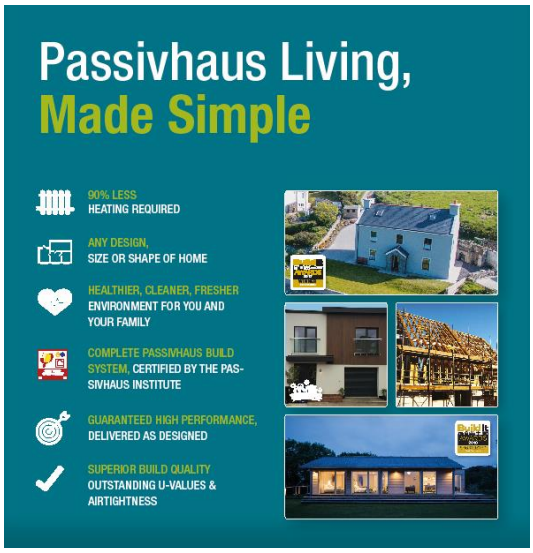
Our Self-Build Column

Why a Passivhaus should be on your self build list this year

In this week's column, we take a look at the very essence of what makes Passivhaus so great - and why one should be on your Self Build list this year.

- **Extremely low heating and cooling costs, despite rising energy prices -** Passivhaus buildings use up to 90% less heating / cooling energy. Just 10 tea lights or even the body heat of four people could keep a 20m^2 Passivhaus room warm in the middle of winter, even in extremely cold climates. In reality of course, Passivhaus buildings are not heated with tea lights; they use energy efficient building components and draw on the Heat Recovery and Ventilation System.



- **High levels of comfort -** Passivhaus buildings are characterised by consistent indoor temperatures without temperature swings or draughts during cold winter months as well as hot summer periods. Summer heat is controlled through shading, window orientation and passive ventilation to prevent overheating. The Beattie Passive highly insulated structure combined with high-performance windows also helps dampen unwanted noise generated from outdoors.

- **Consistent fresh air throughout the building -** Passivhaus buildings' superior ventilation system ensures a continuous, consistent supply of fresh air at room temperature and ensures high indoor air quality. The filters remove airborne pollutants such as pollen reducing allergies for residents.

- **Affordability -** As there is no requirement for radiators or other heating / cooling systems, the running costs for the building are a lot less than an equivalent building constructed to current building regulations. Passivhaus is now being recognised in the market with a higher asset value than traditional construction.

- **Perform as designed -** Passivhaus buildings perform as designed. In an industry where there is often a discrepancy of as much as 100% between the drawing board and as-built performance, this is crucial.

- **High quality -** Passivhaus standards require a high level of quality in building materials and construction methods to achieve the levels of air tightness and insulation required.

- **Sustainable (up to 100% reduction in CO2) -** As no heat escapes from a Passivhaus and very little, if any, extra energy is spent on heating, carbon emissions are minimal. Some Passivhaus buildings are also fitted with solar panels to provide electricity and hot water, making them completely carbon neutral.

- **Flexibility for design features -** Despite the high-energy performance of the building meaning you shouldn't need a fire to heat the house, some owners install either electric or wood burning fires for aesthetic reasons. We certainly allow for the design and installation of fireplaces into any Beattie Passive building, allowing Santa to still make his grand entrance in the most traditional manner!

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