

Brickfield Barn, Everdon, Northampton



Brickfield Barn near Everdon, Northamptonshire is a small working farm with a big ambition, namely to become as sustainable as possible.

In 2006 when heat pumps were virtually unknown in the UK, WDS installed two ground source heat pumps working in parallel to provide heating and hot water for Brickfield Barn. Seven years on, these two 11kW Dimplex heat pumps are still performing well and keeping the home warm during the cold winters.

In 2010 WDS installed a water borehole to provide potable water for the house and farm saving money on the high water bills the farm was incurring.

The Problem:

In 2011 the client was keen to look at other ways of saving money on her business operation and to further reduce her carbon footprint, so she asked WDS to look into the options on how to provide the farm with green electricity.

The Solution:

WDS Green Energy made a detailed site survey, looking at the options for providing electricity on site. They discussed the possibility of a wind turbine or solar panels to reduce the farm's carbon footprint.

It was decided that the most cost-effective and viable solution would be to provide a photovoltaic system on the south-west facing roof of the newly erected barn.

In April 2011 a 6.96kWp PV system was installed on the barn roof. The system was designed around the clear Perspex roof lights so as not to impede natural sunlight into the barn.

The client was delighted at how much electricity she was generating from the newly installed PV system so in August of the same year WDS added a further 1.92kWp as a 'brise soleil' on the south-east facing gable end.

The angled panels are designed to provide shade as well as produce electricity and were fitted using bespoke wall-mounted racking. This new system gave Brickfield Barn a combined generating power of 8.88kWp.

The three DC/AC inverters and meters were installed inside on the barn wall so as to be easily accessible for maintenance and meter readings.

The Benefits:

The solar PV panels will not only reduce the farm's electricity bills and carbon footprint dramatically but will also provide an excellent income under the Government supported Clean Energy Cash-back Scheme, also known as the Feed-in Tariff (FiT) with an annual income and savings of around £3,000 per year.

In 2011 the FiT was guaranteed for twenty-five years (now lowered to twenty years) meaning that the scheme should generate around £70,000 of tax free income and savings during its lifetime.

