GREEN OPEN HOMES WEEKEND

BRISTOL ENERGY NETWORK

FUNDED BY Retrofit West

Open Home Profile

Name:

Frances

Contact (optional)**:**

Location:

5 Cherington Road, BS10 5BH

Home Overview

Home Type (e.g., Detached, Semi-detached, Apartment, Bungalow)**:**

Semi detached house

Year built (Approx)**:**

Size (Square footage or number of bedrooms/bathrooms)**:**

3 bedrooms, one bathroom

Renovation History (Include any green renovation dates or milestones)**:**

The house was purchased by the current owners in 2006 and had previously had double glazing and gas central heating installed.
In 20076 internal solid wall insulation was installed along with a new gas boiler and solar thermal panel to heat the hot water.
In 2010 solar PV was installed.
In 2021 the gas boiler was replaced with an Air Source Heat pump and a second set of solar PV installed.
In 2023 a timber extension was added with a green, sedum roof

Green Features

Energy efficiency

Insulation (Type, areas insulated)**:**

Internal solid wall insulation to most external walls, underfloor insulation to most of the ground floor of the house, and loft insulation.

Windows & Doors (Type, materials used, double/triple glazing)**:**

Internal solid wall insulation to most external walls, underfloor insulation to most of the ground floor of the house, and loft insulation.

Green Features

Energy efficiency

Heating System (Type, efficiency rating, and control system)**:**

Air Source Heat Pump mostly using existing radiators – installed 2021

Cooling System (Type, efficiency, and control system)**:**

None

Lighting (LED, smart controls, natural light)**:**

All internal and external lights are LEDs

Appliances (Energy Star rated, specific energy-efficient models)**:**

All white goods were A or A* rated (previous rating system) when installed
All gas removed from house and Induction Hob installed in 2021

Smart Technologies (Smart meter Tariffs, integration tech)**:**

Smart meter which allows for payments for the export of surplus electricity from the PV panels and to make us of flexible time-of-use tariffs maximising the use of electricity at cheaper periods of the day and night.

Zappi EV charger which integrates with the Solar PV system to maximise the charging using the surplus electricity generated.

Energy efficiency

Solar Panels (Number, capacity, and type)**:**

2.1 kW system on side roof installed in 2010
2.27 kW system on rear roof added in 2021

Battery Storage (Type, capacity, and integration):

Other Renewable Sources (Specify any additional renewable energy systems):

Solar water heating system installed in 2007.

Green Features

Indoor Environmental Quality

Air Quality (air purifiers, low-VOC paints and materials):

All paints used were Green paints. Now most paints are low VOC easier to source environmentally better paints.
Wool carpets throughout to reduce plastics and chemicals.
Marmoleum used for hard flooring areas.

Ventilation Systems (Trickle vents, wall vents, MHRV):

Extractor fans in kitchen and bathroom are heat exchanging with on/off override
Tile Vents in roof to reduce loft condensation
All rooms have opening windows
Velux automation determines temperature and CO2 levels to decide if Garden Room needs ventilation. Can be manually operated through the electronic system.
Garden Room has bifold doors to enable the whole room to be opened to the rear garden.

Natural Lighting (Skylights, sun tunnels, and window placement):

Old lean to conservatory replaced by insulated Garden Room.
Garden Room replacement with Velux windows has increased natural light into house.

Other useful information:

- Water from our roofs is captured in a number of different sized water butts and pumped to pond and greenhouse and used for pot watering as needed.
- Bike shed and garden room have green roofs. Green roofs slow down water runoff.
- All timber used for raised beds and pergola in garden is FSC and UK or European grown
- EV charger on side of house is Zappi charger which has eco modes and can charge solely on surplus energy from our solar pv system
- All battery powered items use either rechargeable batteries or solar charging (e.g. for security lighting)

Performance & Savings

Energy Savings (Annual kWh saved, percentage reduction compared to previous years):

See more info on next page.

Carbon Footprint Reduction (Estimate of CO2 reduction - this CO2 calculator can be a useful tool to use):

See more info on next page.

Financial Savings (Utility bill reductions, payback period for green investments):

Overall, at July 2025 prices, the home's annual energy bills have been more than halved from £1,500 to £700.

Green Features

Challenges & Solutions

Heating System (Issues encountered during the renovation/work):

Unable to find external wall insulation contractors in 2007 so had to insulate internally and the disruption of this has been minimised by linking it to other changes and redecoration of the house.

Solutions Implemented (How challenges were overcome, any innovative approaches):

Upcoming Projects (Planned upgrades, additional sustainability measures):

More solid wall insulation:
- Finish internal wall insulation in hallway.
- Insulate rear bedroom

Long-term Goals (Goals for further reducing environmental impact):

Any other information you'd like to share?

• Carbon Footprint Reduction: (Estimate of CO2 reduction - this can be a useful tool to use https://www.carbonfootprint.com/calculator.aspx)

The home is now fossil fuel free and runs entirely on renewable electricity.

The carbon footprint of the house was originally 4 tonnes per year– 3 tonnes from gas and one from electricity. The owners have improved the energy efficiency of the house and installed solar panels which have reduced its footprint by 50% - 2 tonnes per year.

The carbon footprint of this renewable electricity could be considered to be zero or approximately 1 tonne per year depending on the carbon accounting approach.

• Energy Savings: (Annual kWh saved, percentage reduction compared to previous years)
Overall the homes' energy use has been reduced by 65%.
Insulation, solar hot water and replacement gas boiler reduced gas consumption by 36% - 16,000 to 10,000 kwh.
The Air Source Heat Pump and induction hob have replaced this gas use with 3,800 kwh of renewable electricity per year.
Solar PV Panels generate some 4,000 kwh of energy which is used in the following ways:
• House – 1,000 kwh
• Car – 1,000 kwh
• Export – 2,000 kwh

For Internal Use

Your Availability

What days/times can you do? (We'll be running the days from 11-4pm)**:**

How many volunteers would you like? (You can have up to 2)**:**

How would you like people to come to your home?

Drop-in ■ Booking ☐ Hybrid ☐

Instructions

Please return this pack to communications@bristolenergynetwork.org. We will upload your open home profile to the Green Open Homes website so that potential attendees can learn more about your home.

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