



*BGC-003*  
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### **Breath of fresh air for respiratory centre**

Building controls specialist, BG Controls has installed a state-of-the-art Building Management System (BMS) at BreathingSpace – the UK's pioneering respiratory centre.

Located in Rotherham, the £12 million rehabilitation complex aims to improve the quality of life for more than 2,000 people with chronic obstructive pulmonary disease each year, as well as their families and carers.

Incorporated into the design of the award-winning building are a number of sustainable principles, including thermal mass, lime plaster, geothermal heating, solar hot water as well as natural ventilation and cooling systems, all of which were designed and developed by Rotherham Council's construction design sections and Cambridge University.

BG Controls installed a bespoke BMS for the unique building, which combines natural ventilation for cooling and a ground source for heating.

The centre has been constructed on a sloping site, which has created a large undercroft that has been incorporated into the project design. This is fundamental to the operation of natural air handling within the building.

To facilitate the use of fresh air ventilation, BG installed a Trend IQ BMS, which modulates low-level dampers in the undercroft. These units draw air from the outside of the building and store it in a plenum vessel to cool. When required, floor dampers are then opened to allow the cooled air out into the building, thus enabling the building breathe.

The BMS also controls an eco-friendly geothermal heating system, using two heat pumps. These draw out heat from the earth and convert it into heat for the building, which is distributed throughout the building via under floor heating pipes.

For local control of the facilities, BG engineers installed a touch screen in the plant room to enable on-site staff to make any changes to the parameters. A PC, complete with a Graphical User Interface has been installed on-site to allow the users to review the operation and performance of the building.

In addition, a telephone line connected to the BMS allows BG Controls' technicians to remotely monitor the building's operation from its head office bureau facility. Engineers can then review systems alarms and proactively diagnose any operational faults.

Overall, the absence of electro-mechanical air-conditioning equipment has enabled lower running costs and the best possible environment for occupants.

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**Reader enquiries:** Please contact Duncan Biggins at BG Controls on 01909 517 460, email [enq@bgcontrols.co.uk](mailto:enq@bgcontrols.co.uk) or visit [www.bgcontrols.co.uk](http://www.bgcontrols.co.uk).

**Note to editors:** Rotherham-based BG Controls has been controlling the environments of offices, cinemas, factories and public buildings using the latest available building controls solutions since 1995. BG Controls operate as an 'Open Systems House' supporting and operating different systems for different project solutions. These include building and energy management systems, remote monitoring, electrical installation, technical support and maintenance.

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