

HEATWEB

CASE STUDY · HEAT NETWORKS & COMMERCIAL

National Trust, Morden Hall Park

Renewable heat for a historic stable yard

AT A GLANCE

CLIENT
National Trust

LOCATION
Morden Hall Park, south west London

BUILDING
The Stable Yard, a historic building

SYSTEM
Xcel HEATBANK® thermal stores with solar panels, wood-fired boiler and heat pump

RATING
BREEAM 'Excellent'

HEATWEB SERVICES
Co-ordination of all renewable energy elements, project management

At Morden Hall Park in south west London we co-ordinated every renewable energy element of the Stable Yard redevelopment. Two HEATBANK® thermal stores hold heat from solar panels, a wood burner and a heat pump, and the building received a BREEAM 'Excellent' rating.

The challenge

The National Trust aimed to generate half its power from renewable sources by 2020, under a plan to reduce energy consumption by 20%. At Morden Hall Park the Stable Yard, once a store for equipment and machinery, was redeveloped with both modern and more mature renewable energy methods.

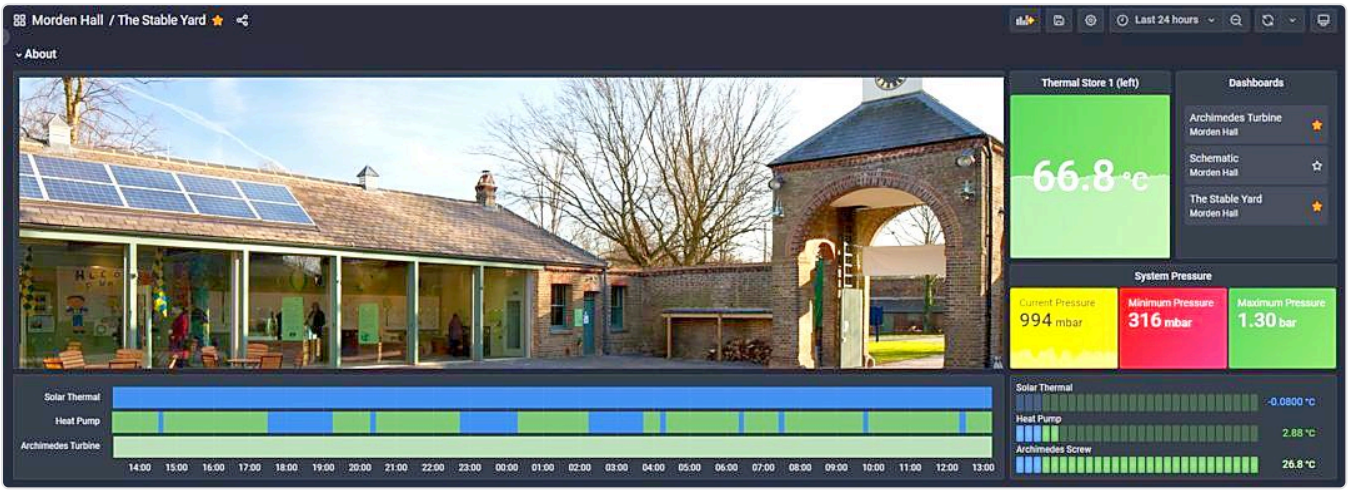
Many companies were involved, from architects and low carbon consultants to the lead construction partner and the underfloor heating, wood burner and heat pump providers, all working within the needs of DEFRA and health and safety requirements.

What we did

- Co-ordinated all the renewable energy elements, with project management by Richard Hanson-Graville.
- Showed the Trust's building surveyor, who had a HEATBANK® system at home, how it would be adapted to suit this property.
- Built the system around two 475 litre HEATBANK® tanks, fed by solar panels, wood burner and heat pump depending on the weather and time of year.
- Kept ongoing communication with every member of the project team.

What we found

- An unvented cylinder preheats incoming cold water with the solar panels before it goes to the tanks.
- The HEATBANK® stores renewable heat until needed, topped up by the heat pump, for underfloor heating and taps.
- The banks and cylinder sit neatly beside the renewables showroom, visited by adults and school parties.



Live dashboard from the Stable Yard at Morden Hall.

475 L
each of the two HEATBANK® thermal stores

20%
reduction in energy consumption under the Trust's plan

10%
only the top 10% of new non-domestic buildings rate BREEAM 'Excellent'

The outcome

- The Stable Yard received a BREEAM 'Excellent' rating, very rare for a refurbished or historic building.
- The Trust reports that the installation went very smoothly and the system pretty well runs itself.
- As a field trial in our SBRI open-source controls project, the plant now reports live to a cloud dashboard.

> "The Stable Yard just used to be the storage area for our equipment and machinery. Now it has been transformed … The installation went very smoothly and the system pretty well runs itself."
>
> **Maureen Patel, National Trust at Morden Hall**

About Heatweb. Heatweb Solutions is a UK provider of engineering support for heat networks and commercial HVAC: monitoring, fault diagnostics, technical compliance, optimisation, commissioning and maintenance.

Talk to an engineer

The full case study: www.heatweb.co.uk/blog/case-study/put-your-trust-in-specflue/

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