



## National Trust

### TYNTESFIELD HOUSE & HOME FARM

As part of the huge restoration undertaken by the National Trust throughout this historic building, a decision was made to install a biomass boiler.

This now provides a gentle background heat to preserve the delicate fabric of the Grade I building and its contents. A new oil boiler provides a back-up but the peak load is supplied by the biomass boiler.

Rural Energy installed the 250kW wood pellet burning Herz BioMatic biomass boiler in the old sawmill shed which is also home to a number of bats. The installation is unusual in that the shed is divided diagonally so that both the bats and the biomass boiler can be accommodated.

The pellet feed screw passes through a corner of the bat house but otherwise the area will be undisturbed, although consideration was originally given to routing the flue through the bats' home to provide background heat for their comfort!

All major components are sited on separate raised plinths to avoid damaging more of the existing natural earth floor than is necessary.

The pellets are stored in an outside aluzinc prefabricated silo capable of containing 25 cubic metres which gives a minimum of 3 weeks supply. A dust sock is attached to the vent pipes, primarily for safety, so that when the fuel store is filled with pellets it prevents any dust particles from escaping.

The boiler is estimated to cut CO<sub>2</sub> emissions by 141 tonnes per annum, totalling 564 tonnes by the end of 2014.

Due to the success of the project, a Herz BioMatic 220kW boiler was installed by Rural Energy at Tyntesfield Home Farm later that year.

### CASE STUDY FOCUS

Supplying a  
**250kW**

Herz® BioMatic

CO<sub>2</sub> emissions cut by  
**404 tonnes**

### SYSTEM SUMMARY

Boiler Type: Herz® BioMatic

Fuel Type: Wood pellet

Fuel Store: Energy centre

0203 189 0654 / [ruralenergy.co.uk](http://ruralenergy.co.uk)

**Rural Energy**  
INSTALLING BIOMASS SINCE 2002





## TYNTESFIELD HOME FARM

As part of a £20m restoration project and a wider estate masterplan, a second biomass boiler was specified for Tynesfield Home Farm.

Home Farm has been converted into a vast facility including a shop, restaurant, second-hand bookshop, garden shop, wildlife hub, straw-bale ticket and information building and farm-themed play area.

The Home Farm is now a warm and welcoming visitor hub with an array of sustainable features including solar panels, daylight led lighting controls and the 220kW Herz BioMatic.

For this project, Rural Energy engineered a solution that was suitable to be retrofit into the existing piggery building. The building has been converted into the energy centre, with a well-sized plant room and a v-profile fuel store built in.

The biomass boiler is used as an educational tool for visitors who wish to learn about the Trust's sustainability efforts.

This installation runs on wood pellet fuel. There were several reasons behind choosing this fuel over wood chip. The energy centre site is part of the Home Farm facility and therefore wood pellet deliveries offered better safety and less dust. Furthermore, the pellet deliveries would not be as disruptive or space-hungry as a wood chip delivery, and with the limited access pellet fuel is a more flexible solution. Finally, with the old piggery building chosen as the energy centre, a v-profile fuel store required less space, overall groundworks and time on site building than a typical wood chip store, making it easier to retrofit.

*“We are really looking forward to seeing the benefits of a more efficient system.*

*It's fantastic that we can now use modern technology to conserve the house and its collection into the future and do our bit for the environment too.”*

**Sarah Schmitz**  
House Steward  
National Trust