

# 18 Archibald Road Worthing BN11 2SL

## Overview

**Owners:** Nicky Christoforou and Damien Collis

**Type:** Terraced

**Age:** 1890's

**Beds:** 2

**Walls:** solid

**Area:** 68 m<sup>2</sup>

## Key Features

Biomass Boiler

Solar Thermal

## Other Features

Loft Insulation

Rainwater Harvesting

Vegetable Growing

## Introduction and approach

18 Archibald Road used to have storage heaters, which cost around £200 per month to heat the house in winter. In addition to this, logs were also purchased to heat the living room in the evening, as the storage heaters generally cooled down by 6pm. The kitchen and bedrooms had no heating and the large bathroom only had a fan heater on the wall. Needless to say, the house cost a lot to heat and was still unbearably cold, especially the kitchen which would be 8 degrees some mornings. It was a bit like living in a Victorian house in Victorian times!

Nicky did not like the idea of gas as she was opposed to fracking and so looked at alternative heating sources. She read up on the different renewable technologies available (Biomass, Air Source Heat Pump and Ground Source Heat Pump) as well as Fischer electric heating. Nicky settled with Biomass as she was used to burning wood and likes the intense heat it produces. She briefly considered ASHP; however, the heat loss calculations showed that the house wasn't insulated enough for an ASHP to efficiently heat the house, as they run at low temperatures and are best installed in well insulated houses.

Nicky and her partner had to knock down their old shed and part of their back wall to install a shed and gate with double doors, so that pallets of pellets could be delivered. They also enjoyed



smashing up their old-fashioned fireplace and having their fireplace opened up to house the pellet boiler.

In addition to the pellet boiler, D H Solar Engineering recommended Solar Thermal for heating hot water in the sunnier months so that the boiler does not need to be on in the hot weather, just to heat the hot water. In fact, the solar thermal works most the year round, bringing the base of the hot water cylinder up, even in freezing cold weather, as long as the sun is shining, you can hear it working. Once spring arrives, the boiler is barely needed for hot water and in summer, there is a continuous supply of hot water from the solar panels. Nicky takes great pleasure in filling the paddling pool with hot water from the tap, as well as cold from the hose, knowing that it costs no more. Nicky is very pleased with the heating system as she now has heat in every room and an open fire is now something that Nicky likes to have on as a little extra warm luxury in the late evening, instead of heating the whole house, and instead of being a necessity in the early evening because of being so cold. Nicky is a person that really feels the cold and is very grateful to now have a warm home.

As you may have guessed, Nicky likes to save money where she can, whilst investing in the environment. Her current energy supplier is

People's Energy as they were cheaper than OVO, who she'd been with for a number of years. They also provide 100% renewable electricity and they give some of their profit back to their customers.

The house is double glazed throughout, although the windows are a bit draughty and need re-sealing at present.

## Electrical appliances

Low energy Compact Fluorescent Lamps are used at present, Nicky is doing some research before switching over to LEDs, as she is concerned about the quality and potential health effects of the amount of light at the blue end of the spectrum that they tend to emit.

Nicky is trying to reduce the number of things that she buys new and currently has an old second-hand Miele washing machine. She's not sure how energy efficient it is. However, she knows that it's a good make and will hopefully last a long time, thus preventing too much going to landfill, and further manufacturing demand. She sold her washing machine that wasn't working quite so well (for £10) to a company who repairs and sells them on.

Nicky likes to line dry the washing when she can, uses a clothes airer when the weather is bad and, as back up particularly with a little one around; the tumble drier is A++ rated.

She has a Berkey water purifier to produce clean and better tasting water. It was an expensive initial outlay; however, the filters need to be changed every 7-11 years and therefore produces less waste than some of the smaller filters, which need to be changed more regularly. Now she has the filter, it also goes camping with her despite the initial grumbles of her partner who now sees the benefit of turning, sometimes, brown murky water into something clean, clear and tasty!

## In the garden

Nicky is a keen gardener and has been growing her own fruit and veg with varying degrees of success over the last few years. She has also been composting and is very enthusiastic about the wonder of nature and how mouldy peelings and egg boxes turn into a rich brown compost that don't cost a penny to produce, reduces household waste and feeds her garden.

## Growing fruit and vegetables

Nicky loves to grow her own food and did so very successfully in the first year of growing veg. There was a real problem with slugs one year and too much sun and not enough water another year. Sometimes, she just doesn't have enough time to dedicate to the veg so last year she let the wild poppies and borage take over to feed the bees. Therefore, the veg patch was full of a beautiful gentle buzzing sound and many different varieties of bees. She adopts a no dig approach to her gardening as far as possible but does not stick strictly to any particular method.

## Rainwater harvesting

The 2 water butts in the back garden are used to water the garden/veg plot

## Lessons learned/further improvements

You can't feed a whole family from your back garden, but you can get a veg box delivery; Nicky uses Riverford and there are more local ones too.

Biomass per kilowatt hour is more expensive than gas (but much cheaper than electric) and requires interaction. Feeding pellets daily and cleaning every 2-3 days ideally and more thoroughly once a month.

## What's next

Draught proof windows

General home improvements.

## Professional team & technical info

**D.H. Solar Engineering**, 1A Phoenix Works, North Street, Lewes, BN7 2PE (01273 655547) – lovely company to work with and would recommend them – they installed the boiler, heating system and solar thermal.

**Klover Star 14 Pellet Boiler Stove** – [www.klover.it](http://www.klover.it) – with its own built-in hopper, the stove can be programmed to light itself whenever warmth is needed and burns clean and environmentally friendly pellets at an average efficiency of 92%.

