

Heritage responds -
**Taking positive action
on climate change**

Case study

Wimpole Renewables

National Trust

Wimpole Hall is a Grade I listed mansion with a spectacular architectural pedigree; the newly installed heat pump system combined with the National Trust's largest solar PV scheme to date saves over 140 tonnes of CO² emissions a year.

Wimpole Hall is a mansion with a rich history of many different owners, all putting their mark on the architecture and interior design of the building. From Sir John Soanes Yellow Drawing room to delicate French porcelain figures and Rudyard Kipling's books, the newly installed heat pump system provides stable humidity conditions to protect the collection whilst reducing the Hall's carbon footprint. The Trust's largest solar PV scheme to date supplies the heat pump but also exports green energy to the grid.

Background

Wimpole Hall is a complex house with a spectacular architectural pedigree. Wimpole's interior is a rich mixture of mainly 18th-century decoration, including a spectacular Baroque chapel with trompe l'oeil murals by Thornhill.

Wimpole has long been an estate able to provide its own resources. A look at the Ordnance Survey map from 1903 tells you that, as well as the kitchen garden, farms, reservoir, smithy, woodyard, claypits, and fishponds, the mansion was once lit using gas produced on site.

Image:

National Trust

Over a century later, Wimpole is now producing a significant proportion of its own heat and electricity through the marriage of two renewable technologies:

- 180kW of ground source (borehole) heat pumps providing heating to the mansion's showrooms, staff flats and office, as well as heating and hot water for the Old Rectory Restaurant.
- 200 kW ground mounted photovoltaic panels adjacent to the new Visitor Reception and car park

The Wimpole team were very engaged in the project. The project team recognised that it was very important to involve staff and volunteers from the beginning and provide them with a good understanding of the work involved and the reasons behind it. Pre-planning and design and plan stage research and work was invaluable and vital to the success of the project.

Projected results

Significant reduction in Scope 1 carbon emissions, expected to be in the over 200 tonnes of carbon each year. Removal of risk of leakage or spill of 35,500 litres of oil used to run the former boiler each year.

Top tips

- Ensure contractors are aware that mapping is indicative, not definitive.
- The timetable for planning process is subject to local planning department changes.

Key takeaway

Get everyone involved! The public and property are excited about works like this, and it also provides an opportunity to share the reasoning behind it with visitors. For example, discussing the link between heating and conservation and what the National Trust is doing to ensure its sustainability for the future.

Next steps

Thanks to the Green Recovery Challenge Fund (part of the National Lottery Heritage Fund), we will be continuing to audit and reduce carbon emissions in our operations at Wimpole as well as sequestering carbon in our land. This will include creating woodland, woodland pasture and agroforestry on 120Ha of land on the Wimpole estate.

The renewables in place at Wimpole are part of a wider commitment and project to be carbon net zero across the operational line at the Wimpole Estate.

We have been tracking and reducing carbon across food and beverages, heating, lighting, electrification of equipment and in our gardens, farm and countryside.

Read more about the project here: www.nationaltrust.org.uk/wimpole-estate/projects/going-green-renewable-energy-at-wimpole.

