



Wood pellet boiler

Isle of Eriska Hotel, Argyll

Why use green heat?

The Isle of Eriska Hotel is situated on its own island, in the stunning scenery of the Scottish Highlands. The desire of the Eriska Hotel to improve its environmental performance and also lower heating bills, led to the decision to install two wood fuel boilers to heat the main hotel building as well as the swimming pool. Due to the lack of a suitable wood chip supply in the Oban area, and the nature of the heating requirements of the hotel, it was decided that wood pellets should be the source of heat for the hotel. The advantage of wood pellets is that the fuel comes ready dried and is easy to store. The new wood pellet boilers each have their own pellet store and vacuum pump supply system, and new buffer tanks were installed for hot water and central heating. The internal wood fuel hopper avoids the need for an external boiler house and the boilers make use of existing traditional style chimneys.



"We have managed to both reduce our carbon footprint and also control our energy bills. Support from ALI Energy and the carbon trust was essential in making the decision to install the wood fuel boilers. Advice and support since making this decision has insured that we now have a long term sustainable answer to our heating requirements."

Lessons Learned:

- In order to avoid running out of wood pellets this needed a good system of estimating pellet consumption and when re-fuelling is needed.
- Control dust from the pellets with a capture chamber as part of the blower system input
- Adjustments were needed to the fuel auger feed mechanism, to prevent weight being pressed onto the auger. This allowed the pellets to be drawn from the chamber more effectively
- Regular cleaning of the boiler prevents long term issues which affect the boiler efficiency

KEY FACTS

- **More sustainable source of heat**
- **Guaranteed quality standard of wood fuel**
- **Fully automated wood fuel boiler**

For more information contact Use Green Heat

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Images supplied by
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Wood fuel delivery

- Wood pellets can be delivered in bulk, and blown into a fuel store using a specialised blower vehicle, which uses a blower system attached to the vehicle.
- Wood chips can also be delivered using this a blower vehicle, such as for smaller wood chip boilers with limited space for fuel storage or internal fuel stores.
- Buying in bags of pellets costs more per unit than buying pellets in bulk.
- Wood pellets are around 10% moisture content and are manufactured in Scotland.



Facts and Figures

BOILER

Max output: 70kW

Manufacturer: Hoval

Fuel type: Wood pellet

Moisture content: 10%

Installation date: May 2010

System setup: Two 70kW boilers with oil-fired topup/ backup boilers

Energy consumption: 276,000 kW-h per boiler per year

Wood fuel storage capacity: Approx 6 tonnes of wood pellets

INSTALLATION COSTS

Installation cost: £40,000 for each system including the boiler, fuel store, and accumulator tank

Installer: HW energy

Funding source: Scottish Biomass Heat Scheme

Support rate: 47% of project costs with interest free loan from the Carbon Trust

OPERATING COSTS

CO2 savings: 170 tonnes per year

Wood pellet cost: £17,000 per year for two boilers

Maintenance costs: £5,000 per year for two boilers

Cost savings: £10,000 per year for two boilers (not including loan repayment)

