative approach to sourcing construction materials for its HQ



The best retrofit product was Wood Energy's Green Heat Module, chosen by University of Salford