

CASE STUDY:

Hay House Nursing Home



RHI PAYMENTS AND FUEL COST SAVINGS UNDERPIN CLIENT'S HIGH LEVELS OF RESIDENTIAL CARE

SUMMARY OF PROJECT:

- 150kw Lindner & Sommerauer Biomass Boiler.
- Distribution pipework including all internal connections to heating systems.
- Runs on Wood Pellets.

KEY OUTCOMES:

- **Biomass Fuel Cost Reduction;** 20-40% over oil.
- **CO₂ reduction;** 96% or 66 tonnes versus heating oil (Biomass Energy Centre)
- **RHI Accreditation;** soon to be RHI Accredited and will generate additional revenue stream for the care home owners

Financial Benefits:

- RHI Payments and fuel cost savings will make the project both sustainable and financially viable.

ABOUT US

MJS Mechanical and Electrical Solutions are a Midlands-based mechanical, plumbing and electrical, design and installation company.

MJS regularly carry out installations for other renewable energy companies throughout the UK, offering them access to an experienced team of installers, builders and groundworkers to assist with their project delivery if additional capacity is required.

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KEY FACTS*

Project Included:

Linder & Sommerauer 150kw biomass boiler system. Flue system, thermal store and distribution pipework including internal connections to heat exchangers also included.

Fuel Consumption:

48 tonnes of wood pellets (based on a system of a similar capacity, in a smaller application)

Fuel Cost Saving:

Wood Pellets 20-40% vs oil
(Source; Biomass Energy Centre)

CO₂ Saving:

Up to 98% or 66 tonnes vs heating oil
(Source; Biomass Energy Centre)

RHI Payments:

A project of this size would gain approximately £17,345 every year for 20 years, index linked to inflation.

Total Project Price:

£105,000

Payback Period:

4-5 years (combining RHI income & fuel cost saving)

*Financial information not specific to this project – figures are based on an average of several typical products of this size. Current information on RHI payments for guidance only, not to be considered a guarantee.

Background

Hay House is a family- owned and run nursing home specialising in the care of people with dementia and other mental health conditions.

Resident comfort is a priority for the owners, who were expecting large heating bills from the three old and inefficient oil boilers they were using to heat this Grade II listed building.

The Requirement

In partnership with Rainbow Heat and Power & Wye Valley Energy, we won a competitive tender for the supply and installation of a 150kw Linder & Sommerauer biomass boiler which would need to run on EN Plus grade wood pellets.

Two 2,000 litre buffer stores, all associated fitting accessories and a wood pellet fuel suction system were also included. As part of the project, we also managed Hay House's RHI application.

Complete Biomass District Heating Package

We installed the boiler, fuel delivery system and buffer tank in the plantroom as well as the heat main to connect the main farm house.

The Renewable Heat Incentive

A project this size would expect to receive RHI Payments of approximately £17,345 every year for 20 years, index linked to inflation.

They would also expect to gain a fuel cost saving of approximately £3,500 per annum. The fuel cost saving will deliver a payback on the capital cost in 4-5 years.

Biomass heating Summary



- 150Kw Lindner & Sommerauer biomass boiler.
- Runs on wood pellets.
- Fully automated wood pellet fuel system.
- 2 x 2,000 litre buffer tanks.
- 18m of underground heat main.
- Automatic ash extraction system.
- RHI eligible ultrasonic heat meters complete with certification.
- 150kw Consumer interface Unit fitted into main building.
- Biomass Boiler linked to existing heating and hot water system in the farm house.
- High efficiency, low energy main system pump.
- Full assistance with RHI application including schematic drawings,
- Bespoke boiler house construction.
- Commissioning, programming and end user training.



Contact Us to Discuss
Your Biomass Project

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