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BOREHOLES & GROUND SOURCE

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Case Study

Ground Source Heat Pump System for Grade I listed building in Wiltshire

At a glance

- **Ground Source Heat Pump System**
- **Vertical Boreholes**
- **Grade I Listed 20,000 sq ft property**
- **Cost savings**
- **Environmentally friendly long term solution**
- **Renewable energy**
- **High ground water levels providing increased optimisation of our system**
- **Experience and expertise**

Objective

The owner wanted to create a GSHP system using boreholes to create a long-term fossil fuel free renewable solution for their home.

The house is a 20,000 sq.ft. Grade I listed private house built in 1598 and which was refurbished across 2015 and 2016 using LPG boilers for the heating and hot water.

About the project

In 2021 Nicholls designed, supplied and installed a 174kW ground source heat pump system with vertical boreholes to provide heating and hot water at our client's beautiful Grade 1 listed Elizabethan house, whose buildings are often used for commercial and domestic functions.

The borehole array is designed to sustain optimal efficiency for the GSHP system indefinitely. Our client sees it as a 100 year investment.

Using our expertise and knowledge of the geology of the area, we knew that the borehole array sees a naturally high volume throughput of ground water. The benefit of this is that it provides quick heat replenishment and optimises the system performance further.

"I am delighted with the quality of the installation and the after sales service. I chose Nicholls because the drilling was likely to be the most unpredictable and complicated part of the installation and that is the core strength of Nicholls. As it happened, we experienced serious issues with artesian water sixty metres down and it might have created a real problem if the drilling was being undertaken by a sub contractor to a heat pump installer. Nicholls had the experience to solve the problem and were able to thrown more resources into the project in order to complete on time."

Private Client, Wiltshire