



Home Energy Case Study

Changing to an air source heat pump in a Victorian terrace home

About the home

A medium-sized 1880s terraced house (now with 4 bedrooms after a loft conversion) in the central Berkhamsted conservation area.

What had to be right for the pump to go ahead?

- Space for the outdoor unit outside – for the large box itself, and also space behind and in front
- In this case, 8+ metre distance from neighbour's bedroom window (less if shielded by high wall etc)
- Room for the larger hot water tank and all the extra kit and piping
- Efficient route from outside unit through house to hot water tank
- Have a recent EPC (within 10 years) for the government grant
- Insulate the house as much as possible beforehand.

The cost

The pump, installation, new larger hot water tank and 5 new radiators cost £13,350 (July 2022). The government grant was £5,000 in 2022. So, we paid £8,350.

The government grant is now increased to £7,500.

We were not expecting to save money immediately, as electricity currently costs 4x gas per kWh.

But in fact, our bills are several hundred pounds lower than they would have been, due to the efficiency of the pump, and because of our much-improved insulation.

Want to know more?

All the issues and the steps behind this case study?
See the detailed how-to guide

What motivated the retrofit?

To reduce the carbon footprint of the family home and to contribute to the reduction of CO2 emissions in the UK.

Existing gas boiler was 17 years old and needed replacing.

Our air source heat pump

An 11.2 kW air source heat pump for heating our radiators and providing hot water.

The installation took 4 days as there is a lot of kit to install and set up. We replaced 5 radiators with bigger double-finned ones.



At a glance...

2.5 tons of carbon saving this year, and every year to come, and even more as electricity becomes greener

So quiet – inside and outside the house!

A nice warm home
Plenty of hot water
A lower fuel bill

Get started with your home energy transformation