



Thornham Village Hall, Norfolk

Ground Source Heat Pump and Underfloor Heating

Thermo-Floor were involved in the design, supply and installation of a ground source heat pump and underfloor heating for a Village Hall set in on the beautiful North Norfolk Coast.

The Project

Thornham Village Hall is the heart of the local community and venue for many village activities. Sustainability and renewable energy are a high priority for ensuring the future of this community.

Villagers fund raising and a £475,000 Lottery Grant allowed this new eco-friendly building to be possible. And in January 2014 HM The Queen visited Thornham to open the new building.

Facts and Figures

Building

- Floor area : 340 m²
- Insulation: 0.022 W/m.k
- Floor insulation: 340 m²

Source of energy

- Ground Source Heat Pump

Climate system

- Heating supply of 38°C to the UFH system to achieve an internal temperature of 21°C

Thermo-Floor system

- Full service project execution
- LTS-N -manifolds for heating Danfoss DHP-L Ground Source Heat Pump
- 2km of underfloor heating pipe

This consisted of a Danfoss ground source heat pump with a horizontal collector system, and an energy efficient underfloor heating system.

This project consisted of the following

1 GSHP System comprising of 1 Danfoss DHP-L Heat Pump.
1,000 m of 40mm Ground source collector pipe
150m of 63mmØ Under Ground Reverse Flow Header Pipe.

Supplying 3 LTS-N (low temperature) Manifolds with enough hot water to feed 2065metres of our 16 x 2.0mm PE-RT tubing, covering 340m².

Natural Heat Recovery from the ground and Transferred through to the UFH system.

The solution provided by Thermo-Floor has resulted in the village halls underfloor heating system running solely on hot water generated by the ground source heat pump, requiring no additional energy from an external system.