



HEAT & POWER

HAY HOUSE CARE HOME DEVON CASE STUDY



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

SUMMARY OF PROJECT:

- 150kW Lindner & Sommerauer biomass boiler.
- Runs on wood pellets.
- Distribution pipework including all internal connections to existing heating systems.

KEY OUTCOMES:

- **Biomass Fuel Cost Reduction;** 20-40% vs heating oil.
- **CO₂ Reduction;** 96% or 66 tonnes versus heating oil.
- **RHI Accredited;** Soon to be accredited and will generate additional revenue stream for the care home's owners.

FINANCIAL BENEFIT:

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

ABOUT US

Rainbow Heat and Power provide biomass heating solutions for home, business and agriculture (often using district heating). From design to commissioning, we have the experience to provide a complete solution.

WE CAN HELP

- Reduce fuel costs by up to 80%.
- Reduce CO₂ emissions by 96%.
- Gain Renewable Heat Incentive (RHI) compliance.

LET'S TALK ABOUT YOUR BIOMASS PROJECT

TEL; 01884 212 044

HELLO@RAINBOWHEATANDPOWER.CO.UK

WWW.RAINBOWHEATANDPOWER.CO.UK

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 experiencing large heating bills from the three old and inefficient oil boilers they were using to heat this Grade II listed building.

THE REQUIREMENT

We won a competitive tender for the supply and installation of a 150kW Lindner & Sommerauer biomass boiler which will 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, Rainbow 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 house.

FINANCIAL BENEFIT

A 150kW project of this size would expect to receive Renewable Heat Incentive (RHI) Payments of approximately £17,345. per annum and to gain a fuel cost saving versus oil of 20-40% or approximately £3,500 per annum.

The fuel cost savings and RHI payments combined will deliver a payback on the capital cost of the equipment in 5 years.

KEY FACTS*

PROJECT INCLUDED

Lindner & Sommerauer 150kW biomass boiler system. A flue system, thermal store, distribution pipework (including internal connections to heat exchangers) also included.

FUEL CONSUMPTION

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

FUEL COST SAVING

Wood pellets; 20-40% versus heating oil (*Source; Biomass Energy Centre*).

CO₂ SAVING

Up to 96% or 66 tonnes vs Oil (*Source; Biomass Energy Centre*).

RHI PAYMENTS

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

TOTAL PROJECT PRICE

£105,000.

PAYBACK PERIOD

5 years (combining RHI income & fuel cost saving).

*Financial information not specific to this project – figures are based on an average of several typical projects of this size. Current information on RHI payments for guidance only.

BIOMASS HEATING SUMMARY



- 150kW Lindner & Sommerauer biomass boiler.
- Runs on wood pellets.
- Fully automated wood pellet fuel delivery system.
- 2 x 2,000 litre buffer tanks.
- 18m of underground heat main.
- 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.
- Automatic ash extraction system.
- 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.



LET'S TALK ABOUT YOUR BIOMASS PROJECT

UNIT 5, CEDAR COURT
TIVERTON BUSINESS PARK
TIVERTON, DEVON EX16 6GT
01884 212 044
HELLO @RAINBOWHEATAND POWER.CO.UK

