CLOUDHOUSE CAFE & GALLERY
Stow, Galashiels

Why Use Woodfuel?
The building comprises of a café and exhibition space and the pellet boiler is situated in the main café area. To make it an attractive feature in the café area, a boiler with a glass door was chosen so that the burning chamber can be seen. Before being developed for its present use, the building was unoccupied and without heating. With no mains gas in the area there was a strong impetus to find a financially viable means of heating the space. The owners were also keen that the new heating system was sustainable and biomass was considered the most suitable option for both the geographic location and the interior space.

Key Benefits of this Woodfuel Installation
// Very economical solution for off gas mains areas
// Carbon lean technology preferred by owners
// Clean and easy fuel to handle
// Added value to customers and visitors

System Accolades
The boiler provides heating via a wet central heating system, including under floor heating and domestic hot water. The system was part of a larger process of development, with the only significant change to the structure being the provision of a flue. Planning constraints were therefore minimal. The first deliveries of pellets came from Argentina and Ireland but the café now has a secure, local supply of good quality pellets. The performance of the system has been good and the owners are very satisfied.

The small internal pellet store holds 1-2 days of pellets, and allows the boiler to be positioned in rooms and buildings with limited space for a larger fuel hopper.

“We are very enthusiastic about the project and are keen to recommend the system to others. I am looking to install a woodfuel system in my house after seeing it work so well at the café.”
Lessons Learned:
// Seek local fuel supply to maximise carbon savings
// Installation and ongoing service package should be arranged together
// Using an experienced woodfuel installer will help guarantee a good installation
// If repeating the project Cloud House Café would have installed radiators, since they find that when it is very cold it takes a long time for the Café to heat up through the floor

What is under floor heating?
// Warm water is circulated through pipes or tubes that are laid into the floor

Advantages of under floor heating
// Large radiating area allows efficient heat retention
// More economical over life cycle of technology [pipework can have a lifespan of up to 100 years
// Under floor heating loops are practically maintenance free if installed without any joints
// Energy savings of up to 40% can be achieved over traditional radiators

Renewable Heat Incentive
// When this woodfuel system was installed, the UK Government Renewable Heat Incentive (RHI) scheme did not exist. The RHI is now available and commercial woodfuel heating installations can receive payments based on metered heat produced for 20 years
// If this project were eligible for the RHI, it could generate up to £1,840 of income per year, based on the maximum biomass tariff of £0.086 per kWh, assuming the boiler is run at maximum capacity for 800 hours of the year
// This income could be combined with any savings made over displacing fossil fuels to give a potentially very attractive payback period
// Projects installed pre July 2009, or that have received public grants for their boilers from other sources (unless they have paid them back) are not eligible for the RHI

See the usewoodfuel website for more details on the RHI and how to apply: www.usewoodfuel.co.uk

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BOILER
Application Cafe and Gallery Heating and Hot Water Provision
Max output 27 kW
Model Lucrezia Idro Pellet Boiler
Fuel type Wood pellets
Moisture content 10%
Installation date November 2007
Backup system None
Woodfuel store capacity 1-2 days
Fuel loading interval Every day when using at full capacity
Annual woodfuel use 4.5 tonnes
Accumulator tank 700 litres

BUILDING
Heated area 60 m²
Heated volume 145 m³
Building fabric 16th Century stone
Building use Café and Gallery space

INSTALLATION COSTS
Boiler system £7,600
Funding source Scottish Biomass Support Scheme
Funding support rate 50% of additional costs of woodfuel system

RUNNING COST
Woodfuel cost £1,000 per annum

www.usewoodfuel.co.uk