

# Heat Pump Simplicity



## Property Overview

Year built: 1924

Location: Shelford Road, Trumpington

Property type: Mid-terrace

Cost of energy improvements: £22,793 including £7,500 grant

Timeline: completed November 2023

## Meet your hosts: Michael & Amanda

We decided to move from an outlying village into town in 2019, at the same time as our son started sixth form. This meant a significant downsizing, but we've very much enjoyed the process.

There was no reason *not* to install a cost-effective, low carbon Air Source Heat Pump (ASHP) to replace an ageing combi-boiler. It was really simple. We found that even our 1924 terrace with ageing roof insulation met the requirements for a grant. A decent Microgeneration Certification Scheme (MCS), registered installer will check all this for you when they first come out to scope the job.

Luckily, we received a £7,500 grant from the Government's Boiler Upgrade Scheme (BUS) which reduced our costs. This was really helpful as we were working with a limited budget, but we did not consider the work as an investment and did not calculate a payback period for any of the work.

We are strongly committed to environmental politics, but a heat pump makes sense regardless of one's environmental views.

## The Renovations

To install an ASHP, we needed a fuse upgrade (to 100 amp) which UK Power Networks fitted for free ahead of the installation.

All but two of our existing radiators needed replacing, so we chose to install slightly higher specification ones, and added an additional radiator upstairs. Other than this, we made no radical changes to our home.



Air Source Heat Pump by back door

## At a Glance

### Challenges

- Space for a new hot water cylinder
- Working to a limited budget

### Benefits

- The new heating system is easier to use
- The house feels much warmer
- We are off gas!



New hot water cylinder

For hot water storage, we had to install a new hot water cylinder. We'd expected to lose our airing cupboard to accommodate this, but as the airing cupboard was inaccessible, the installer suggested a combined cylinder that could be located elsewhere in the house. This resulted in losing slightly more space in the kitchen than anticipated.

Triple glazing had previously been added to the front of the house, primarily to block out the road noise. In October 2022, we added a four-panel solar PV array with battery storage. Installing solar panels was a separate project and extra cost.

We didn't add any roof insulation as the house met the BUS grant requirements with what it already had. However, to prevent heat escaping from the one remaining open chimney, we added a removable chimney block made of wool.

Following installation of the heat pump, we replaced the gas hob with an induction hob, and then disconnected the gas supply to the house.

## Finances

Financial considerations were important as we were working with a limited budget.

## Performance

The ASHP has performed as anticipated.

## Energy Consumption

Energy Consumption <small>(pre-installation data is not available)</small>	Energy kWh/m <sup>2</sup> /pa			Carbon kg CO <sub>2</sub> e/pa	
	Gas	Electricity	Total	/m <sup>2</sup>	/person
After Renovation	None	56.3	56.3	10	463

## Conclusions

As part of the installation, we now have new system controls and thermostats and the heating system is easier to use; more importantly, the house feels much warmer.

We are pleased with the performance of the ASHP, and feel confident about its future reliability and low running costs.



Air Source Heat Pump

## Key Features

- 8.5kW [Mitsubishi Air Source Heat Pump](#)
- Mitsubishi 200L R32 1Ph Mono Packaged Cylinder
- 4 Panel PV system: [JA Solar 390W](#) all black mono half-cell mono short frame MC4
- [FoxESS HV2600 2.6kWh](#) HV small system battery

## TOP TIPS

- The best time to switch to an ASHP is when your boiler needs replacing.
- Don't be put off by the fear that this is complex – it isn't.
- A national firm using a one-size fits all approach may not be right for you, especially if your house is older; a local firm with flexible solutions may work better.

## Professional Contacts

[Eco Installer & Service Ltd](#)