

## English Schools Close due to Overheating

The failure of school designers to provide adequate thermal mass and other passive methods of cooling, has resulted in many schools in England closing or sending pupils homes during heatwaves.

Schools have reported classroom temperatures of more than 36°C but proper utilisation of thermal mass could significantly reduce the internal ambient temperatures without having to install energy intensive air conditioning.

This approach is advocated by both the CIBSE Technical Memorandum 36 - which highlights the need for solar

shading, ventilation and thermal mass to combat overheating - and by the DFES Building Bulletin 101 which states: "Summertime overheating can be largely eliminated by the provision of sufficient ventilated thermal mass".

Recent research from Arup Research and Development underlined the useful role of concrete's thermal mass in reducing internal temperatures in houses by passive means. Although the research was carried out on residential buildings, it applies equally to other building types.

Utilisation of the thermal mass potential of concrete would result in a more comfortable teaching environment without the need for excessive air conditioning.

