

# Exeter scientists key to creating one of UK's greenest schools

October 29 2012

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The Earl of Wessex at the opening of Exeter's greenest school.

Scientists at the University of Exeter have been heavily involved in developing a school which is in the national top ten for energy efficiency.

Experts at the University of Exeter's Centre for Energy and the Environment have been studying the first year of operation of Montgomery Primary School in St Thomas, Exeter.

They say the school uses less than a third of the energy of a typical school which puts it in the top 10 per cent of schools nationally for energy efficiency.

The Earl of Wessex officially opened the school last week and described it as a 'fantastic and brilliant' school.

The Centre for Energy and the Environment was closely involved in the design of the school with Devon County Council.

Over its first year of operation, the school has been shown to have zero [carbon footprint](#).

The scientists say the design performance of the school significantly exceeds the proposed "zero carbon" regulations. This puts it firmly at the forefront of low carbon building design nationally and well ahead of government targets.

Dr Dan Lash, from the Centre for Energy and the Environment, worked with colleagues Andrew Mitchell and Dr Tristan Kershaw on the project.

Dr Lash said: "A common failure of modern buildings is that they consume much more energy in practice than predicted during the design process.

"We have monitored the performance the school since it opened. After a year of occupation, it can be seen that the design has been hugely successful.

"The energy consumed by the school is very close to the predicted consumption, using less than a third of a typical school, and putting it in the top 10% of schools in terms of energy efficiency.

"In addition, the energy generated by the [solar panels](#) actually exceeded the energy demand of the school, meaning it generates a surplus of [energy](#) beyond its needs. And making it one of the greenest buildings in the UK.

"Most importantly, the building has resulted in a modern, comfortable and resilient facility for the pupils and staff of the school. It acts as a

learning tool for both pupils and members of the community."

The Earl of Wessex spent over an hour touring the building and chatting to pupils, staff, parents and governors.

The innovative, air-tight Passivhaus design means it doesn't need a boiler to provide heating. For most of the time, the building is warmed by the body heat of pupils and staff and the thick insulation keeps it cool in summer and warm in winter. Montgomery is believed to be the first school in Europe to be both Passivhaus and zero-carbon.

Provided by University of Exeter

Citation: Exeter scientists key to creating one of UK's greenest schools (2012, October 29) retrieved 30 June 2024 from <https://phys.org/news/2012-10-exeter-scientists-key-uk-greenest.html>

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