



The 50kWp system at Northfield Orchard Farm provides evidence of the capability to design and install ground based PV arrays. This included assisting the client with planning and grid connection requirements

Northfield Orchard Farm – Solar PV Array

Darke & Taylor's specialist PV design team were responsible for the design, specification, supply and commissioning of this 50kWp ground mounted PV system. Using a specialist subcontractor to drive the piles, the PV array was then installed by the Darke & Taylor PV installation team. A number of designs were modeled to overcome site based issues and address the client's wider objectives.

Project Scope:

- Feasibility study
- PV Sol Analysis & CAD
- Full PV and Electrical System Design
- Pile driving and ground mount installation
- Installation of DC and AC Systems
- Commissioning
- MCS Registration & FiT Application Support
- Monitoring Solution

Further Details:

We captured a digital horizon file for the site and imported it into the PV Sol modeling software. This generated a shading analysis for every hour of the sun's path through the year. Two shading obstacles were identified and the impact on photovoltaic and financial performance were calculated. The reduction in yield caused by a tree was deemed significant and on our advice the client had it removed. We also limited the effect of shading from a telegraph pole by designing a three inverter system with a total of nine MPP trackers and a sting configuration that maximised performance of the system in spite of the obstacle. Including installation of the ground mount system the project was completed in under two weeks. By way of endorsement of our delivery, the client has since offered to open the site for viewing by prospective clients of D&T.

PROJECT DETAILS

Client:

Nick Frost, Frost Farms Limited

Project Manager:

Darke & Taylor/Applied Sustainable Energy

Building Services Consultant:

Darke & Taylor/Applied Sustainable Energy

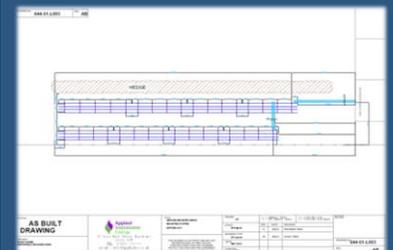
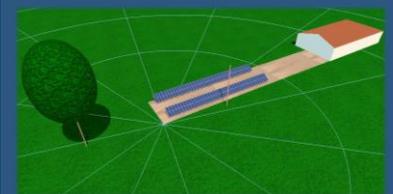
PV System Size:

50kWp

Commissioned:

April 2013

"The approach taken was thoroughly professional and rigorous. The design team intelligently designed and modeled a system layout that would be the most efficient for my individual location. I was helped by the team through every stage of the paperwork process. Delivery and construction of the array was carried out with great care and attention to detail and the array was completed within the agreed timeframe and to a competitive budget." Nick Frost, Director Frost Farms Ltd



A ground mount solution extensively modeled, designed and engineered in-house