

Green Haze, Coombe Bissett

1960s bungalow, redesigned as a large family home with many green technologies



Key features

- High level of external wall insulation
- Underfloor heating
- Ground source heat pump
- Mechanical ventilation and heat recovery
- Rainwater harvesting
- PV and solar thermal

The Story

It's hard to guess that a simple 1960s bungalow lies beneath the stylish exterior of Green Haze. It's taken nearly four years to carry out the conversion, with the first hurdle being the rejection of the original planning application. Steve, a commercial helicopter pilot, is a self-builder, and has done most of the work himself, including the plumbing and cladding.

The Home

Materials and design: The original 1960s bungalow was constructed of dapple LBC brick and concrete tiles. It has been extended on either side, with the fibreboard cladding creating an attractive unified appearance. It faces South to make the most of the heat from the sun. Wherever possible, recycled materials have been used, such as the reconstituted slates on the roof and the reclaimed parquet flooring in the conservatory.

Insulation: The walls are clad with external insulation (Kingspan), while there are high levels of insulation in the loft, made from recycled plastic bottles.

Hot water, heating and ventilation: A geothermal system, using a [Nibe](#) ground source [heat pump](#) supplies both hot water and the underfloor heating, installed by [Jupiter Heating](#). The geothermal energy comes from 3 boreholes in the orchard at the back, installed by [Orchard Drilling](#), at a cost of £12-15,000. This is complemented by solar thermal hot water heating. The [Mechanical Ventilation with Heat Recovery](#) (MVHR) system has been skilfully installed along the fillets of the roof. There is a woodburning stove, but this is mainly used for aesthetic reasons, and there is no other source of heating.

Windows: Double-glazed. New doors and windows were commissioned from [Dibben Joinery](#) in Dorset.

Lighting and electricity generation: Low energy lighting has been used throughout. A 3.9kW PV system has been installed on the garage at the back.

Water management: 6000 litre underground rainwater storage tank, feeding the toilets and washing machine. Water is metered and costs about £8 per month.



Energy and cost saving

Monthly electricity costs are about £140.

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