

# Bath Green Homes

## Late Victorian terrace & new-build extension: Draught proofing & insulation



“slug farm, always wet and dark” and impossible to keep warm. The existing lean-to extension blocked the light and had ill-fitting windows: “When I moved here I was cooking in my coat!” Already environmentally aware, Jo was keen to make her home more energy efficient but she also wanted to have comfort, beauty and good natural light (particularly important to her as an artist).

The house needed substantial building works so she decided to combine these with an eco-renovation and hired an eco-consultant at the start of the project.

### Overview

Age/period:	1895
Type:	Victorian terrace
Years in residence:	5
No. bedrooms:	3
Wall type:	Solid wall
Area:	Bathford

### Key Features

- Extensive draught proofing
- Double glazing to sash windows & new-build extension
- Under-floor insulation
- Loft insulation
- Wood burning stove
- Green roof

### Introduction

When Jo Slee bought her Victorian mid-terrace in a conservation area, the north-west facing kitchen was a

### Features

#### Draught proofing

Jo is a member of Bathford Energy Group, a network of local people who are keen to reduce the amount of energy they use in their homes. “In March 2012, I had the Bathford Energy Group energy survey done. I’d had the loft done, insulated and double-glazed, but hadn’t done the downstairs or any draught proofing. I think I scored the lowest out of everyone in the village for air tightness!”

Jo set to work DIY draught proofing which cost her almost nothing except time. She has begun filling in all the gaps in her floorboards and skirting boards, using a plastic DIY dispenser containing flexible decorator filler in all rooms except the kitchen where she used silicone (cost: £7 per room plus £3 for the dispenser). She has even put in a temporary seal to her sash-windows using sellotape – as she says, “Don’t be afraid of interim measures!”

**“I’ve come to realise you have to think of the**

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***whole house when you're looking at energy. I'm committed to a life-time of filling in cracks and crevices!***

Trickle vents on all new windows in the rear extension ensure the house can be ventilated when needed.

## Insulation

Mineral wool insulation between the rafters was included as part of the loft conversion, in line with building regulations. Jo was also keen to insulate her new-build extension. Replacing her kitchen floor with engineered tongue and groove oak floorboards, her builder installed Celotex under-floor insulation under the solid concrete floor in the new extension at the same time.

## Glazing and Wood Stove

Well-sealed double glazed doors in the extension make the most of natural light and keep in the warmth. Although the extension faces north-west, it is comfortable sitting next to the doors even on colder nights. A double-glazed cat-flap also makes a surprisingly big difference.

A wood stove manufactured by Tiger provides a cost effective source of top-up heating in the winter.

## Sedum Roof

Finally, a low maintenance green roof made of sedum (accessed via the upstairs bathroom) provides further insulation as well as a *"stunningly beautiful"* space where Jo plans to grow herbs.

## Appliances and lighting

All appliances are 'A' rated as these are the only ones available for an integrated Wickes kitchen but Jo would have preferred triple 'A' rated. All light bulbs are either eco or low-energy halogen. Jo recommends the 25W 'BioBulb' (100W equivalent) as best for reading, as it gives full spectrum (daylight) light.

## Reclaimed Timber

Jo feels passionately about reusing and reclaiming timber wherever possible. Reclaimed wood has been used on the downstairs and upstairs floors, as well as for making cottage style tongue-and-groove cupboards.

## Learning

Although delighted with her building works, the installation of her roof-lights by a different

contractor did not go so smoothly: "The struts were not insulated and edges not sealed. They had to be re-done but are still not quite right."

She has just one other regret, that when replacing her living room/dining-room floor with reclaimed oak boards, she did not insulate beneath them at the same time: *"I missed an opportunity – I didn't have insulation put in under the floor and now wish I had."*

## Next steps

- Replacement for poorly-fitting single glazed front door. Jo wants to replace this with something in keeping with the conservation area. Howarth's of Yorkshire manufacture repro Victorian-style doors using wood with insulation in the core which are well-fitted and sealed. Although expensive she feels this measure would be worth doing as the existing front door is a "cold spot".
- Further insulation: Jo is thinking about solid wall insulation and is weighing up the costs and benefits.
- Replacement sash-windows: Jo would like to get double glazed wooden windows to replace the last two remaining original Victorian s/glazed ones but the cost is a factor for her.
- More efficient boiler: Jo wants to replace her existing Pro-combi gas boiler as it is water inefficient.
- Solar water heating: there is a small south facing roof at the front of the house with space for solar thermal tubes but as it faces the street in a conservation area this may not be possible.

## Contacts

**Eco-consultant:** Simon Lewis, Green House Project, Bristol

**Building contractor:** Dougie Mallinson, Bath

**Double glazed sash windows:** Premier, Frome

**Wood burner installers:** Marshman, Marshfield, Corsham

**Energy Assessments:** Parity Projects