Case Study

Arley Primary School, Warwickshire Making a World of Difference



New Primary School benefits from the Sunesis approach

When Warwickshire County Council was looking to amalgamate two local schools into one new building and needed absolute certainty over both the build cost and programme, they turned to the 'off-the-shelf' solution offered by the unique Sunesis formula.

The inclusion of renewable heat pumps to provide all the heating and hot water means the school only needs about half the plant room, freeing up valuable space for education provision.



Air Conditioning | Heating Ventilation | Controls





ABOVE: The new school was built with absolute guarantees on quality, costs and timescales.



ABOVE: Children from Ansley and Old and New Arley villages now have a modern and comfortable school.

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Making a World of Difference

Created as a joint venture between Scape and Willmott Dixon, Sunesis is an innovative approach to fixed-cost construction which delivers buildings for the public sector with speed, simplicity and certainty. The process also includes the latest renewable heating system from Mitsubishi Electric which will now help safeguard the school's monthly energy costs.

The new £3.9 million Arley Primary School, near Nuneaton has been built at Gun Hill, on the site of the current infant school, amalgamating it with nearby Herbert Fowler Junior School.

It will take in a maximum of 315 children, 45 in each year group, from the villages of Ansley and Old and New Arley, and provides a wonderful learning environment for the community.

The school has been built using the Keynes model from the Sunesis Education range of standardised, yet personalisable designs and comprises 11 classrooms, a hall, catering kitchen, staffroom and offices, as well as an outdoor play area.

"The Sunesis process provides high quality, modern designs delivered on average 12 months faster and 30 per cent cheaper than market alternatives", explains Tim Carey, Product Director for Willmott Dixon, the construction partner – alongside Scape, the public sector procurement specialists – behind the 'off-theshelf' building concept.

"All local authorities are under increasing pressure to save money, so this system is helping to reduce the cost of building new schools".



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Mitsubishi Electric UK's commitment to the environment





ABOVE: The Ecodan CAHV air source heat pumps not only free up valuable internal space and save on construction costs, they also allow the school to qualify for the nondomestic Renewable Heat Incentive (RHI).



ABOVE: The renewable heating system is easy to monitor and control and helps keep the school's running costs to a mimimum.

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The inclusion of three Ecodan CAHV monobloc air source heat pumps will provide all the heating and hot water that the school requires, with the Ecodan heating system operating effectively in ambient temperatures of -20°C to 40°C making it ideal for use all year round.

"The inclusion of the Ecodan means that the school only needs about half the plant room required for a traditional gas or oil fired system, which not only saves on the building costs but also frees up valuable additional space for education provision", adds Carey.

For every 1kW of electricity used to power an Ecodan CAHV air source heat pump, up to 3.2kW of heat can be delivered to the building; 69% of which is renewable energy, which also means that the school now qualifies for the non-domestic Renewable Heat Incentive. This will see Arley Primary School receive regular quarterly payments for the next 20 years.

The Sunesis formula also provides absolute guarantees on quality, costs and timescales, whilst meeting legal OJEU (the Official Journal of the European Union) requirements.

This is the publication in which all tenders from the public sector which are valued above a certain financial threshold must be published.



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ABOVE: Modern air source heat pumps like the CAHV units can deliver reliable hot water and heating, even in the depths of winter when outdoor temperatures drop well below freezing.

Ecodan CAHV system

Three 14kW Ecodan air source heat pumps work together to meet the heating demand.

Multiple unit cascade control of up to 688kW capacity.

Provides from 25°C up to 70°C water flow temperatures without boost heaters.

Low maintenance, hermetically-sealed monobloc design.

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As a joint venture, Sunesis is built on the combined experience of public sector know-how and private expertise through the combination of Scape (which is owned by local authorities and ensures Sunesis is OJEU compliant) and construction specialists Willmott Dixon (one of the most recognised and trusted brands in the built environment).

Authorities are able to choose the building they want from a range of five individual school designs, and personalise each one to suit their individual needs from a range of pre-costed options.

Mark Robinson, Group Chief Executive at Scape, adds: "The beauty of this approach is that the Local Authority knows exactly what it is getting, when it will be delivered and how much it will cost, right from the start of the process.

"In an era of increasing accountability, Sunesis provides councils with viable options which allow them to improve their learning spaces and deliver value for money, without compromising on standards".

In 2012, Warwickshire County Council was the first local authority in the UK to use a Sunesis design for Oakfield Primary School's new building in Rugby. Launched in 2011, Sunesis has delivered more than £25m worth of schools to date, with a further £22m underway.

The Sunesis Primary school range also includes the Newton, Paxton and Dewey models, with other offerings tailored for the Leisure and Care sectors.



Changes for the Better

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Certificate Number: MCS HP0002 Heat Pumps Product Reference: CAHV-P500YA-HPB





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