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St Lawrence College, Kent

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St Lawrence College is a new 1,700 square metre self-contained school which houses over 150 pupils and six classrooms in an interlinked three and two single storey building development, which also incorporates a covered courtyard and specially constructed 'bubble' style roof.

The £4 million innovative, eco-friendly development is constructed using over 2,200 square metres of aircrete Toplite blocks from Tarmac Topblock and has a number of special features incorporated into the overall structure of the building. The complex design not only utilised blocks in the construction of the walls, floors and ceilings in the main buildings, they were also used in the construction of a special cooling tower in the centre of the courtyard.

Explaining the building's design and use of Toplite blocks, the architect stated "When designing such a unique structure, we had to focus on two main areas, the first being to design a complex that delivered all of the practical needs of a school, whilst creating an inspirational environment for learning. The second, and arguably the most important factor, was to design a building that could be constructed in just 12 months, to be operational for the intake of students in September 2006.

As with any project, balancing building design with the practical elements of labour, timescale and most importantly budget, are all crucial in the selection of the materials for construction. By weighing up all of these elements, we chose to build the school using blockwork. From a practical sense, walls and therefore buildings could be constructed swiftly, creating an overall building skeleton in just a few of months, therefore leaving more time for the more complex areas of the design."

By being able to cut and shape the 100mm Toplite blocks to the required sizes using simple hand tools, the construction team were able to reduce the overall cost of the construction, whilst ensuring that the tight specifications, design and functionality of the tower was not compromised. Similarly, they were able to use lightweight aircrete blocks in between the beams for the roof segments of the single storey blocks - laying the sedum roofing material directly on top of them.

The school was opened to pupils, on schedule, in time for the new school year - in September 2006.

Project team

Architect: Brodie Plant Goddard

Design and build: Barwick Construction

Aircrete blocks supplier: Tarmac Topblock

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M&E consultants: Crofton Design

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