Case study

59 Connaught Avenue Shoreham-by-Sea BN43 5WL

Overview

Owner: Jenny Towler

Type: End of Terrace House

Age: Built around 1936 with a 1970's two storey L-shaped extension

Beds: Five

Walls: Brick with half rendered wall and pebble-dash

Area: Whole House Retrofit plan has a chart saying 195 m2 for the treated floor area

Residents: Two people (was four)

Key features

Whole House Retrofit Plan

Solar Panels

Triple glazed rear windows - upper floor

Cavity wall and loft insulation

Air Source Heat Pump

Mechanical Ventilation Heat Recovery System

Introduction and approach

After attending a talk by the Better Buildings and Retrofit Group, Jenny decided that, as certain areas of the house needed major maintenance, she would have a Whole House Retrofit Plan prepared to give her an idea of what needed to be done and a plan of works to be undertaken over a number of years either by herself or future owners. In short, to make the house 'Fit for the Future'.

With the help of an architect, and the support of the Better Buildings and Retrofit group Jenny implemented a number of their recommendations over the last two years,

which have improved energy efficiency and been part of an ongoing general maintenance programme.

Energy efficiency measures

Heating and hot water

For the last 50 years, this has been provided by an oil-fired boiler. Solar panels were installed on the garage in 2011, so that in the summer the boiler was turned off and the solar powered electricity heated the water. The boiler is due to be replaced by an ASHP in March/April 2026.

Insulation

Walls - Replaced cavity wall insulation with bonded beads and increased loft insulation (2025)

Windows - Triple glazed rear windows on upper floor (2024)

Roof - Replaced the rear lounge flat roof with added insulation (2025). Front part of the house re-roofed in 2013

Renewables and low carbon technology

Solar Panels (2011)

Electricity

Solar Panels (2011). On grid and has a FIT tariff

Carbon emissions

5.1 tonnes CO2 equivalent per annum according to Whole House Retrofit Plan (June 2023)

Other sustainable measures/ lifestyle decisions

Water conservation – Two water butts

Heating and hot water – Jenny hopes to have replaced oil fired boiler with Air Source Heat Pump (ASHP) and Mechanical Ventilation Heat Recovery System (MVHR) in March/April 2026.

Lessons learned

What Jenny learned was the importance of talking to people, getting views about their experience and weighing up the pros and cons. Not every energy efficient system is suitable for every house and lifestyle. The whole house retrofit plan was vital in that it allowed for an easily understood step by step, phased plan for work to be undertaken. The rewards of seeing what other people have done and what to expect are immeasurable, along with a team of people to bounce ideas off.

Professionals/materials

Architect:
Justine Rattray

Whole House Retrofit and EPC certificate:
Nick Owens, Owens Insight

Internorm Windows:
Benchmark Windows Limited

Cavity wall insulation extraction and replacement:
Cavity Tech Solutions Ltd

Flat roof replacement and upgrade:
Countywide Roofing

Installation of ASHP and MVHR:
OHM Energy