

Case Study

Canary Wharf

PROJECT OVERVIEW

Canary Wharf is planned on a grand scale, yet with meticulous attention to detail. The offices at Canary Wharf have been built to the highest standards, set in a landscaped estate providing a relaxing and healthy environment for office workers and visitors. The Estate extends over 86 acres. Some of the world's leading architects and designers have been involved in its creation. The estate comprises:

- Ten office buildings (some incorporating retail units at street level).
- Multi level indoor shopping in Cabot Place East and Cabot Place West.
- A Docklands Light Railway station.
- A conference and banqueting centre.
- 17.1 acres of landscaped open spaces. The Cylon Unitron BMS has been installed in various buildings within Canary Wharf, including One Canada Square, DS5 City Corp Building and BP1 at Churchill Place.

BP1 is the newest project with some 92,900m² (1 million sq ft), the building is arranged over five basement levels, ground and 33 upper floors.

It includes a health and fitness centre for the BP1 staff as well as a 365-seat restaurant and 100,000 square feet of training facilities. The 31st floor boasts an entire 17th century room including period fireplace and wood panelling. Five south facing atria are stacked vertically maximising levels of natural light in the office areas and providing a more relaxed informal working environment.

The Cylon Unitron BMS has been installed in all 5 basements and 33 upper floors controlling plant, with local temperature control via 2,100 UCU10VAV controllers on 1 basement and 23 upper floors. The BMS is managed by a full time team of Eton Associates Engineers. The facility has achieved an Excellent Environmental Assessment (BREEAM) rating.

SOLUTIONS BENEFITS

For the owners the new building provides a better working environment, improved efficiency and significant environmental performance improvements. The Cylon Unitron BMS controls local temperature and electrical supply management and the facility has a range of features to cut down on energy use. Benefits include:

- Centralised management of 24 floors of commercial office space
- Highly controlled comfortable working environment suitable for this world headquarters
- Energy saving through efficiently managed ventilation, cooling and heating
- Intelligent load shedding providing security of supply for critical plant in the building
- Fast system trouble shooting through centralised alarm and supervisor control



CYLON SOLUTION

The main function of the Unitron BMS on the BP1 building is controlling the local temperature via the 2,100 VAV controllers on site. Energy is saved by delivering only the required amount of air into each controlled space. When each space does not have a cooling requirement the system automatically drops the fan speed further reducing the energy required.

Each floor of the building hosts 16 multiple time zones which allow the flexibility of enabling every fan assisted terminal unit box to be changed to a specific time allocation. The Cylon OSNodes provide a high level interface with the Chillers. With 6 Chillers and 9 Cooling Towers sequenced to achieve rotation for numerous zone applications, if one chiller shuts down, the BMS actions another to power up and single point failure is prevented.

The Unitron BMS manages a Load Shed Routine throughout the whole building. In the case of power failure the system will shut down non essential plant to match available supply. Likewise the system constantly monitors maximum demand and will intelligently shed load so as not to incur penalties from the utility provider.

ABOUT CYLON

Cylon Controls Limited provides smart energy control solutions for buildings. Founded in 1985, Cylon has grown into a multi-million dollar corporation and has become the largest privately owned manufacturer of building control systems in Europe. As a focused global provider of uniquely flexible, web enabled HVAC technology & solutions, Cylon understands buildings better than anyone else. Our product range has been installed in all categories of buildings across Europe, North America, Asia, the Middle East and Africa to maximise comfort, productivity and energy efficiency. With the introduction of UnitronUC32, the world of intelligent building controls has taken another significant step forward. An entirely new 32-bit hardware architecture is combined with advances in controller engineering, Ethernet networking and system interaction via the web. The result is an intelligent system with a low first cost, but which at the same time addresses the true lifetime cost of intelligent controls. UnitronUC32 not only offers state of the art technology that will cater for your control needs well into the future, but it also bridges the gap between old and new by being fully compatible with all existing Unitron systems.

UnitronUC32 will upgrade even the earliest Unitron systems to a leading edge, web-based architecture without any gateway devices, and without any re-engineering of the original system, thus saving costs.

PROJECT SUMMARY

Applications:
Heating, air handling, cooling.

Number of Points: 16,200

Number/Type of Building:
1 building /
92,900 m2 (1 million sq ft)

Network:
Arcnet - RS485 Subnet,
RS232 PC to UCC4

Cylon Hardware Installed:
UCxx range, UCUXX range

Cylon Software Installed:
WN3000

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