Case study

118 Harbour Way, Shoreham-by-Sea, BN43 5HH

Overview

Owners: Chris & Beccy Hannon

Type: Semi-detached house

Age: 70's

Beds: 3

Walls: Brick

Area: 134sqm

Residents: 3

Key Features

Rainwater Harvesting

Rain pond (rain garden overflow)

Air Source Heat Pump

Solar

Solar Battery

EV

Introduction and approach

Beccy works at a local Primary school, and Chris for the South Downs National Park Authority.

They moved into the house three years ago (from a cold, badly insulated flat!) to discover a well-insulated house which already had solar panels. A good start to inherit!

Since then they've continued the journey of trying to lessen their impact on the environment by adding solar panels, air source heat pump, and buying an electric car.

In an effort to help mitigate surface water flooding (which Shoreham Beach is at risk of), and inspired by a previous Eco Open Houses event, Chris and Beccy decided to install a rain garden which, as well as helping prevent flooding, turned into a haven for local wildlife.

Energy Efficiency Measures

Heating and hot water

This was with gas but they decided to install an Aira Air Source Heat Pump – this, so far, has surpassed their expectations. It was paid for from a Government grant plus they have a referral scheme for a further £250 off (see end of case study).

Having inherited a home with solar panels on a south facing roof, they decided to go the whole hog and switch to an EV powered by a newly installed a solar battery – makes perfect sense!

Insulation

The whole house is well insulated. The brick cavity walls are insulated. The windows are double-glazed and the loft is insulated, creating a cosy home.

Renewables and low carbon technology

10x PV Panels, 3kWh max capacity

9.5 kWh Solar Battery

Aira Air Source Heat Pump

Electricity

Annual usage is 2800 kWh, but they have got an EV and heat pump within last 4 months and switched off gas so likely to be higher.

Other sustainable measures/ lifestyle decisions

Electric Vehicle - to take advantage of south facing solar panels and solar battery

Rain Pond and Rain Garden - Shoreham Beach is at risk of ground-water flooding. To try and slow the flow into drains at peak rain times, Chris & Beccy installed an overflow pipe from the water butt into a galvanised steel bath which is now a (modest) pond for wildlife – dragonflies, frogs and toads seem to like it. In heavy rain this then overflows on to the garden where they have put in a small soakaway and planted above it.

**One of the things that we love about Eco Open Houses events is that they often inspire and empower others to take action and make changes that really enhance their lives, save money and make a difference.*

Faced with the possibility of ground water flooding Chris and Beccy discovered articles and a video about how to build a rain garden, made for previous Eco Open Houses events by Claire Hunt from Transition Town Worthing and also a video about how one of their directors, Francoise, resolved a damp issue in her flat by creating a rain garden. It makes doing these events so worthwhile if you can help others find effective, simple and inexpensive ways forward.

**Comment from event organisers*

Lessons learned

They were unsure about the heat pump initially as electricity cost is a lot higher than gas, but the Air Source Heat Pump is so many times more efficient than gas; it is a lot cheaper to heat their house & hot water than before.

Always tweaking the rain pond /garden!

Professionals/ Materials

Octopus EV Charger

GivEnergy 9.5kWh Solar Battery

Aira Air Source Heat Pump - (AIRA have a referral scheme for a further £250 off heat pumps: **https://aira.referral-factory.com/ulSYh9YV**