

SMALL PROJECT OF THE YEAR
RIBA EAST
AWARD
2022

Wuduhus, Huntingdon

Passivhaus Standard | Energy Efficient | Sustainable

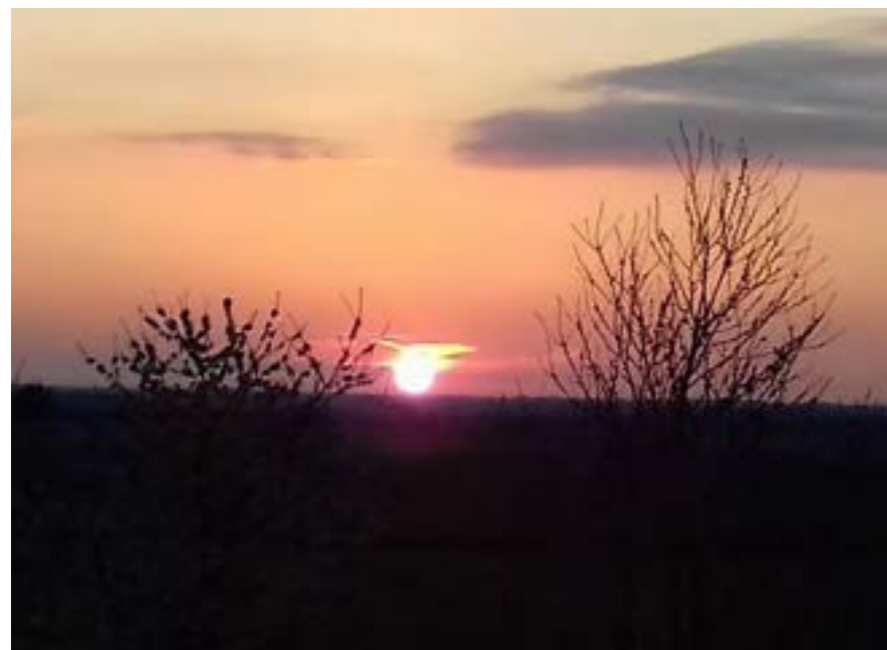


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The striking roof design is a major feature of the house. It is fitted with PV panels that generate renewable energy.



A New Dawn

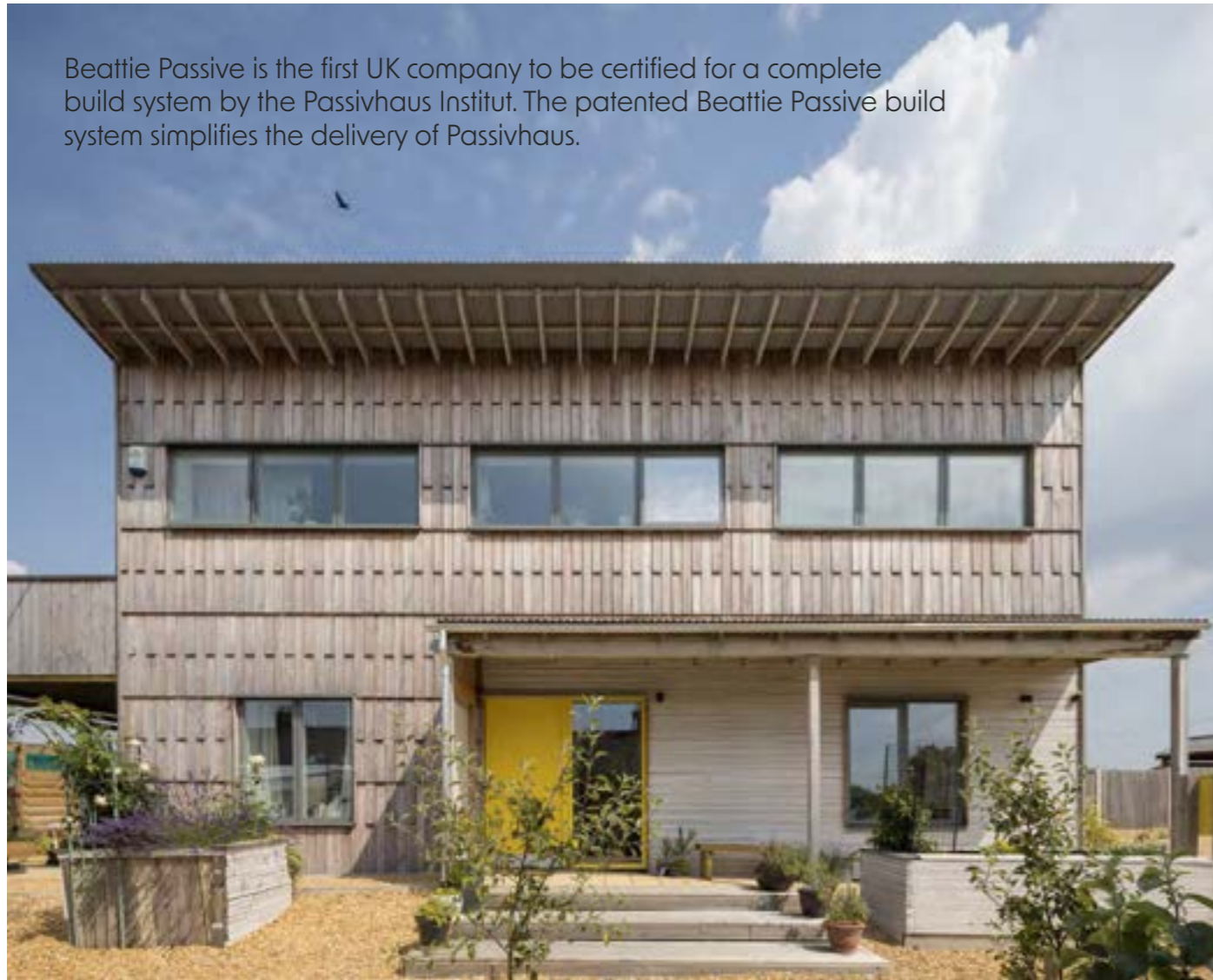
Wuduhus is situated in a small village on the outskirts of The Fens. To make the most of the stunning views, the house is actually inverted, with the main living space located upstairs.

Inset: This photo of the first sunset was taken by the client, Joan Morters, on her first night in the property (April 2019).

East RIBA Regional Small Project of the Year 2022

This award-winning 135m² 2-bedroom property was designed to be a 'forever home' for our client, retired headteacher Joan Morters. The house exceeds the airtightness requirements of Passivhaus, with an impressive airtest result of <math><0.358 \text{ m}^3/\text{hm}^2@50\text{Pa}</math>.

Beattie Passive is the first UK company to be certified for a complete build system by the Passivhaus Institut. The patented Beattie Passive build system simplifies the delivery of Passivhaus.



Client	Joan Morters
Location	The Fens, Cambridgeshire
Brief	A unique 135m ² 2-bedroom home set in The Fens. Built to the Passivhaus standard with minimal environmental impact.

Sowing the Seeds of Sustainability

In June 2016, our client, Joan Morters, attended an event at the National Self Build & Renovation Centre in Swindon and met our Founder and MD, Ron Beattie, who explained the ecological and environmental benefits of the Beattie Passive build system.

The end result is a phenomenally energy efficient, Passivhaus standard property, with virtually zero heating bills, PV panels for renewable energy, and minimal environmental impact.

"When the structure arrived, it all went up so quickly"

Joan Morters, Client





Q&A Joan Morters

We talked to self-builder and committed environmentalist Joan Morters about her original vision for Wuduhus.

What led you to consider Passivhaus as a construction method?

I had always planned to self build. As a retired headteacher, I knew I would remain active and over the past few years I've also become more conscious of the environment and living in a more eco-friendly way. I used to watch Grand Designs and saw how new technology and design innovation could reduce the need for electricity and fossil fuels whilst allowing for modern design and creativity, and this interested me hugely.

How did you learn about Beattie Passive?

I attended an event at the National Self Build & Renovation Centre in Swindon back in June 2016 and met Ron Beattie at the Beattie Passive stand. We talked through the Beattie Passive system and I was struck by how efficient it was and how their system made perfect sense when building an energy efficient home. I was also swayed by the fact that they are a British manufacturer, as I am passionate about supporting the UK market!

How were the early stages of design and working with Beattie Passive?

This went really well and Beattie Passive

actually introduced me to an architect they had worked with before [Mole Architects] who was not only well versed in the Beattie Passive system, but also passionate about Passivhaus living. The architect had a great understanding of how I wanted to futureproof the house and we spent a lot of time discussing ideas to ensure the layout would work for me in the coming years. The process of transforming the design into the Beattie Passive system [to create the structural thermal envelope] went smoothly as both teams had worked together in the past.

With regard to futureproofing, what measures did you consider during the design process?

This was always designed to be my forever home so I was keen to ensure that I could cope living here as I get older. So the key design criteria for me was accessibility and an easy layout. I have a downstairs bedroom which acts as guest accommodation for now, but could also be for a carer in later years and the installation of a lift will allow me to continue living on the top floor to enjoy the fantastic views! All doors are wide enough for a wheelchair so I've covered all bases, just in

case, as I wanted to ensure this was both a beautiful and practical home to live in during my retirement.

Have there been any downsides to the project at all?

Managing other contractors has been a challenge, but no more than I expected with a self build project! Also, using other contractors who are not familiar with the Beattie Passive system meant I had to guide them through the installation of various fixtures and fitting - for example telling them they couldn't simply drill a hole in the external wall for wiring or the outside tap as this would adversely affect the integrity of the structure and therefore its performance. However, they soon learned how to work with the building and the airtightness test of just 0.358 hm²@50Pa shows it's performing as it should!

How has the process been on site?

All in all, it has gone relatively smoothly. Planning took longer than expected and I was grateful to my neighbour who is a builder/developer who was able to recommend various trades I needed prior

to Beattie Passive arriving on site. When the structure arrived it all went up so quickly. It was amazing to see my house take shape. The Beattie Passive team worked really well together and they were always helpful and took time to explain the process as it happened.

In your opinion, what is the best aspect of living in a Passivhaus standard property?

The reduction in utility bills is fantastic, not only with it being a Passivhaus, and therefore super-insulated, but I also have 6 PV panels on the roof generating my own electricity (see photo below). Even though I live in a quiet area, the noise quality afforded by the high-spec triple glazing and super insulated structure will be another bonus along with it being less dusty, which is not just better for my health, but also less work to clean!



A Labour of Love



This gallery of photos from the client documents the project: from the original plot, to the construction of the Beattie Passive build system, and then through to airtesting and completion.

From Concept to Completion







