

# Kentish latter day scholars get eco-friendly environment

St Lawrence College, one of Kent's foremost independent schools underwent a dramatic facelift with the design and build of a new £4m eco-friendly middle school last year

The new 1,700 square metre self-contained school now houses over 150 pupils and six classrooms in an interlinked three and two single

story building development that also incorporates a covered courtyard and specially constructed 'bubble' style roof.

## Special features

Designed by Surrey-based consultancy Brodie Plant Goddard, the building's skeleton is constructed using over 2,200 square metres of aircrete Toplite blocks from Tarmac Topblock. With a number of special features incorporated into the overall structure of the building, the complex and eco-friendly design not only utilised blocks in the con-

struction 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.

## Practical needs

The architects main areas of focus were 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. Consequently they 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."

## Unique

Barwick Construction was awarded the design and build project in August 2005. Construction site manager, Trevor Ellingham said: "The design of the school was both unique and challenging from a construction perspective, particularly in relation to the large cooling tower that formed the centre piece of the complex. At the product specification stage, the use of Toplite blocks to construct the tower was not con-

sidered, however, due to our experience of block construction, we were able to prove that the strength, handling benefits and lightweight construction of aircrete blocks, were perfect for the task at hand."

By being able to cut and shape the 100mm Toplite blocks to the required sizes using simple hand tools, they were able to reduce the overall cost of the construction, while ensuring the tight specifications, design and functionality of the tower were not changed.

“ The use of sedum roofing material improves the environmental performance of the whole building, adding to the eco-friendly design of the 24,750 square foot school complex ”

Similarly, when constructing the roof segments for the single story blocks, they were able to use lightweight aircrete blocks in between the beams, laying the sedum roofing material directly on top of them. The use of sedum roofing material improves the environmental performance of the whole building, adding to the eco-friendly design of the 24,750 square foot school complex, as the sedum material absorbs water, emitting oxygen as it grows."

## Centre of excellence

Commenting on the new middle school, headmaster, Revd. Mark Aitken said: "Since we were founded as a charitable foundation in 1879, our success and the demand for places at St Lawrence has continued to grow. By making this investment into a new middle school we will further establish the college as a centre of excellence.



◀ The building incorporates a special cooling tower in the centre of the courtyard.