

Project profile



Client

Wrexham
Community Centre

Products

Dimplex ground source
heat pumps

Partners

Azure Natural
Energy Systems

Community centre chooses Dimplex heat pumps

A new £2.3 million enterprise and community centre in Wrexham has been designed to include a variety of sustainable energy features including Dimplex ground source heat pumps, rainwater harvesting, solar thermal water heating, windcatchers and sunpipes.

Plas Pentwyn (Hilltop Hall) in Coedpoeth provides a wide range of community-focused facilities together with rentable office accommodation designed to give local people access to training, employment opportunities and encourage business start-ups.

Greg Young, building services engineer at Shrewsbury-based GA Young Associates who supported Wrexham County Borough Council on this project, says: "The drive for using renewables came very strongly from Wrexham council. We looked at various options and liked the idea of heat pumps, and because we had land available, ground source was the obvious choice.

Dimplex heat pump installer partner Azure Natural Energy Systems – recently awarded Dimplex Non-Domestic Installation of the Year for this project – installed a SI 50 TE ground source heat pump at the site. Greg continues: "We went to Azure because they were extremely helpful in providing information and data, from products and systems to helping with the calculations for the coiled horizontal ground collectors installed in the trenches."

Nick Bateman, senior architectural technologist, Wrexham County Borough Council, says: "We've started introducing sustainable energy systems on the majority of our building schemes now, and after two schools and a visitor centre, Plas Pentwyn is our fourth development to have ground source heat pumps. We also have sites that use wind turbines and solar and are setting up monitoring systems to see how the different systems perform for us.

"A key reason for this is of course the simple one of switching to renewable energy solutions, which is a choice many local authorities are making, but we have the bonus that it helps us to comply with Building Regulations as planning departments are always keen to see renewables in a development."

The Dimplex SI TE range of high output three phase ground source heat pumps provides flexible solutions for higher capacity heating systems. The eight models in the range offer heating capacities of 24 – 130kW, with both heating and passive cooling options available.

All models use the Dimplex heat pump manager (WPM2007), which is designed to regulate, control and monitor the entire heating system and allow independent control over multiple heating circuits at differing flow temperatures. Water temperatures for up to three heating/hot water circuits are individually programmable, allowing the heat pump to provide maximum flexibility, control and efficiency.

Models with outputs of 24kW and above, such as the one at Plas Pentwyn, incorporate twin compressors, enabling them to flexibly and efficiently adapt to fluctuating heat demand by automatically switching between single and dual compressor modes, depending on the outside temperature and heat demand of the building, maximising efficiency.

The centre was officially opened in September by Olympic gold medallist, and local Wrexham lad, Tom James from Team GB's rowing fours squad.



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