

Modern ‘slow heat release’ core to Georgian home

George Scholes has been a regular customer for the Studley-based stove showroom, the Heat Store where he has grown to be a friend of David Ashmore, the showroom’s owner and proprietor of a number of other businesses based at the Company’s site in the Warwickshire town. So, when David wanted someone to test his innovative, new Ecco Stove ‘slow heat release’ stove he turned to George to test one in George’s recently updated Georgian House in North Oxfordshire.

The Eccostove is a clever design, conceived by David Ashmore, to create a stove that stores heat following the burn of a full load of wood fuel and then continues to release heat for at least twelve hours after the stove had gone out. Slow heat release is not a new concept for stoves but David’s design, crafted in silicon carbide, avoids using soapstone or ceramic blocks which are not necessarily suitable for UK taste and the UK market. The Ecco Stove works well in both conventional house designs where doors can be left or open plan properties, as the heat generated by the stove is wafted around the home on air currents that really do create comfort conditions in nearly every room.

After David Ashmore’s description and demonstration, George Scholes was taken by the Eccostove concept and decided that it would be an ideal heat source for the three story part of his period house which is a combination of original Georgian core plus converted barns. He decided to site the Ecco Stove in the sitting room, from which one of the properties three staircases leads to the bedrooms used by George’s children. Installation of the stove, undertaken by the Heat Store’s HETAS-trained engineers, was quick and simple as it used one of the original chimneys of the house.

At David Ashmore’s request, George kept a log of how and when the stove was used including the amount of wood consumed in each ‘burn’ and the temperatures achieved in each room over the hours after the stove was operated. These showed that all the bedrooms achieved and held a temperature of at least

The Ecco Stove uses a labyrinth of flue ways and air channels constructed into the body of the appliance to extract as much heat out of the flue gas (smoke) before feeding it up the flue to the atmosphere. This keeps pollutants down to the bare minimum. As much heat is extracted from the flue gasses as possible to heat as much of the building as possible, rather than the just room the stove stands in.

Innovative use of Silicon Carbide as the whole structure of the stove, incorporating the unique benefits of the material produce a very high temperature in the combustion chamber (typically 900-1100°C) and a catalysing effect to consume the volatile elements in the products of combustion within the Ecco Stove before they exit to atmosphere.

Silicon Carbide has the characteristic of absorbing heat and releasing it slowly. European CE Standards tests carried out on the Ecco Stove prove it still releases 25% of its absorbed heat 7 hours after running up to temperature, but typically the fabric of the building is warmed and even a lower heat release will keep a well insulated building up to temperature 14 hours after 20kg of wood has been burned (in 2 x 10kg batches).

The stove’s output is tested and verified as 4 to 11kW.

70⁰F even in the intensely cold weather experienced last winter leaving George delighted with the performance of the stove.

As George Scholes explained “I’ve purchased a number of stoves from the Heat Store over the years and the products and the service have always been excellent. I was happy to help David Ashmore to test the Eccostove under real life conditions and I’m delighted at how well it’s heated the house over two really hard winters.

My figures showed that it worked just as well as David had promised. It really is an ideal design for properties like mine where the heat can rise up through the building to warm the rooms. Wood fuel can be purchased quite economically in our part of North Oxfordshire and we have quite a lot growing in our large garden”. As if to illustrate this point, the local electricity utility were busy cutting the tops off trees that had grown up to interfere with the supply lines.

The Eccostove is available in two outputs; the E850 with a maximum rating of 11kW per hour and the E678 which is intended for slightly smaller homes which has an output of 9.4kW per hour.

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As a result, the efficiency of the stove is tested at 85.3% with a carbon output to atmosphere of only 0.24% average. The Ecco Stove efficiency satisfies the UK’s Department of the Environment, Farming and Rural Affairs’ (DEFRA) smoke control regulations.

Although the Ecco Stove is larger than many others it can be installed in a small room without overheating it because it gently projects its heat over a much larger area than a convention steel or cast stove. The room it stands in will not be hotter by more than 1 or 2°C than surrounding areas (if doors are left open).