

Case Study - Woodthorne Primary School, Wolverhampton



New Caspians bring efficiency and control to classrooms



The Client

Woodthorne Primary School, Wolverhampton is a school built in the 1960's with buildings typical of the period. In need of refurbishment the heat emitters in school heating system hadn't been updated since their installation when the school was built. Consequently, they were robust cast iron radiators which were coming towards the end of their serviceable life. They took up significant amounts of wall space and became very hot to the touch causing potential issues for painful burns on contact for the school children. Often, they were hidden from the children by tables and cupboards reducing their efficacy. The windows and doors have been improved to reduce heat loss.

The Challenge

Enough was enough and the school management decided it was time to update the heating system. Finding a way to heat the buildings quickly and efficiently without posing a danger of contact with hot surfaces and to avoid major alterations to the fabric of the building was the brief. RMC Mechanical Services of Wolverhampton developed a heating scheme working out the heating requirements and heat loss calculations for the project. The old cast iron radiators offered little local control and often the classrooms were very hot, or not hot enough. Working closely with the school to understand the requirements of the staff at Woodthorne Primary School, Clive Jones, Director of RMC Mechanical Services, was able to develop and propose a scheme that would meet the needs of the teachers and pupils. In the summer of 2018 RMC Mechanical Services carried out the upgrade work to the heating system.

The Solution

The solution was to remove all of the old cast iron radiators from the classrooms and replace them with Smith's Caspian SL fan convectors. These were installed at a height of 1.8m above the ground removing them from any possible contact by the children. Furthermore, an extra benefit was the release of all of the wall space that was covered by the old radiators. This effectively means that the teaching space is much bigger and available to the teachers and children alike.

Each classroom now has 2 x Caspian fan convectors mounted at 1.8m and each classroom is controlled by a wireless room thermostat giving individual room temperature control for the teaching staff.

Other rooms that have benefited from new Caspian fan convectors are the staff room, corridors and the hall. The hall presented a few challenges in that the previous heat emitters were a recessed (in the wall) fan convector that had stopped working a long time ago, and several metres of old cast iron radiators running around the perimeter of the hall. Replacing all of these old emitters with 3 Caspian fan convectors placed out of the way at high level has improved the comfort levels immensely as well as removing the hot-to-touch old-style radiators from the walls. A second benefit is the ability of the new Caspian fan convectors to heat the space very quickly when it's required rather than for several hours before the space is needed as was the case with the old radiators. A point not lost on the Caretaker, Terry Bird who says, "the new Caspians are reliable and great for schools as they generate a lot of heat when it's needed, and they are proving to be much more economical to run than the previous old-style radiators".

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Terry Bird | Caretaker



Wireless room thermostat



Old cast iron radiators

The Products

Caspian fan convectors have been specially developed for a wide range of applications in larger spaces and commercial environments. With the ability to rapidly heat large areas at low cost, Caspian commercial fan convectors are both practical and energy efficient. They can be also installed in an adjacent room, or storage cupboard, with the warm air outlets positioned at the rear of the appliance and ducted into the adjacent room such as a sports hall or even a narrow corridor, permitting an obstruction free wall space. They can also be supplied in any colour to meet the demands of the installation location. Fully compatible with renewable energy technology, such as ground and air source heat pumps, Caspian can also enhance your environmental credentials.

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