

Raynham Hall chooses renewable energy

Grade 1 listed 17th century property, Raynham Hall, has invested in a new renewable energy heating system to cut costs and deliver more effective heating. The project, completed by Finn Geotherm, has seen the Hall replace its old and ineffective oil boiler with a new ground source heat pump.

Built in 1621, Raynham Hall is a spectacular property set in 5000 acres. It is lived in by Charles, the 8th Marquess Townshend, who inherited the property in 2010. The Hall also hosts a series of events each year including recitals and guided tours.

The annual heating bill of £36,000 was too expensive and the oil boiler desperately needed to be upgraded. Originally installed in the 1950s, the existing boiler was old, outdated, overworked and inefficient. It had been augmented over the years by several supplementary pumps to aid heat distribution and the pumps often fought against each other. A hot water tank in the top of the building was fed by the boiler at the bottom of the house, meaning it took hours to get any hot water.

After a thorough heat loss survey of all 62 rooms, Finn Geotherm specified 2 x Lämpöässä Eli90 ground source heat pumps with a 3000 litre thermal store to supply all heating for the Hall, as well as hot water for its 12 bathrooms. The ground source heat pump is fed by 10km of ground loop installed beneath grounds incorporating the old cricket pitch.

Since it was installed, heating costs at Raynham Hall have been cut by 64% and the amount of energy consumed has been reduced by 72.6%.

Lord Townshend, owner of Raynham Hall, said: "The previous heating system was terrible. However, results for

the heat pump so far have been extraordinarily good. The house is now very comfortable. Finn Geotherm wanted to deliver a heating system which would work with and enhance our everyday lives and this does exactly that. You put up with a lot when you live in a large house but there really is no need to go without adequate heating and hot water. It's a huge problem we've been living with which has just disappeared."

Working with Natural England and archaeologists to monitor the project, Finn Geotherm carefully designed and installed the system to ensure the exquisite architecture of Raynham Hall remains exactly as it was but, for the first time in its long history, the Hall is now properly heated.

Lord Townshend sums up: "This is the sort of larger period property that everyone tries to tell you can't be heated with a heat pump but my ground source system proves otherwise. I am delighted to be using modern technology to heat my 17th Century home – it is the perfect combination."

Key benefits

- Massive reduction in heating bills and energy use
- The hall now has heating and hot water throughout
- Qualifies for 20 year Non-domestic RHI scheme
- System will pay back in seven years
- No impact on the appearance of the property

