



Showcasing Excellence

Cheshire County Council develops flagship primary school



The Government's desire to deliver better public buildings is clear. In 2003, against the backdrop of sustainable construction targets and the national agenda for workforce reform, Cheshire County Council embarked upon a journey to produce a flagship primary school for Cheshire. The building is unique. Powered by solar and photovoltaic panels, harvesting rainwater for sanitation and controlled by an energy management system, award-winning Kingsmead primary school has set a blueprint for educational buildings of the future.

Building for the future

With Northwich undergoing significant redevelopment, and major housing schemes in progress, Cheshire County Council needed to provide a new primary school for 210 students. Delivered under a partnership agreement with contractors Willmott Dixon and architects White Design Associates, the overall aim was clear: to make Kingsmead Primary School a flagship building, both in terms of design and sustainability.

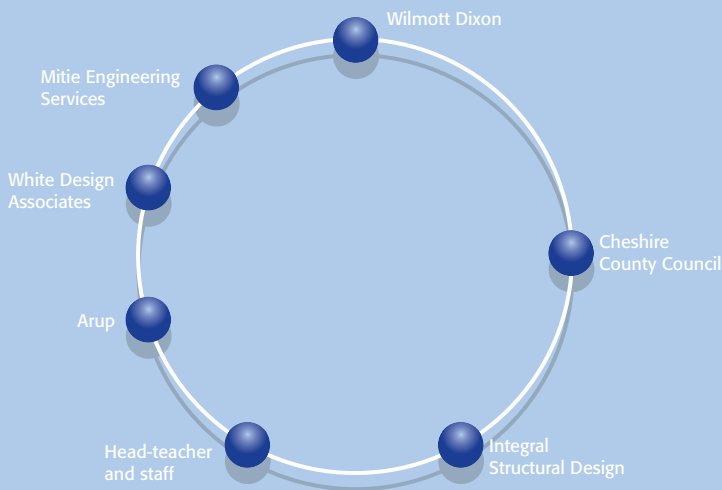
Objectives:

- To maximise existing partnership agreements, to offer a blueprint approach to accommodation for the education system.
- To incorporate sustainable building methods and materials wherever possible.
- To create a unique and inspiring design that would provide inspiration for both teaching and learning.
- To deliver a flagship building on time and to budget, which would significantly reduce waste and energy consumption, and reduce running costs by up to two thirds of a typical primary school.
- To improve results and increase recruitment and retention opportunities by creating a building that could act as a learning tool.

Working in partnership

Cheshire County Council spent many years developing innovative procurement routes culminating in a partnering agreement with contractors Willmott Dixon. This meant that Willmott Dixon clearly understood the council's ethos and principles prior to embarking on the Kingsmead primary school scheme. All partners were key in delivering the end-facility.





“The key success criterion identified in the initial design brief for Kingsmead were to deliver a flexible, cost effective and sustainable building that not only enhanced the learning opportunities for all pupils, but was also a rewarding and effective workplace for teaching staff. Partnering with an experienced contractor with whom we had a strong and open relationship and with a project team that was entirely focused on improving the quality of the finished project, ensured an end result that is now benefiting teachers, pupils and the environment.”

**Keith Bate, Head of Property Strategy,
Cheshire County Council**

An eco-friendly building

The scheme’s environmental success has been actively endorsed by a variety of high profile industry bodies including the Department for Education and Skills, Constructing Excellence and the National Audit Office.

Key environmental design factors include:

- **The inverted roof** – designed to ensure that all rainwater can be harvested for use inside the building to flush toilets, thereby reducing the demand for piped water.
- **The orientation of the building** – all the classrooms within the building face North, enabling consistent light levels, with minimal unwanted summer heat gain and glare. In the winter, solar controlled and rain sensed roof lights provide extra light for the classrooms.
- **Super insulation and other complimentary strategies** – the building’s walls and roof have 200mm of insulation, made partly from recycled glass. The internal blockwork walls of the building provide ‘thermal mass’ that keeps the building cool in the summer and warm in the winter. The building also boasts a biomass boiler which runs on wood chips from waste timber, providing around 60% of the school’s heating load. Solar panels on the school’s roof provide 20% of the building’s hot water and photovoltaic panels generate approximately 15% of the building’s electricity requirements.

Super insulation and complimentary strategies have helped to reduce energy consumption by up to 50% in comparison to a typical primary school.

- **The use of sustainable, natural materials** – wood features heavily as it is a natural resource. Other materials used have been sourced or manufactured from natural, waste or recycled materials.
- **An educational building** – the structure of the building is exposed throughout allowing pupils to view the fabric and materials that went into its construction. The pupils can also use special equipment to measure how much rainwater has been collected and how much energy the building is using. These activities are promoting a better understanding of the fragility of the environment and encouraging pupils to help take care of the planet.

How does your project measure up?

■ **To share your success please contact:**
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