A GREEN UPGRADE

Piers and Sue Taylor built their ‘transparent’ extension to a dilapidated folly 19 years ago, before picking up the tools once again in 2020 to make highly energy-efficient improvements

ECO RETROFIT

HOMEOWNERS Piers and Sue Taylor
CONSTRUCTION Timber frame extension
LOCATION Near Bath
SIZE xxxxxx
BUILD TIME
xxxx months
HOUSE COST Already owned
BUILD COST xxxxx
VALUE xxxxxx

CHANGING SPACES
Initially designed to feel as if they were camping in the treetops, the first floor has less glazing than the original design. The old folly was also recently completed after years of renovating and provides as cosy master bedroom for Piers and Sue.

The saying goes that hindsight is a wonderful thing and while for some that may be true, architect Piers Taylor of Invisible Studio found himself tormented by the extension he and his wife Sue built just under 20 years ago.

In 2001, after they bought a derelict crenelated folly in the center of a forest overlooking the Somerset countryside, the Taylors set out to build a modern addition for their young family.

"Basically, we bought it because it was cheap and had no car access," begins Piers. "We designed the new space to be as big as we could under the greenbelt development rights and built a narrow structure that spanned the plot. The old schoolhouse folly had no views and tiny windows so we wanted to take the most of it and feel like we were really living in the landscape."

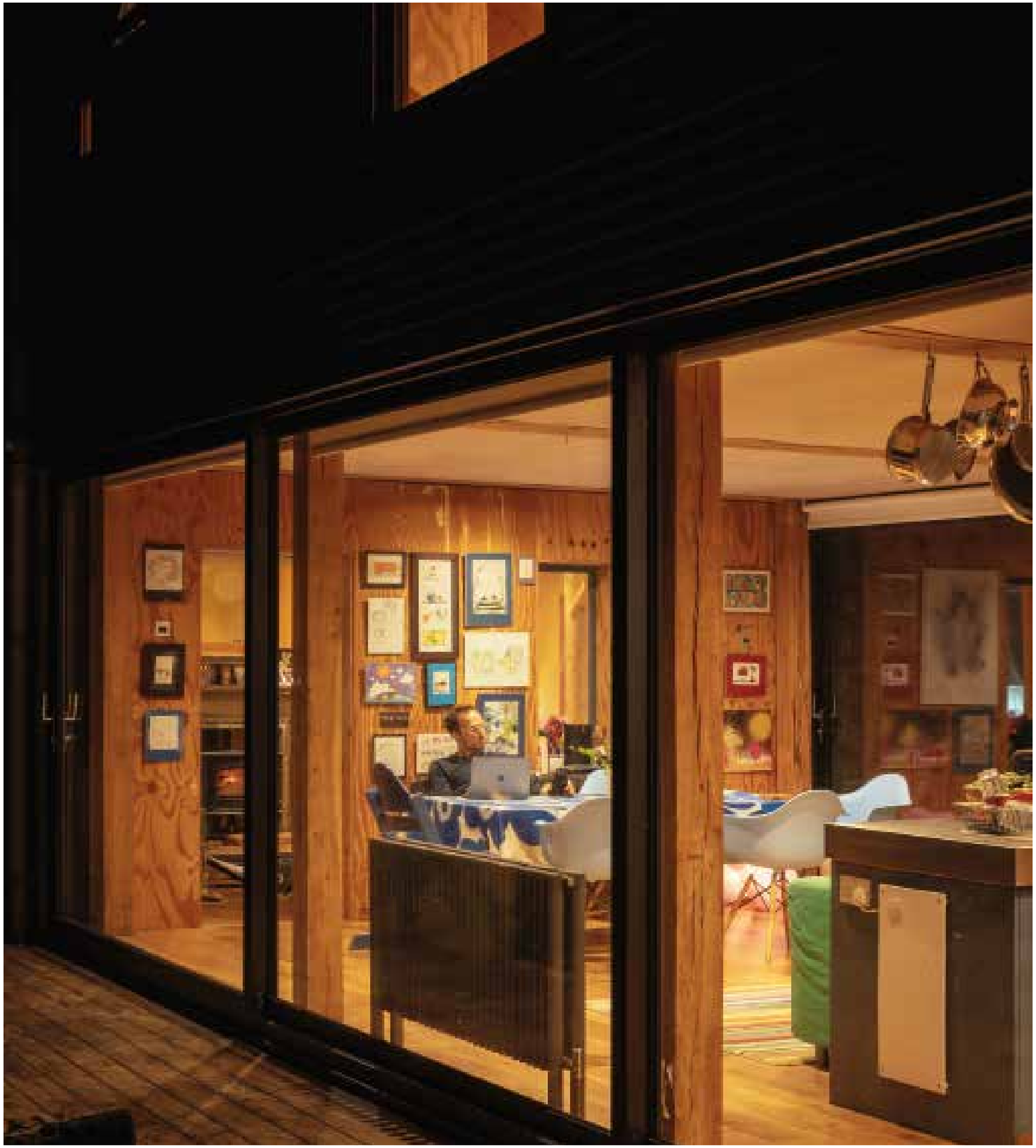
Built on a shoestring budget by Piers himself, the new building was plagued by multiple construction issues including the main contractor dropping out before the start and minimal access requiring all the materials to be carried by hand to the site — meaning the materials had to be rudimentary and lightweight throughout. Almost 20 years later and the building was getting worse-for-wear.

"It got too hot in the summer and too cold in the winter," says Piers. "Also, my own thinking had developed and I came to really hate the house because of all the things that hadn't worked as a result of compromises to build it quickly and cheaply." His solution while spending more time at home during the first lockdown was to retrofit the structure, fixing past mistakes and improve energy-efficiency throughout.

NEW BEGINNINGS

Under Permitted Development, work got underway to remove what they could of the external walls, all the windows and roof. The internal linings were left untouched so Piers and his family could live in the house while work began around them. "We put on layer after layer of insulation and a continuous airtight membrane around the whole house," continues Piers. "We chose double glazed windows

WORDS AMY REEVES PHOTOGRAPHY C/O INVISIBLE STUDIO



EMBRACING NATURE Rough and raw finishes still reign throughout the home, including bare plaster and ply timber cladding. The large sliding doors, from xxxxxxx, on both sides of the house draw back to expose the main living area to the elements completely in the summer.

KEY SUPPLIERS

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because the technology has improved so much over the last two decades that they are twice as good as the old ones."

Newly insulated floors are also heated using low-cost electric underfloor heating, powered by new photovoltaic panels on the roof to save on the usually high running costs associated. Piers and Sue's original investment in the structure of the building paid off and the timber frame was retained. "I knew we could change the kitchen, bathrooms and finishes over time so we put our money into a heavy frame that would last forever. It made the rest of the house quite straightforward to change," he explains.

'Ordinary' materials still take centre-stage in the house as externally the old weatherboard cladding has been replaced by new black corrugated metal. "You can't get more basic – it's on every shed and barn – but it's the detailing, like the flashings around the windows or the new guttering, that makes it special."

A HOME REJUVENATED

Internally, once again Piers' foresight into the changes that the home would demand ensured any alterations were as painless as possible. The ground floor has remained very much the same, save a few upgrades to the kitchen finishes, while all of the upstairs internal walls were non-loadbearing and designed to be moved around as the family needed.

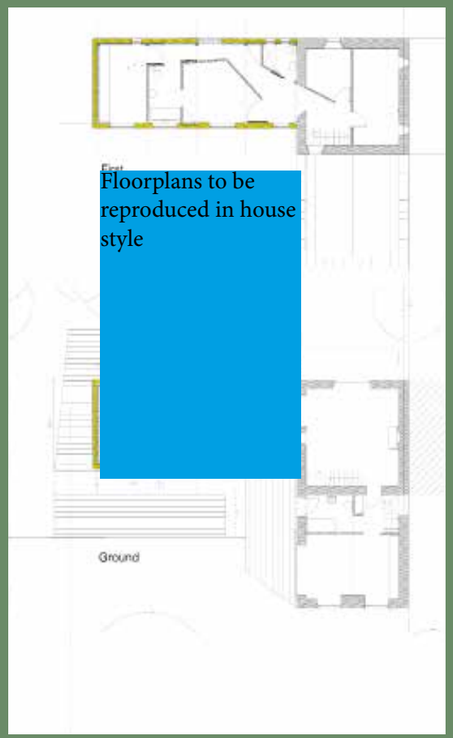
"When we were first building my children were very little and we wanted them as close as possible, but of course as they got older they wanted to be as far away as possible," says Piers. "Also, we had an incredible idealistic notion 20 years ago that we wanted everything to be quite open-plan, even upstairs and we didn't think in terms of acoustic separation and living in it was a nightmare." As well as soundproofing the walls, some of the reconfiguration of the rooms has adapted the layout to suit life for Piers and Sue now their children are grown.

"Rearranging the layout and retrofitting has breathed new life into the house and the whole structure just feels incredibly robust," he concludes. "It really feels not just like a well made building, but one that also works well."

ADAPTING ROOMS
The budget Howdens kitchen has been upgraded with a new stainless steel worktop while the utility behind the units used to house various appliances which have since been relocated to provide better storage and to reduce noise in the open plan space.

"The old schoolhouse folly had no views and tiny windows so we wanted to make the most of it and feel like we were living in the landscape"

THE FLOORPLAN



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THE KNOWLEDGE

CHANGES IN ATTITUDES TOWARDS EFFICIENCY

Architect and homeowner Piers Taylor details how he reviewed his past work and introduced the new sustainable developments of the last two decades

In some ways the largest changes in the last 20 years in green building aren't anything to do with bolt-on renewable technologies, but it's all about the attitudes towards the overall performance of the structure. Nowadays everything is about a fabric first approach where insulation and airtightness are key.

We live off-grid and all of our heating was wood which was really unsustainable because it's incredibly hard work. What I wanted when redesigning the building was a house that needed minimal heating — that type of thinking has developed immeasurably over the last couple of years. We took a low-tech approach that depended on super insulation plus an airtight membrane to make sure no air could escape. From under the floor, up the walls, over the roof and back down the other side is one continuous taped membrane, allowing for the openings to naturally ventilate when we choose, not when the weather comes in. Two decades ago that type of thinking just wasn't prominent. People were thinking in terms of leaky buildings, ventilating and bolt-on renewables, rather than getting the fabric to do the work for you.