

CASE STUDY

MAINTAINING NHS ENERGY SAVINGS

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Trend building management systems have made a crucial contribution to the large energy savings made by St James' Hospital, Portsmouth, and seventeen other NHS premises in the Hampshire area. High system efficiency is ensured by a Service Level Agreement between Trend Field Service and the NHS Trust responsible for the sites' maintenance. This long-standing contract not only provides 24hr rapid response breakdown cover but also includes regular system check-ups.

"We have always specified Trend equipment on new build and refurbishment projects that require intelligent building controls. We have also always gone for more than just breakdown cover when it comes to system maintenance. Without the regular service visits and check-ups the system's performance would gradually have deteriorated and we would never have sustained such a high level of energy savings." Mike Cummings, Maintenance Engineer, St James' Hospital.

Built in Victorian times, St James' is a large mental illness hospital as well as serving as an administrative centre. In 1989 a single Trend IQ intelligent controller went into action in its steam boilerhouse. Today 32 network-linked IQs form a system that controls and monitors most of the HVAC services, including all the heating in the 3-storey main block.

IQ controls have also been installed in community hospitals in Gosport and Petersfield, and in a number of health clinics and other small properties. To allow central management and monitoring of these outlying sites, their controllers have been modem-linked to a Trend '945' PC-based supervisor on the system at St James'.

St James' Hospital has an impressive record for cutting energy consumption, having continued to make savings year after year. Its heating fuel usage is now 40% lower than in 1989. Much has been achieved through good housekeeping and the installation of energy efficient plant and equipment. However, no measure has had a greater effect on savings than the introduction of the still-expanding Trend BMS.

The system has had a particular impact through its close control of

steam pressure. This had previously proved very difficult to regulate, with the result that wards and other areas were often overheated. The direct steam heating that used to be in place throughout the main block has been partially replaced by LTHW radiators served by steam calorifiers. In both cases the Trend system provides accurate, weather compensated control of the heating circuits. It has also made savings by applying routines such as optimum start/stop of the office heating and by preventing simultaneous operation of heating and cooling plant.

Through its control and monitoring of domestic hot water services it plays another important role, helping to combat the risk of legionellosis.

At the other seventeen sites Trend IQs tightly control LTHW heating, DHW and – in the locations where it is fitted



– air handling plant. Again there are examples of Trend technology solving control problems and thereby ending energy waste. At one of the health clinics, difficulties controlling the somewhat complex warm air ventilation had resulted in supplementary electric heaters being used in some of the rooms. Now a Trend system has taken over, this practice has ended. Further savings have resulted from the system varying the AHU fan speed in accordance with demand.

St James' and the other buildings enjoy the same high level of maintenance cover for their Trend systems. The current Service Level Agreement guarantees 24hr/day, 365days/yr telephone assistance (within 2hrs) and site call-out (within 4hrs). It also provides annual site visits to backup system data files and to perform system integrity scans and controller battery checks. On a service

visit, the first action of the Trend engineer is to talk to the hospital engineers and deal with any concerns or queries they might have about the system's operation.

The Trend equipment at all the sites has proved very reliable. On those rare occasions when faults do occur it is important that they are quickly corrected. Loss of heating control in areas such as maternity wards and those for the elderly can not be tolerated. As part of the SLA, Trend not only promises a rapid response to breakdowns but also guarantees the availability of spares. Interestingly, in the case of most reported faults Trend has been able to diagnose and remedy them remotely (via modem).

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