



# Our Self-Build Column

## Self-build is Driving Innovation

As the demand for both energy and build efficiency marches onwards, the underlying positive is that it drives innovation, not just in the range of products available but also in construction methods and new ideas. And savvy self-builders are to thank for this!

Two of the most recent trends of innovation that are shaking up the market are the way we deliver homes and home battery storage.

There has been a huge shift towards off-site manufacture with homes being built to order in a factory and then delivered to the site on the back of a lorry. With construction on site then taking around three-four weeks, rather than months, it's no surprise this method is increasing in popularity and now widely available across the UK.



We take this one step further when building multiple homes at developments such as the Custom & Self Build development at Graven Hill in Oxfordshire, by supplying our very own Flying Factory allowing construction of Beattie Passive homes to take place on-site (yet off-site), using local labour and far reducing both build time and delivery costs.

The second big move in the industry is towards the use of high quality home batteries which allow you to store the sun's energy gathered during the day, to be used at night to run lighting and electrical appliances. The technology for solar storage is now also being used for hot water, heat batteries charged with the sun's energy, can heat water by changing the molecular structure to create heat, which delivers hot water. This means we can store our own electricity and energy needs, far reducing the reliance on the grid and our utility costs.

Demand for ever-improving performance of key elements such as triple glazing means that manufacturers must up their game to compete in this growing market, which is good news for the self-builder. Not only do performance levels improve, but the rise in production drives down the overall cost of the end product. Increasingly, self-builders are choosing Passivhaus certified windows and doors which are not only better for thermability but offer improved security features as well.

Another hot topic is of course insulation which is essential for maximising energy efficiency in the home. Above all, the insulation must be water resistant. We always use insulation that won't be impacted by moisture and if exposed to moisture at any point in the home's lifecycle will dry naturally and recover to 100% of its design performance. This gives it the longevity needed for the high-performance homes we design and build.

And to top it all, innovation in roofing membranes is also making a significant contribution to a home's energy efficiency. It's important that the membrane allows moisture to breathe out of a building and ensures the building remains wind-tight.



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