



**Press Release**  
**September 25<sup>th</sup> 2009**

## **Passivent Commercial Provides Passive Carbon Reduction**

***The company has breathed a new, sustainable life into one of Sheffield's landmark £4.3m office buildings.***

Passivent Commercial, one of the UK's leading suppliers of natural ventilation solutions, has provided its systems to ensure a fresh yet quiet internal environment in the refurbishment of Sorby House, a 1960s four-storey office block designed to provide a landmark building to act as a catalyst for the 10 year regeneration programme in Burngreave, Sheffield.

Bond Bryan Architects comment that the building, refurbished by Kier Sheffield for Burngreave New Deal for Communities Partnership (BNDfC), optimises sustainability, taking "an energy hungry office into a modern economically sustainable and environmentally sensible community facility" largely due to the Passivent ventilation, fully glazed twin wall façade and biomass solid fuel heating system.

Passivent Aircool window ventilation inlets strategically positioned in the glazed façade draw fresh air through the 38,000 sq ft of office spaces using natural air pressure variations, whilst their integral acoustic attenuation modulates potentially distracting urban noise from outside penetrating within. Some 25 suspended ceiling louvres further utilise natural air movement principles- of convection- to dissipate the fresh air throughout the building. The twin walls of the façade glazing and internal vertical ducts create a passive stack (or chimney) whereby the 'used' internal warm air rises, and is exhausted via four Passivent Airstract high capacity terminals on the roof and 10 terminals above the twin wall facade.



The Passivent system functions predominantly via natural air movement, requiring electricity only to attenuate the louvres when they move. It operates 24/7, allowing excess heat build up within during the



day to be extracted at night, in effect providing free night cooling. Natural ventilation systems have been shown to reduce energy consumption over air conditioned buildings by up to 50%, yield 15% savings on capital costs and 75% savings on maintenance costs, and can eliminate the need for a separate plant room. Additionally, Passivent natural ventilation gives a significant reduction in CO<sub>2</sub> emissions. Research also shows that occupants prefer naturally ventilated buildings, with fewer incidents of sick building syndrome, and improved performance.

Stephen Mitchell, Associate Director at Bond Bryan Architects commented, "The building has been transformed from an energy hungry, un-insulated office into a modern economically sustainable and environmentally sensible community facility. Cost benefit analysis proved that air conditioning could be installed for a similar capital cost to the natural passive ventilation system used, but the ongoing running and maintenance costs were substantially higher and not economically sustainable in the longer term."

Passivent is part of the Building Product Design Group and is the UK's leading designer and supplier of natural ventilation systems for both domestic and commercial applications. The company is a founder member of the NatVent EC-EU-funded project co-ordinated by the Building Research establishment to develop practical natural ventilation solutions for the commercial sector. It has also contributed to the BISRIA Guide BG2/2005 Wind Driven Natural Ventilation Systems, as well as being a member of the DfES steering committee on natural ventilation guidance for schools, Building Bulletin 101.

**Ends**

**For further information:**

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