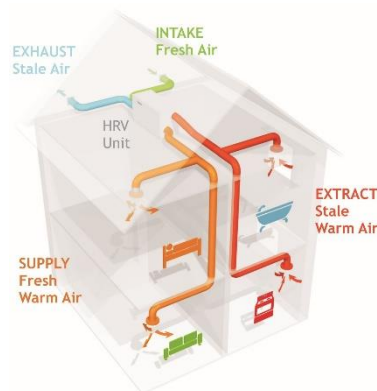
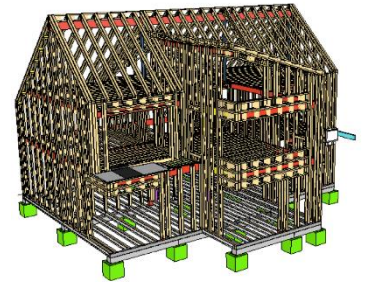


# Our Self-Build Column

## How to achieve an energy efficient home

When asked 'Why do you want to build your own home?' every self builder we have ever met has highlighted 'being more energy efficient' as a key reason. Which is no surprise given the spiralling cost of fuel. So, taking matters into your own hands can have significant cost benefits, but just how do you build a really energy efficient home?

It all starts with Design. To be truly energy efficient your home needs to be completely insulated and this core process starts with your Architect. Floors, walls and roof insulation must be joined seamlessly with no gaps, any gaps will only lower its performance. Then comes air tightness. If hot and cold air is allowed to flow in and out of the structure, this transfer of heat is what makes a home less efficient. Your Architect should include an air tightness strategy to ensure an airtight layer surrounds the structure removing any possibility of heat transfer.



Once these elements are in place, it's time to decide how to utilise the energy created within the structure's 'envelope'. The best use of heating is via heat recovery ventilation which uses energy that has already been produced. Then it's on to installing good quality triple glazed windows and doors as any aperture should be of the highest performance to maximise energy efficiency.

For heating and hot water supply to the home, the most energy efficient way is via a gas boiler or air source, both of which have unique benefits but knowing which to choose depends on the size of property and how many people will live there.

Additionally, many self builders look at photovoltaics (PVs) to supplement the heating element and/or provide income by selling energy back to the grid. However, the original energy company tariffs are less attractive so the added use of battery storage is now more favourable to maximise the installation of PVs.

But even with the best plans and products in place, the type of construction you choose for your self build is the most important factor in attaining true energy efficiency. Traditional construction methods have had to adapt to more energy efficient processes and materials and these have often been seen as forcing a square peg in a round hole. Whereas modern methods of construction such as Passivhaus are more cost effective and deliver energy efficiency as standard, using the latest in building technology and materials to deliver a zero performance gap i.e. a home performs exactly as it was designed.

To read the blog on the EDP property website [click here](#)