

# Reekitlane **DUAL FUEL BOILER & SOL**

THERMAL CASE STUDY



Dave and Lesley Ellis were living in Hampshire and had just retired when they decided to make the bold move to relocate to Scotland. Not only that, they also decided to take on their very first project and build a house from scratch. This house would not only be beautiful but also sustainable, using some of the best eco-friendly techniques around.

They were very thorough and did lots of research including attending a biomass course. They already had access to woodland so already knew they wanted to install a combination boiler that would run on both logs and pellets. They visited a few different companies where Athol's name always seemed to pop up so they contacted AD Heating. They visited the showroom and Athol took them out to visit some similar installations and they were very impressed with the SOLARFOCUS boiler. They had ample time to research this area whilst the house was being planned and it was good to know that all the information that was given by AD Heating made complete sense to them. They felt safe that their installation was in the hands of a professional, local and reputable team.

It was estimated that the property requires 26,762Wh for annual heating and hot water. If the property was to be running on oil the carbon output would be 1.6 tonnes per year by running on pellets this would mean a reduction of some 1.55 tonnes of carbon output. Considering they now live in a much larger house their fuel bills have been dramatically reduced and in fact have been halved. From March to October they do not use the heating and the boiler is hardly used as the solar thermal panels produce masses of hot water.



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### **KEY FACTS**

Boiler:	SOLARFOCUS Therminator II
Fuel Type:	Log & Pellets, with solar panels
Installation:	February 2013
CO2 Savings:	1.55 tonnes per year
RHI Income:	£24,000
Project Cost:	£36,000

This beautiful home recently won the award for "sustainability" in the **Aberdeenshire Design Awards 2014.** 

"This contemporary property demonstrates a strong emphasis on sustainability principles with a combination of energy saving measures and locally sourced materials."

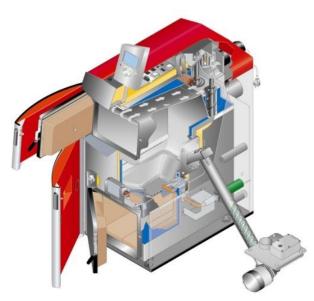
"The installation went without a hitch and their after sales customer service has been exceptional."



The SOLARFOCUS Therminator II 40kW boiler has an integral fueling chamber that is 186 litres and a rated output of 36kW when running on logs. The boiler is connected to a 2000 litre thermal store which allows the thermal store to hold approximately 70kWhrs of energy every firing. The boiler is also capable of running automatically on pellets via a vacuum system and Schellinger Pellet Mole.

Dave and Lesley also had installed four SOLARFOCUS solar thermal panels. The SOLARFOCUS CPC panel is unique in its design as it is the only flat panel to have a concave mirror behind the collector tubes and operates in quasi-vacuum state due to the one way valve letting excess pressure out when the panels get hot, creating a vacuum in the panel.

The solar charges the hot water tank as a priority and then charges the thermal store so as not to lose any potential solar gain.



#### **About AD Heating**

Established in 2008 the company specialises in the design and installation of renewable energy technologies for both domestic and commercial properties.

Supplying quality products is what sets AD Heating Ltd apart from others in the biomass market.

To find out more, please call us on 01651 891907, email info@adheating.co.uk or visit our website and Facebook page.

#### **SOLARFOCUS Therminator II 40kW**

#### Only ONE combustion chamber

- The unique design of the Therminator II allows you to burn pellets and log wood in one combustion chamber.
- The generously dimensioned stainless steel filling chamber is designed to accommodate logs with a length of half a metre.

#### **Perfect combustion technology**

- Thanks to the downfiring combustion technology in conjunction with the lambda sensor and the induced draft fan.
- Highest level of efficiency with minimum emission values.

#### **Ember retention**

- The boiler ignites the log wood fully automatically via a hot air fan at the times you set.
- You can select the ember retention function –
  embers then remain in the combustion chamber
  on the grate for a certain time to facilitate firing
  up after a complete burn out.

#### Ash box

- Large ash box, compressed fireclay bricks.
- Extends the intervals of time between emptying the ash. Easy servicing and a long life cycle.

#### Heat exchanger cleaning

- Specially designed turbulators automatically clean the walls of the heat exchanger at pre-set intervals. A clean heat exchanger saves fuel.
- Automatic means automatic a constant level of efficiency saves energy costs. No manual after cleaning needed.

## **Ignition**

- The boiler is equipped with a fully automatic ignition.
- This means that the boiler is not only fully automatic at the time predefined by you in automatic operation with pellets but also if you fill the boiler with logs.