

# Bath Green Homes

## 1960s semi-detached bungalow



### Overview

**Age/period:** 1960  
**Type:** Bungalow, semi-detached  
**Years in residence:** 20  
**No. bedrooms:** 4  
**Wall type:** Cavity wall  
**Area:** Bathwick

### Key Features

- Micro-CHP boiler
- Solar PV
- LED lighting
- Internal wall insulation in one wall
- Under-floor insulation
- Wood stove

### Introduction

When Simon Emery and his family moved into their bungalow, located on the bank of the River Avon in Bathwick, it was a return to the family house his father had built many years before. "When we saw it come on the market, we couldn't resist buying it

ourselves" explains Simon.

Over the years they've lived there, the Emerys have transformed it into a low energy family home that is full of vibrant colours and character.

As Simon himself is a builder (of Emery Bros. Ltd in Bath), he's well qualified to install improvements, all of which have been driven by Simon's business-led preference for measures which he sees as making perfect financial sense.

### Features

#### Micro-CHP

The one exception to this is the micro-CHP (combined heat and power) boiler, which Simon had installed a few years ago. Keen to experiment with new technology, Simon chose the system on the grounds of its potential to generate both electricity and heat. The Baxi EcoGen sterling engine system generates around 1 unit of electricity for every 6 units of heat it produces. In theory this provides an income for the exported electricity, under the Government's Feed In Tariff,

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whilst simultaneously providing heat and hot water to the home.

However, he's been disappointed with the outcome. "I wouldn't recommend this to anyone" he says. "It cost over £6,000 to install, (compared to around £2,000 for a conventional gas boiler), but it only makes us a few hundred pounds a year. That's less than my solar PV system!" Simon feels the payback is too long to recoup the additional upfront investment, and wishes now that he'd opted for a conventional gas boiler.

Reliability is also an issue, with servicing costs escalated by the fact that this is only one of a handful of micro-CHP boilers in Bath. It broke down three months after being installed, and while the supplier solved the problem, the boiler is now out of warranty. "British Gas wanted £300 a year for a maintenance plan – but I said no, as it's too expensive" says Simon. "So now if anything happens, I'll have to pay for it!"

## Solar PV

Simon's experience with Solar PV, however, has been much more positive. It's a 2kWp system, which sits on the south-east facing roof. "It just sits there and generates electricity – we don't have to do anything to it" says Simon. "And through the Feed In Tariff we get a good income on the electricity we export – as well as getting electricity during the day for our own appliance use for free."

## LED lighting

Another measure which makes total financial sense to Simon is LED lighting. "Why wouldn't you use LED lights instead of halogen?" he asks. "The light quality is so much better than it used to be a

few years ago. And they pay back so quickly". Simon has a bank of LEDs in the kitchen where he has trialled a range of different bulbs, to find the best ones.

As well as standard LED spotlights, strings of coloured and decorative LED lighting also add fun and character to the home.

## Internal wall and floor insulation

"I've installed internal wall insulation on the living room wall" explains Simon. "It's basically just Celotex incorporated into the tongue-and-groove paneling".

There is also 100mm Celotex fitted between joists under the suspended timber floor.

## Wood Stove

Simon is modest about his wood stove. "Surely lots of people have got one of these now?" he asks. For Simon this is simply an obvious choice - as he burns off-cuts of timber from his building business, which would otherwise go to waste.

This is just another example of a household for which it is simply common sense to make the maximum use of the resources available around it.

## Contacts

**Building work – Emery Bros Ltd, Bath -**  
[www.emery.co.uk](http://www.emery.co.uk)

**Transition Bath LED 'Try Before You Buy' project -** [www.transitionbath.org/ledlighting](http://www.transitionbath.org/ledlighting)