

Kingston Lacy



MGS Thermo-Loops® help 17th century National Trust property embrace 21st century sustainability

The National Trust's Kingston Lacy stately home will no longer burn 30,000 litres of heating oil every year following its switch to a renewable ground source heating system.

Almost 6,000m of MGS Thermo-Loops® have been installed to help extract warmth from the soil and heat the Grade 1 listed manor house and its courtyard buildings.

Challenge

Kingston Lacy is a stunning country house and 8,500-acre estate near Wimborne Minster, Dorset, which is run by the National Trust and open to the public.

It is one of the National Trust's most popular properties in the South West, attracting thousands of visitors to the beautiful house and its Japanese gardens, heathland, water meadows and Iron Age hill forts.

The lavish interior of the four-story home includes paintings by artists including Rubens, Velazquez, Van Dyck, Titian and Brueghel, and William John Bankes' personal collection of ancient Egyptian artefacts.

The stately home was heated by oil-fuelled boilers and storage tanks which had become unreliable, with an increased risk of breakdown or spillage.

As well as the high carbon emissions caused by burning fossil fuels, the heating oil used was proving very costly and the system produced inconsistent heat which was potentially harmful to the works of art on display.



Solution

The National Trust have removed the oil boiler and installed an extensive ground source heat pump system to provide heat throughout the country house and its courtyard buildings.

Almost 6,000m of MGS Thermo-Loops® have been installed in 32 vertical boreholes beneath the estate's overflow carpark.

The Thermo-Loops® were installed in the 180m boreholes drilled by the ADP Group.

Specialists spent more than two years conducting archaeological and ecological surveys to ensure the boreholes and complex pipework did not harm the historic site.

MGS Thermo-Loops® are made to Ground Source Heat Pump Association standards from PE100+ RC HDPE material and provide the ultimate performance for vertical ground source heat exchangers.

Within each 180m deep borehole, a liquid glycol is pumped inside the Thermo-Loops® absorbing ambient warmth from the ground. This is then transported back to the ground source heat pumps where it is condensed and passed through a heat exchanger to help provide the heat required for the building.

Products used

MGS Thermo-Loops®

Results

The new heat pump is anticipated to save around 57 tonnes of carbon emissions every year.

As well as greatly reducing heating costs, the more consistent and controllable warmth created by the system will help maintain better temperature and humidity levels for the furniture, décor and art housed within Kingston Lacy.

“ADP Group were appointed by ISO Energy to drill 32 x 180m at Kingston Lacy, for the National Trust. Having used MGS Thermo-Loops® extensively over the past 10 years, we felt comfortable with not only the quality on offer from MGS, but also their availability to deliver on time and with great product support, making their appointment as our primary material supplier for the project, an easy choice”

TOM PAGE,
MANAGING DIRECTOR,
ADP GROUP

COMMENT TO BBC:

“The new heat pump means we can more easily maintain the optimum environmental conditions for displays, ensuring that they can be enjoyed by generations of visitors long into the future.”

DR ELENA GREER,
CURATOR, KINGSTON LACY'S