

Schneider Electric improves energy efficiency for Birmingham City Council with Andover Continuum Building Management System

BCC take control with new intelligent BMS from Schneider Electric



PROJECT AT A GLANCE

Project Type

Buildings

Location

1 Lancaster Circus, Birmingham

Number of Buildings

1

Applications

• Andover Continuum BMS to control the building's HVAC systems; Schneider Electric distribution boards and LV panels

CUSTOMER BENEFITS

- The new BMS allows the operating manager full control of the HVAC systems on every storey of the building
- Open plan spaces are cooled by over 70 chilled beams per floor, which are controlled in zones by the Continuum system while the meeting rooms are cooled and heated by Fan Coil Units (FCUs), each one individually controlled by the BMS
- Schneider Electric's web based Energy Remote Monitoring (ERM) system is installed across a number of sites in the BCC estate providing an aM&T system which provides the client with meter data and readings on a day + 1 basis.
- Less cabling, less hardware and reduced installation costs, leading to lower capital expenditure and reduced training, maintenance, staffing requirements and personnel costs cut operational expenditure.
- Schneider Electric provided full training to the team of Urban Design operators while installing the BMS
- The refit was carried out while the building was still occupied



Schneider Electric has installed a new, intelligent building management system (BMS) for Birmingham City Council's (BCC) 1 Lancaster Circus property. Located in central Birmingham, the five storey office block houses around 2,000 employees at any one time, working across various council services including Urban Design, which is responsible for managing the BMS. BCC's Urban Design, controls some 200 of the council's properties across the city, from schools and leisure facilities to social services centres all utilising the Continuum BMS or early derivatives.

Schneider Electric, in conjunction with electrical contractors, Dodd Group, completed a £550k total system overhaul, installing a brand new, energy-efficient, Continuum BMS to control the building's HVAC systems. 1 Lancaster Circus had been suffering from 'sick building' syndrome on both a cosmetic and functional level. The previous BMS had been in place for 25 years and had been extensively reworked and added to with various different pieces of technology over time. The building needed an updated, more sustainable system, in line with BCC's objectives.

[Building application]

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Chris Bennett,
of Schneider Electric

Unlike the old system, the new BMS allows the operating manager full control of the HVAC systems on every storey of the building. There are centralised plantrooms on the roof and in the basement areas containing the main heating, cooling and ventilation plant. The main heating plant is connected to a district heating system that provides heat for a number of buildings (including the Children’s Hospital) in the local vicinity. Each floor consists of open plan spaces and a number of meeting rooms. The open plan spaces are cooled by over 70 chilled beams per floor, which are controlled in zones by the Continuum system. The meeting rooms are cooled and heated by Fan Coil Units (FCUs), each one individually controlled by the BMS.

Zoning chilled beams and allowing individual monitoring and control of FCUs increases energy efficiency and thus reduces a building’s carbon footprint, by supplying only the required amount of energy to each terminal unit at a certain time. Lancaster Circus’ gas, electric and water systems are also integrated into the BMS using Schneider Electric distribution boards and panels, offering a central point of energy monitoring and profiling. Schneider Electric’s web based Energy Remote Monitoring (ERM) system is installed across a number of sites in the BCC estate providing an aM&T system which provides the client with meter data and readings on a day + 1 basis.

The benefits of this approach include less cabling, less hardware and reduced installation costs, leading to lower capital expenditure. In addition, reduced training, maintenance, staffing requirements and personnel costs cut operational expenditure.

The refit was carried out while the building was still occupied and coincided with a full refurbishment. This challenging environment meant work had to be carried out in phases between 2008 and 2010 and completed as efficiently as possible. Chris Bennett of Schneider Electric added, “This was a really interesting project which developed and grew over the course of the installation, meaning we were able to tailor the system to suit the needs of 1 Lancaster Circus directly. Installing a BMS while a building is occupied always presents challenges, but by working closely with Dodd Group and Urban Design we were able to overcome any issues and make sure that the council received the correct and most efficient system to suit their needs. The building environment is now far superior to what it was prior to modification, with the new system creating a light and fresh atmosphere.”

Schneider Electric provided full training to the team of Urban Design operators while installing the BMS. It also offers full seasonal commissioning to 1 Lancaster Circus, to adjust the system if necessary according to climate change.

Schneider Electric’s intelligent building management systems have been making buildings and infrastructure more energy efficient for over 80 years. Its integrated solutions include the very latest technology and techniques and have the ability to manage all of an organisation’s facilities and sites from a single computer, at any time and from anywhere.

For more information, visit www.schneider-electric.com/uk or call 0870 608 8 608.