



# Your questions answered

## Thinking of going green? Eco expert Michael Parker tells you how

**M**ichael Parker has over 40 years experience in the house building industry. He is the founder of Michael Parker Homes and Ubuild-it self build centre and a consultant for Ecocatalyst. [www.ecocatalyst.co.uk](http://www.ecocatalyst.co.uk) 08450 213075

**Q.** *My very ancient gas central heater boiler is coming to the end of its life and in these days of high fuel costs I want to think carefully about a replacement. I have heard about heating systems that extract heat from the earth but how good are they and what are the pros and cons?*

**A.** These systems are called GROUND SOURCE HEAT PUMPS and are most efficient when used in a new, highly insulated property which is free from draughty areas around doors and windows. The system can run underfloor heating and can pre-heat water before it enters a conventional boiler. There are two main methods of installation -

the first is in a ground loop of piping that is buried in your garden, the loop is normally laid flat or coiled in trenches up to 2 metres deep - your garden would have to be large enough to accommodate the piping. The second is to bore a hole vertically down some 100 metres in your garden and then install the piping within it. Ground source heat pumps absorb the heat from the ground through the piping which is filled with a special mixed liquid. The pumps are powered by electricity and run at a lower temperature than traditional boilers but the savings you would make by installing this system may be outweighed by the costs of insulating your home and installing the pump and piping.

**Q.** *I am looking at using a timber frame to build a two-storey extension to my house, as I believe it could be quicker and easier. Do I still need RSJs to support the upper floor or is the frame constructed in such a way that they replace the need?*

**A.** The only location that you would need RSJs would be on any openings that you enlarged in the original building. Timber Frames would certainly be suitable for a two storey extension and quicker and easier as you stated but it would be advisable to seek a Structural Engineers advice to approve your

design and your Architect would be the person to have these calculations carried out.

**Q.** *We want to replace an old conservatory at the back of our house with a single storey pitched roof extension going the width of the house. We love the idea of having lots of natural light and enjoying the views of the garden. We have explored the idea of having folding glazed doors but I am concerned about heat loss with all that glass. Is there a type of glass that would solve this problem?*

**A.** There are many types of glass made to minimise heat loss. The glass units in the folding doors should certainly be double glazed i.e. two panes of glass made into one sealed unit. The panes are kept apart with spacer bars and hundreds of tiny silica balls within will soak up any moisture in the air gap that exists between the two panes of glass. Some double glazed units contain Argon gas - an inert colourless, non-flammable gas which slows down the convection inside the air space. It is extremely cost efficient and has an excellent thermal performance, which should allay your concerns.

**Q.** *I would like to put in a system that captures rainwater and what I think they call "grey water" from our washing machine and dishwasher for recycling. What systems*

*are there and what is available that isn't too expensive?*

**A.** There are many Grey water systems available: the simple ones which are not too expensive, attach to the bath, shower and sink waste pipes, diverting and filtering the used water before being stored in a water butt. The majority of these filters bring the water back to within European bathing water regulation standards and your local builder's merchant should be able to assist you with your specific choice. Rainwater harvesting is very different from Grey water, it is simply collecting rain that falls on to roofs etc, then storing it and using it as a free resource. It can be as simple as a water butt placed under your guttering down pipe and the collected water can be used to fill watering cans or you can fit an inexpensive siphoning hose. Alternatively a more expensive option is to have large above or underground tanks with filters. These tanks that will not only cater for garden irrigation, but can also be pumped for use in toilets washing machines, and even showers and baths.

**If you have a question for Michael please email [michaelp@ecocatalyst.co.uk](mailto:michaelp@ecocatalyst.co.uk)**