



NORTH LONDON SCHOOL SAVES 44 TONNES OF CO2 WITH INTELLIGENT BUILDING CONTROLS

Waverley School in Enfield has transformed the way it manages energy, following an installation of new-generation Priva Blue ID BMS technology, which has unlocked significant environmental and financial savings.

Until recently, [Waverley School's](#) level of energy efficiency could be summed up by a single visual: the red arrow on its Display Energy Certificate, indicating extremely high energy use. The state special school in North London had created a first-rate learning environment for its students - but trying to manage the school's energy consumption was "a nightmare".

"The old building management system dated back to the 1980s, with basic, complex controllers," comments Graham Williams, Premises Manager at Waverley School. "Parts of it didn't work at all and the parts of it that did work were a nightmare to control. For example, we used to leave the air handling units in the swimming pool running permanently at 100%, because we had no control of speed or when to turn them completely off and on."

RE:FIT scheme

When Waverley School was given the opportunity to undertake a programme of works to boost energy efficiency, using government-backed [Salix](#) financing, as part of the Mayor of London's [RE:FIT](#) initiative, the school jumped at the chance. And installing a brand new building management system (BMS) was top of the energy-saving wish list.

The Energy Services division of [Mitie](#) won the contract for the RE:FIT project and carried out an energy audit of the school, identifying cost-effective measures that would reduce energy use. The resulting works, undertaken by Mitie, were extensive.

"We replaced old inefficient boilers with modern, high-efficiency condensing boilers installed low-energy lighting and controls, programmable radiator valves, refrigeration motor controllers, and variable speed fan motors," says Dale Meadows, Energy Technical Solutions Manager at Mitie.

"And, of course, a key part of the project was the installation of a new BMS. We selected Priva Blue ID because it was good value for money and we knew it would be easy for the school to use."

Special needs

Installation of the new BMS at the school had to be carried out with particular care, because all of the students have severe or profound learning difficulties. The students respond best to routine and consistent schedules, therefore it was important to keep disruption to a minimum. However, the Priva system proved straightforward to install.

"There was no disturbance to school activity during the installation," comments Dale Meadows of Mitie. "It all happened behind the scenes, with very little interruption to heating and hot water. The old system was kept running while we wired up the new system and, at the last minute, we changed it over. The whole process was very smooth."

Improved control

With the Priva Blue ID system now in place, Waverley School has been able to radically change the way

its buildings are controlled. Designed with reliability, user-friendliness and flexibility in mind, Blue ID is at the forefront of new-generation BMS technology, ensuring high performance and future compatibility. For Graham Williams of Waverley School, the new BMS has brought big changes to how he's able to do his job.

"Priva Blue ID is very intuitive and very easy to programme," he says. "It's so much better than I could possibly have imagined. I've been at the school for twenty-five years and I can say that this is one of the best bits of kit I've ever used. It's given us so much more local control, improved the way the school is heated, and made it possible to programme when and how the heating air handling and domestic hot water is engaged throughout the school. It's also given us complete control over our swimming pool environment, allowing us to accurately control the pool water and air temperature - something we have, in the past, struggled to achieve. It really makes my job much easier."

The Priva BMS is also improving the life of the school's systems, since they are no longer used when they're not needed.

Greater visibility

Better control is just part of the energy-saving equation for Waverley School. The Priva BMS has also made energy consumption far more visible to the premises staff - which has prompted a fundamental review of how the school uses energy.

"The new BMS allows the school's staff to use a touchscreen in the plant room, which provides access to gas and electricity data from across the school," comments Dale Meadows of Mitie. "This means that staff can simply and easily click, monitor and make changes to the system if there are any anomalies where energy is being wasted."

Graham Williams of Waverley School adds, "Before, with the old system, we didn't have much visibility. But now, I can see which systems are working and exactly what they are doing."

CO2 savings

The sweeping changes made across the school through the RE:FIT project have resulted in huge energy savings. Thanks to the raft of energy-saving measures that have been installed, the school is saving approximately £52,986 a year on its energy bills. This translates to a carbon saving of 257 tonnes of CO2 per year.

Of this figure, Mitie attributes 44 tonnes of the CO2 savings to the Priva BMS, reducing its annual gas and electricity consumption by 225,302 kWh. The full extent of energy savings resulting from the new monitoring capabilities of the BMS is inevitably hard to quantify. What's indisputable is that the school has been able to transform the way that it uses energy.

Next steps

At Waverley, the push to improve energy efficiency is far from over. Next up is the installation of a Combined Heat and Power (CHP) Unit - controlled using the Priva BMS, of course - which will allow the school to use heat that would otherwise be wasted.

As the school looks to the future, one thing's for sure: it's no longer resigned to being bottom of the class when it comes to its Display Energy Certificate. "I know that when we receive our new DEC certificate, it will show a massive improvement, due to all of the work that's gone into reducing energy consumption," says Graham Williams.

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