

# Merton Sixth-Form Colleges

**2010**

**£7.1M Development**

Merton Council urgently needed additional 6th Form accommodation within the Borough. Following a consultation period four new colleges received planning permission. They were located at four existing secondary schools in Bishopsford, Raynes Park, Ricards Lodge and Rutlish. As the requirement was so urgent the Council tendered the project based on an off-site modular construction. This approach was taken to reduce the construction time and to reduce the capital cost in comparison to traditional construction. Extraspace Solutions, an off-site modular building contractor, was appointed following a tender process.

The project consisted of one single-storey building (1,097 m<sup>2</sup>), and three two-storey buildings (ranging from 1,116m<sup>2</sup> to 1,610m<sup>2</sup>).

S I Sealy worked in partnership with Extraspace Solutions to establish the buildings' fabric and thermal performance. S I Sealy carried out detailed material selection utilising Dynamic Simulation Software, which assisted with the detailed M&E design.

As part of the dynamic simulation, the buildings' solar gain were calculated. This assisted with the design of the buildings' solar shading. Each building incorporated brise soleil. Having this early involvement with the architect reduces the cooling demand on the building, hence reducing the energy bills. The buildings were also constructed utilising pre-insulated panels which provide excellent "U" values for walls and roofs over and above minimum Building Regulations. The buildings are heated and cooled by high efficiency air to air source heat pump technology, which is approximately 350% efficient by reclaiming free energy from the external ambient conditions.

Two of the colleges also incorporate teaching laboratories which consist of laboratory desks with natural gas outlets linked into a gas safety interlock systems. Each classroom has emergency power isolation points to enable the teachers to switch off all the sockets at one point.

High frequency energy efficient lighting has been designed and installed through the colleges, with passive infrared detectors used in circulation spaces and toilets. The buildings include: automatic door access systems linked to student ID cards, intruder alarms, interactive white boards, hard wired data points and WiFi. Some of the colleges also incorporate performing art studios with sound recording booths and production facilities.



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