



Moor Sustainable CIC



Esk Valley and Coast Green Open Homes

Saturday 5th and Sunday 6th April 2014

1860s stone built house



Information on this home

This is a stone built house, built in the 1860s. It has an extension which was added as a granny flat in mid 1990s. Currently, the main part of the house is heated using a) oil powered Rayburn that uses around 1,000 litres per year, b) Multi-fuel stove with back boiler c) one storage heater in the main living room as this doesn't have a radiator so doesn't get warmed if there is no fire. The extension has only storage heaters so we want to extend the radiators into there when we decide what to do regarding a pellet boiler that would replace the Rayburn (saving £600 in oil) and the Storage Heaters (saving £500 in electricity). The solar hot water has reduced our use of oil by 500 litres mainly in the summer (saving £300 per annum) so we don't use the Rayburn at all for a few months.

Low-cost improvements

Loft has 10cm Sheep's wool insulation in extension roof space. Main house not possible to insulate further due to being boarded out.

Costs:- £200

'Big' insulation works

Internal wall insulation in kitchen

Year of installation:- 2012

Installer:- Local builder, electrician and plumber

Costs:- £2,000 (included improvements)

Issues to consider

Better to do this in summer, when walls are dry. It is a lot of hassle as all sockets, wall fittings, water fittings etc have to be moved.

Glazing

Year of installation:- 2012

Installer and Supplier:- Birch Joinery, Whitby

www.birchjoinery.co.uk/

Costs:- £700 each at front, £300 at back

Issues to consider:- Hard/Soft Wood. Do you want a vent including?

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Renewables:- heat

Solar Thermal

Year of installation:- 2009

Installer :- Elf Eco Renewables, Redcar
www.elfeco.co.uk/

Costs:- £3,500

Grant scheme :- Small ROC payment
£60 per annum.

Issues to consider:- Probably need a new hot water tank, fit an immersion to top-up when not enough sun to get hot enough. Initially we only had 10 tubes which wasn't enough for the 210 litre tank, so we had to add 5 more.

Wood Burning Stove

Year of installation:- pre 1999 (came with the house)

Manufacturer :- Hunter
www.hunterstoves.co.uk/

Technical details: - Multifuel but mainly used to burn logs

Issues to consider:- Do you want a stove with a back-boiler or just a room heater?

Renewables:- electricity

Solar Photovoltaic

Year of installation:- 2010

Installer :- Elf Eco Renewables, Redcar
www.elfeco.co.uk/

Costs:- £10,000

Benefits: £900 income per annum (plus electricity off-set) from FIT payments for generation and electricity export. Due to pay off capital outlay in 2020.

Technical details:- 10 × 185 W panels giving total peak output of 1.85 kW

Personal insights

Dry-lining in Kitchen and sitting room. Condensation and mould on the walls in the kitchen led us to install two extractor fans (should have been more powerful than 60w) and then to try dry-lining. The sitting room was much easier as it was only two electric sockets to move. The kitchen was more hassle than expected and may have been easier to employ a single company to do it all. It took over two weeks to sort out and we had problems re-wiring the hot water controls (my fault for not recording how it was set up). It took three lots of electricians to sort – Brian Mortimer Sleights was the best. We notice the kitchen and sitting room are warmer now in the mornings but hard to say how much it saves us. If it saved 1 kwh per day of electricity, it would take 32 years to pay back, but we do have a warmer house. Some of the cost was to improvements e.g. new work-top and tiles so could be done cheaper say £1,500 for a 6 m by 4 m kitchen – we used 5 cm Kingspan

Solar PV was the least invasive and done by two people over two days. We now actively use the washing machine (and cooker for baking) in daylight or preferably when sunny.

Solar Hot Water was a bit more complex as we had to replace the hot water tank which had to be ordered specially (good Scottish company did this McDonalds <http://www.mcdonald-engineers.com/>)

Future work – considering a pellet boiler but depends on what our RHI works out at.

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