

Self-Build Renewable Energy Home



Client profile

When Mike Palmer found an attractive building plot in Yate near Bristol, he embarked on an ambitious self-build project, developing a four-bedroom house. His new home is surrounded by trees and situated next to a lake, making it a very private location. However, it is an easy distance to walk to the shops and is well served with facilities in the town. Mike says, "The building plot was big enough to do exactly what we wanted. When we started the research, we wanted to try being almost self-sufficient to do our bit for the planet. However, we did have to weigh up the costs of all the different renewable technologies. We went for a fabric-first approach, spending more of our budget on the windows, doors and materials for the house." By using high performing materials and addressing the air tightness and ventilation, Mike was aiming to minimise the energy needed to heat and cool the house.

Mike had known Gregor Heating, Electrical & Renewable Energy for some time, having a Heat Plan contract with them (for gas service). When he realised they could help with a renewable energy heating system, he brought them in to survey the project. Mike confirms, "We've always known Gregor Heating. They've been reliable, looking after our gas heating systems. They're a bigger outfit, so they can offer experienced electricians, as well as the plumbing and heating experts."

Scope of works

After visiting the National Self Build and Renovation Centre (NSBRC) in Swindon, Mike began sourcing the right products for his home. He planned to install an air source heat pump and underfloor heating on the ground floor, with radiators on the first and second floors. Mike was keen to have a Mitsubishi Ecodan as it's a well-established brand. Once Gregor had done the initial survey, they took away the information to calculate the correct size of heat pump, pipework and radiators. This was to ensure the whole system was set up for optimum efficiency. Mike says, "There is so much information about what's green and what isn't. Being a self-build project, I did have lots of questions. Gregor were good to deal with when we wanted more details about the air source heat pumps. And they went away to find out, if they didn't immediately know the answers."

Installing the renewable heating system

As with any self-build project, timescales did change because Mike and his family were doing some of the work themselves. Gregor were very accommodating, handling the delays between first fix and commissioning. Overall, Mike found the people from Gregor were very amicable around the house. Mike sums up, "It's been a slow process to get hold of all the

right products. However, nothing was too much hassle for Gregor. If I needed a couple of things moved or done so that the next piece of work could happen, they did it straight away. The guys on site were very pleasant and reliable; the customer service is good. We wanted to future-proof our new home and make it as planet-friendly as possible. If the government does phase out oil and gas, then using electricity is the only option."

Mike installed a wood burner as a feature in the lounge, because he loves a real fire. It also enables them to heat just one room and acts as a secondary heat source in case they need it. All of the aluminium windows are either double- or triple-glazed and coated with reflective films to keep the heat in, adding to the overall insulation. The end result is an almost air-tight, energy-efficient home.



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