



Case Study

LARGE COUNTRY ESTATE, HEREFORDSHIRE

BIOMASS INSTALLATION

CASE STUDY DELIVERED BY



OVERVIEW



This distinguished 17th-century estate stands as a testament to architectural evolution, having undergone significant enhancements over the centuries. Originally built in the 1600s, the property saw the addition of an ornamental garden in the 18th century, enriching its aesthetic appeal. By the 19th century, a grand park with a serpentine drive was introduced, further elevating the estate's grandeur. The property encompasses approximately 11,550 square feet of living space and is set within a plot spanning around 7,051 square meters.

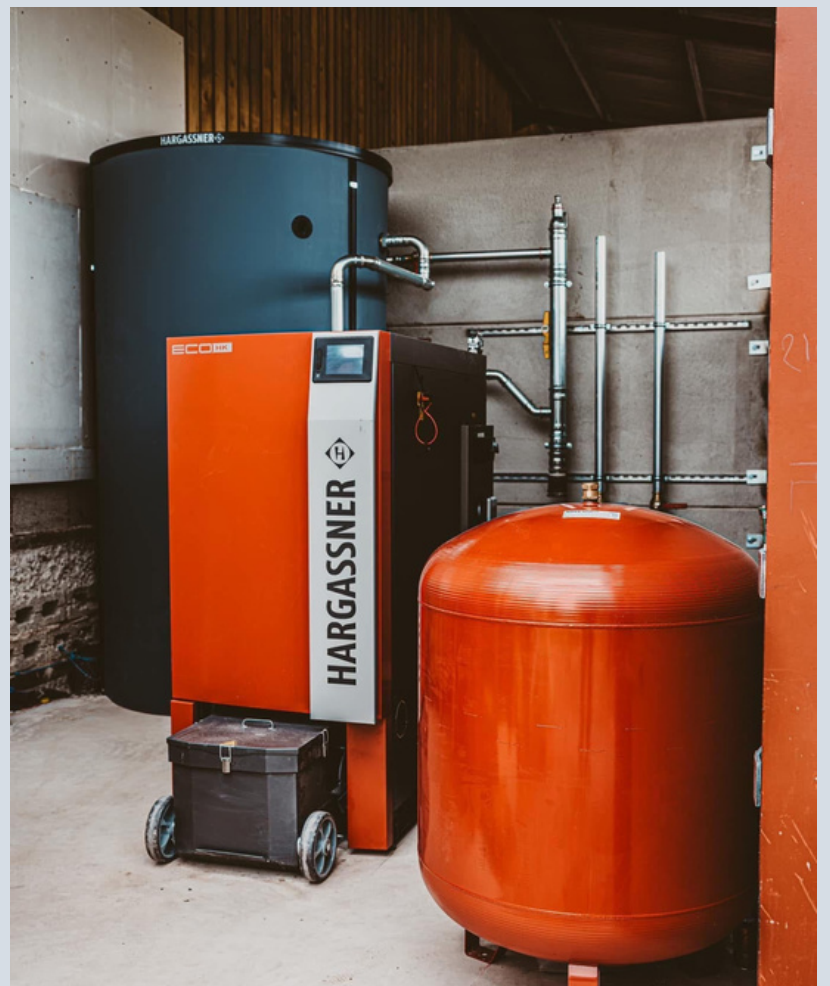
The estate is situated in a region known for its rich history and picturesque landscapes. The surrounding area has deep historical roots, with records dating back to medieval times. A notable local landmark, a Norman-era church, reflects the historical significance of the community.

The climate in this area is characterized by a temperate maritime influence, with mild summers and cool, cloudy winters. Temperatures generally range from 35°F (2°C) to 69°F (21°C) throughout the year. Summers tend to be partly cloudy, reaching average highs of 68°F (20°C) in July, while winters are often overcast, with lows averaging 35°F (2°C) in January. Rainfall is fairly consistent year-round, with the highest precipitation typically occurring in October, averaging 2.4 inches (61 mm).

With its rich history, refined architectural details, and serene countryside setting, this estate offers a perfect blend of historical charm and natural beauty.



THE INSTALLATION



MJS Energy recently undertook a comprehensive renovation of a large country estate that had fallen into disrepair. The estate's owner sought an efficient and sustainable heating solution to restore the property to its original living conditions. Given the estate's extensive forestry resources, the decision was made to install a biomass heating system, enhancing self-sufficiency and reducing carbon emissions.

Project Overview:

Heating Solution: Installation of a 100kW Hargassner Eco HK wood chip boiler.

Scope of Work: Design and installation of a new heating and plumbing system throughout the estate, optimized for maximum efficiency.

Hargassner Eco HK 100kW Wood Chip Boiler:

The Hargassner Eco HK series is renowned for its advanced combustion technology and high efficiency. Key features include:

Unique Step Grate System: Ensures optimal combustion and fuel efficiency.

Automatic Fuel Quality Detection: Adjusts combustion parameters based on fuel type for consistent performance.

Energy-Saving Ignition: Consumes only 300W, reducing operational costs.

Integrated Heat Exchanger Cleaning System: Maintains efficiency and prolongs boiler lifespan.

This boiler allows the estate to utilize its own wood resources, supplemented by external purchases as needed, promoting sustainability and cost savings.

Weather Compensation Integration:

To enhance energy efficiency, the heating system incorporates weather compensation controls. This technology adjusts the heating output based on external temperature fluctuations, ensuring consistent indoor comfort. By proactively modifying the boiler's flow temperature in response to outdoor conditions, the system reduces energy consumption and operational costs. Studies indicate that such systems can achieve energy savings ranging from 10% to 40%.

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Outcome:

The integration of the Hargassner Eco HK 100kW wood chip boiler, combined with a modern heating and plumbing system featuring weather compensation, has revitalized the estate. The property now benefits from a reliable, efficient, and eco-friendly heating solution that leverages its natural resources, aligning with the owner's vision for sustainability and self-sufficiency.