

# The Gainsborough Bath Spa Hotel

Client:



*Independently minded*

Project: Seamless BMS controls upgrade

## CASE STUDY

'Best of breed' BMS solution from BGES controls thermal water spa at new five star hotel in Bath, ensuring superb energy efficiency



# The Gainsborough Bath Spa Hotel



**AIM:** To maintain consistent water temperature in the thermal baths, and provide comfortable conditions in the 5-star guest bedrooms, all controlled via a seamless BMS interface monitored from any location via touchscreen tablets

## Background

Originally built in the 1800s, the Gainsborough Bath Spa occupies two Grade II Listed buildings with distinguished Georgian and Victorian façades in the heart of Bath, a World Heritage Site. Located minutes from the Roman Baths for which the city is known worldwide, it is unique in the UK in that it has the exclusive privilege of having access to these thermal, mineral-rich waters.

## Control of thermal waters

The waters flow directly into the plant room and are used by an extensive number of the hotel's spa facilities, including the main thermal bath heated at approximately 35°C and two smaller thermal baths heated to around 40°C and 35°C respectively. The BMS installed by BGES Group controls the temperatures of the baths to ensure they remain at a consistent temperature. Also served by the waters are sauna, steam room and ice alcove facilities, along with a thermal water fountain and relaxation terrace.

## Meticulously engineered

The ground-breaking Gainsborough Bath Spa hotel is a modern interpretation of a classic design, which hides a contemporary, meticulously engineered infrastructure featuring the latest in energy efficiency technology.

*"We based the BMS on Cylon BACnet building management controllers in the main panels and best-of-breed BACnet FCU fan coil controllers in each of the hotel's 99 bedrooms, while common areas such as treatment rooms and restaurants feature banks of FCUs,"* explains Simon Shaw, Project Director at BGES Group. *"The supervisor workstation uses a BACnet open protocol head-end by Delta Controls called enteliWeb, thus delivering a seamless BMS interface."*

## Intelligent front end

Delta's enteliWEB combines the power of enterprise dashboards with easy-to-use facility management tools. Customisable energy management dashboards and powerful energy reports, provide managers with the tools to reduce energy consumption and lower costs, while task-driven alarm management and system dashboards make it easy for operators to quickly visualise and prioritise work, and keep the facility running comfortably and efficiently.

*"In lieu of not providing touchscreens on the panels – we provided a touchscreen tablet which, connected to the hotel's Wi-Fi, allows access to the BMS from any location,"* says Mr Shaw, *"giving a greater advantage when working in areas other than the BMS panel locations."*

## Pre-conditioned rooms

Equally innovative is the fact that the BMS is constantly monitoring the bedroom conditions: should the room temperature rise or fall too far away from desired conditions, even in times of un-occupancy, the FCU will be enabled to bring the temperature back in line. In total, the BMS has individual control for heating and ventilation in each room/suite, boiler plant, the hot water system, ventilation plant, chiller plant, pool/spa water heating and cooling, fan coil units, cold water booster set, and pumping stations. The BMS also monitors the hotel's lifts and numerous meters, including those for electric, gas and mains water.

