

## EDWARDIAN HOUSE RENOVATION IN THE CLIENT'S OWN WORDS

In May 2009, we moved into our house, which was built in 1914 and had been basically untouched for about 50 years. It is a wonderful old house, however, we quickly began to realise the scale of our heating problems. An old gravity loop heating system linked to beautiful ornate but seemingly ineffective cast iron radiators, plus a water tank located in the open air meant that we could not adequately heat our home, nor get reliable hot water.



Our first port of call was to contact trusted heating engineers we had used previously. We were dismayed to find out that they believed the system needed to be completely ripped out and replaced, and moreover that the job was simply too big and too difficult for them, or anyone they knew locally. We really were unsure what options we had left and seemed to be facing at best the devastating prospect of the guts of our house being ripped out, with all the associated damage that this would incur to beautiful original features.

Our meeting with George Robinson from Advance Heating was a breath of fresh air. First, heating our house seemed to be viewed as an exciting challenge, not as an insurmountable problem. George's assessment was to look at what parts of the existing system could be retained and improved, and how the aesthetics of the original features of the house could be protected at the same time as designing a system that was efficient and future-focused including concerns for energy conservation.



Our most pressing problem related to not having a reliable and cost effective supply of domestic hot water. With a house full of family guests arriving soon for the summer, George and his team delivered a modern, fast and efficient supply of hot water within two weeks. This included the installation of a super energy efficient water tank that included a solar coil so that in the future we will be able to install solar panels for domestic hot water.

Next, the issue was to deliver a central heating system that was capable of heating our house, efficiently and affordably at the same time as conserving the original features of the house. I was concerned to find out what was necessary to heat our home (my worry being that we might never be able to achieve a comfortable temperature without it being exorbitantly expensive). Advance Heating conducted a comprehensive heat loss calculation of the entire house which gave us a clear idea of what was necessary and meant we could choose between a variety of possible options. In particular, this analysis indicated quite clearly that our existing boiler which was doomed to be upgraded by three other installers was appropriately sized to heat the whole house. In addition, we now had a clear idea of what additional heat sources we needed. Overall, this meant

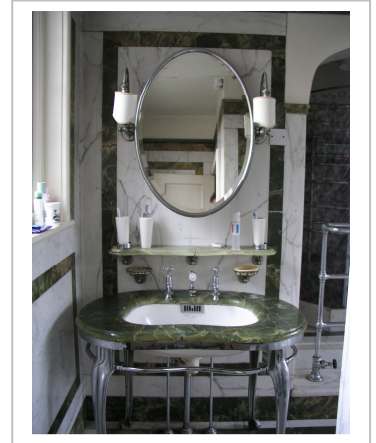
that the original cast iron radiators did not need to be changed at all, even to meet modern standards, and were supplemented with additional reclaimed cast iron radiators where necessary. In our son's small bedroom, an innovative heating solution of a special child-proofed fan heater saved valuable space.

Where they held advantages, certain parts of the original system were retained (for example the existing large bore flow pipe had advantages in terms of flow rates so was worth retaining). George and his team paid particular attention to the conservation of the original features of the property and engaged in sympathetic and painstaking installation work. This made installation very difficult, for example including having to install new pipes within a small crawl space under the floors in order not to damage the original oak floorboards. Another example is that we wished to retain traditional style valves on the radiators, and Advance Heating's understanding of how TRVs work and obtaining special adapters (to achieve horizontal orientation) lead to a better



than expected appearance and functionality of these valves. The overall appearance of our house has also been improved through the removal of some particularly ugly pipe work relating to the original gravity system.

A particularly noteworthy achievement was that our ensuite Edwardian bathroom was restored to complete functionality, indeed to a higher performance than could have been possible when it was originally installed, after over fifty years of being unusable. Parts were impossible to find, and the skills of George and his team meant they were able to make bespoke parts themselves. Antique taps, valves and an intricate shower cubicle were renovated with hand made parts from rubber, horsehair and brass. I can't imagine many companies who would be able to do that. Furthermore, so that damages to decoration in this beautiful original bathroom could be avoided, workarounds were devised, for example re-using inaccessible lead pipe work in the original Edwardian bath, but with dedicated low pressure circuits.



We were concerned that heating would be both efficient and affordable, and this required a complex plan for heating control which George and his team devised themselves. There are some off the shelf control products available but none of these quite suited our needs. A custom designed control system was created to provide essential energy management without the greater costs and complicated use of existing products. Selected wall thermostats were modified to reflect exactly the purposes we needed for them. A five zone system gives us optimum control over the rooms that are heated and ensures that we are able to heat our home affordably.

We were also pleased that even though we have an old house, attention could be paid to energy conservation. All new electrical equipment supplied was selected to consume zero background power wherever possible and energy saving was taken very seriously, for example the thickness of pipe lagging specified was well beyond Building Regulation requirements. A completely new heating concept for the house now provides flexibility for future solar heating or wood burning energy, and the new heating plant now resides in the centre of the house rather than a draughty and wasteful out house.



Overall, we now have a modern system that looks on the surface like a traditional one. Anyone looking around our house would never believe that underneath our floors and connected to our original cast iron radiators is a top of the range modern piping and digital control system. Or that hot water will arrive within seconds and more efficiently from our original period taps than is the case in many new build homes. Most importantly, we have been extremely comfortably warm through a very cold winter and have hot water whenever we require it.

Heating our house was a big challenge. Nothing was simple and there were many unforeseen problems and issues. It needed a team which was prepared to think inventively and creatively, which had the skills and knowledge necessary to engage in this creative thinking, and which was sympathetic to our concerns for preserving the look of our home. We have only been impressed with Advance Heating's attention to detail, concern for quality and seeing every problem as a challenge to be embraced.

A. G., Coventry  
April 2010.