

# Case Study OCS251

The Spindles Shopping Centre | Oldham 2014



The Spindles Town Square Shopping Centre in Oldham, Greater Manchester, is saving energy and reducing greenhouse emissions, thanks to an upgrade of its building management systems by Open Control Solutions, the building energy management system experts who operate throughout the UK. Spindles is a large indoor shopping centre occupied by over 80 retailers, banks and building societies, as well as a 250 seat food court area. It features one of Europe's largest stained glass roofs, depicting the life and times of one of Oldham's famous sons, Sir William Walton.

The Centre's Building energy Management System (BeMS), installed during its construction in the early 1990s, had become obsolete: it was not possible to obtain spares or service the system, so Spindles' management were unable to monitor and control the environmental conditions and energy usage.



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## Emphasis on reducing energy consumption and CO2 emissions

Open Control Solutions was asked to provide a system providing accurate environmental control, with particular emphasis on reducing energy consumption and CO2 emissions.

The BeMS was also to be “open”, so the Centre is not tied to any manufacturer for future expansion and replacement of failed components.

Open Control Solutions installed BACnet open protocol controllers from Trend, residing on a standard IP network. The use of native BACnet controllers ensures the system will not become obsolete in the future. The BeMS client-server supervisory software is connected onto the Centre’s IP network, enabling the Centre to access the system from any PC on the network. It also allows remote secure connection to the system off-site using the internet.

The BeMS monitors and controls the Centre’s Heating Ventilation and Air Conditioning along with the Centre and Car Park lighting.

## Energy metering and management

Open Control Solutions installed additional energy metering onto the BeMS. These intelligent electricity meters communicate using the industry-standard Modbus protocol.

Energy management is enhanced by the integrated Automatic Monitoring and Targeting (AM&T) software; this gathers energy consumption information from the BeMS and enables the Centre management to produce automatic reports focused on energy usage versus targets

In addition, energy desktop display screens show dynamic overviews of the Centre’s main utilities; it provides an interactive interface to manage, review and amend energy-consumption and energy reduction through simple graphics. It enables the Centre’s management to check and measure energy usage, then target key areas to reduce costs and improve efficiencies. Current usage is shown against both targets and previous consumption, providing essential verification that energy targets are being achieved.

OCS now has an energy contract with the centre reviews are carried out quarterly by OCS and the Centre. OCS highlights excessive uses and initiates an action plan to investigate and resolve the excess. It includes not only electricity and gas consumption but also water: for example, OCS recently highlighted excessive use of water overnight, due to automatic toilet flushes when the centre is not in use. This wastes about 300 litres per night. OCS’s proposed solution to Centre management is to install solenoid valve control to regulate flushing with a time schedule utilising the BeMS.

