

## The consultants

Please see below for more information about the consultants that have contributed to the design and build of the new Howe Dell school.

### Capita Architecture

Capita Architecture (encompassing the Capita Percy Thomas, Capita Norman & Dawbarn and Capita Ruddle Wilkinson brands) is the fifth largest architecture practice in the UK. It is part of Capita Symonds, one of the UK's largest and most diverse multidisciplinary consultancies operating in the building design, civil engineering, environment, management and transport sectors.

Howe Dell School has been designed by a team from Capita Architecture's London office with input from staff, pupils, parents and governors alike. The design team have included a number of innovative 'sustainable' elements such as recycled and sustainable materials, natural ventilation, energy-saving lighting and water management. Specific features are listed on the main Howe Dell page.

For further information, click on the link to the right of this page or contact Karl Blockwell by email: [karl.blockwell@capita.co.uk](mailto:karl.blockwell@capita.co.uk)

### Icax

Icax Limited is pleased to have provided Interseasonal Heat Transfer (IHT) to Howe Dell School to enable the school to be heated in the winter with heat captured by the school playground in the previous summer.

This revolutionary patented technology has been developed over ten years by Icax Limited to provide on-site renewable energy to heat buildings in winter without burning fossil fuels.

The essence of IHT is that heat can be collected from dark surfaces like roads, car parks or playgrounds, by an array of pipes beneath the surface. The heat is stored in insulated thermal banks in the ground and retrieved to heat the building in winter.

Using smart control technology, the system enhances the performance of Ground Source Heat Pumps. A standard GSHP extracts warmth from the ground and separates this into heat (used to heat a building) and cold (which is returned to the ground). A GSHP needs to pump harder as the ground gets colder as heat is extracted. Heat is "borrowed" from the ground and creates a thermal "overdraft" in the ground. A GSHP relies on heat gradually migrating back into the thermal overdraft created.

An IHT system differs from a standard GSHP system in that heat is actively "deposited" in the thermal bank in advance of the winter season. This greatly reduces the work required of the heat pump to provide heat to the building the following winter. In engineering terms the Coefficient of Performance of the heat pump is increased from around 2.6 times to around 5.2 times.

This radical new British technology is ready to help address the issue of global warming in a practical, efficient and proven way. Please click on the link to the right of this page for further details.