

# Order by 8pm. Get it Next Day!



For a huge range of stylish door and window hardware at low trade prices, **call today** for your **FREE** catalogue!

- ✓ **UK's Biggest Range**
- ✓ **Minimum 5 Year Guarantee**
- ✓ **Order by 8pm get it Next Day**
- ✓ **Free Returns**



0808 274 69 71

IronmongeryDirect.com

DOWNLOAD OUR **FREE** APP FROM YOUR APP STORE



## IronmongeryDirect

MASTERS OF OUR TRADE

DOOR FURNITURE • WINDOW & JOINERY HARDWARE • SLIDING DOOR HARDWARE • HINGES • DOOR CLOSERS • FIRE CONTROL • SIGNS • LOCKS LATCHES & SECURITY • CABINET FURNITURE • SHELVING & STORAGE • BOLTS & STOPS • SEALANTS & ADHESIVES • SCREWS & FIXINGS



When **Perry and Tristram** inherited a bungalow from Perry's grandfather, they decided to demolish and rebuild it, using the principles of 'local and eco' to ensure the property would be fit for their own grandchildren

# The generation game

WORDS & PHOTOS ALEX PRATT



## THE BESTERMAN FILE

**NAMES** Perry & Tristram Besterman  
**OCCUPATIONS** Retired  
**LOCATION** Cornwall  
**TYPE OF BUILD** New build  
**STYLE** Modern eco house  
**CONSTRUCTION METHOD** Timber frame  
**PLOT SIZE** 0.5 acres  
**HOUSE SIZE** 243m<sup>2</sup> (2,616ft<sup>2</sup>)  
**LAND COST** Inherited  
**BUILD COST** £295,295  
**COST PER M<sup>2</sup>** £1,214 (£113 per ft<sup>2</sup>)  
**BUILDING WORK COMMENCED** May 2012  
**BUILDING WORK TOOK** 13 months

To make best use of a beautiful plot, the Bestermans have created a 1.5 storey replacement dwelling that is sustainable and low maintenance

**K**nocking down and rebuilding is often the best way to use a great plot with a dilapidated property – as proved by this project in the heart of Cornwall. “The original dwelling was cold, draughty and falling down,” says Tristram Besterman. “The structure was shot – there were cracks everywhere.” This was partly because, back in 1925, the bungalow was built using beach sand in the mortar. Tristram and his wife Perry knew the building was coming to the end of its life, but its near constant use by their extended family over several generations meant that the plot had huge significance. “This was a legacy project for our children,” says Tristram.

With so little of the original structure worth saving, a new build was the clear choice. The couple realised very quickly that environmental sensitivity, light, energy efficiency and local sourcing were to be their guiding principles. Within these criteria, there were budget and location considerations, too. “We enjoy contemporary architecture, but there is a vernacular here. The house had to be proportional and have its own integrity,” says Tristram.

With simplicity in mind, the couple turned to the RIBA listings to find a suitable architect. After speaking to several local firms, they settled on Atelier 3. “When we met, there was both enthusiasm and engagement from the team,” says Tristram. “They had done a good range of buildings on a comparable scale to what we wanted to achieve.” Though dialogue was often graphic, as Perry is an artist, a design quickly emerged for a four bedroom home on the same footprint as the previous bungalow. The new house, however, is a quietly accommodating one and half storeys. Inside there is an ‘L’ shaped kitchen/dining/living space, an airy double height section with an internal gallery (and three bedrooms) above and sliding doors leading onto the terrace.

### Managing the scheme

Although the new roofline is 2m higher than the original, Tristram and Perry had no problems getting their proposed design through the planning process. Aware of the importance of local opinion, they spoke to all their neighbours, but the setting of the property in a mature garden meant that the house would be almost invisible from every direction. The only issue with the site was the existence of bats. Following a professional survey, Tristram and Perry received a license from Natural England and constructed a temporary ‘bat home’ during the works, which included the creation of integral bat accommodation in the new property.

With the experience of running a large public building project under his belt, Tristram was confident he could manage the works for their new house. Being retired was also a huge advantage, as it meant he could be on site every day. “This project was entirely dependent on Tristram being there full time,” says Perry, who was involved with the decision making, but not the day-to-day work. The couple estimate that Tristram’s



The double height and open plan zone encapsulates the kitchen, dining and living rooms. The space is perfect for the whole family to spend time together in and was a ‘wish list’ feature from the project’s conception





A woodburning stove sits at the heart of the open-plan zone. Yet, as the house is so thermally efficient, the Bestermans see it as a nice feature rather than a practical addition. A mixture of bi-fold and French doors surround the living areas and lead out onto the deck



involvement in sourcing materials, negotiating and project managing shaved around 15% off the build costs. It was also critical to something else they feel is very important to a successful build – a good relationship with their contractors. This paid dividends when the timber frame company they were using went into liquidation, just 12 days before their work on site was due to be completed. The company's managing director was very up front about the situation and, as a result, rather than being left out of pocket with an unfinished house, they were able to keep their build on track.

"I felt terribly sorry for them. It was a good firm," says Tristram. "We directly employed the team that was already on site and also bought the remaining insulation from the timber frame company's supplier."

The build method the couple chose was a popular combination of open panel timber frame with an exterior blockwork skin. In keeping with their environmental considerations, they used a mixture of Portland cement and lime in the mortar, but the use of concrete block was a compromise. "We looked at the options and thought about the local climate. We could source all the blocks we required from just 12 miles away. These were made using tailings from the china clay industry and we thought it was a good compromise," says Perry.

"We also want the house to last several generations and the weather here is extreme," adds Tristram. "Anything else would have needed replacing within 20 years." To provide good thermal

protection, 240mm of Rockwool was placed in the walls and roof, and Celotex insulation was used in the floors. There was also a measure of compromise with the slate for the roof and upper sections of exterior wall. A traditional material in Cornwall, the local product is nonetheless prohibitively expensive, so Tristram and Perry opted for 'Lugo' slate from Spain. The colour of this is close to the local variety, and is considered to be better quality than similar products from Brazil or China.

#### Eco addition

In terms of installing renewable tech, the couple's decision to incorporate it was based on both "moral imperative" and economics;

having a son who works in the renewable industry made Tristram confident about the calculations in terms of productivity. The couple installed 4kW of solar photovoltaic panels (PV), plus a 'Tigo' box, which optimises the output of the PV. Without this, the panels would all be reduced to the effectiveness of the lowest functioning unit, which might be shaded or otherwise hindered by something as simple as bird muck. Tristram and Perry also have solar thermal panels, providing domestic hot water. This is backed up by an electric immersion heater incorporated in the 300 litre hot water cylinder, which cuts in automatically if the water temperature doesn't reach 60°C. All of their additional electricity comes from a supplier that uses 100% renewable sources.





The couple fitted a mechanical ventilation and heat recovery (MVHR) system, too. The technology extracts stale air from the house and transfers warmth to the fresh air coming in. Together with the high levels of insulation, this means the house stays at an even and pleasant temperature. "We would have liked to have underfloor heating, too, but for budgetary reasons we chose radiators instead," says Tristram. "We only have a few of them around the house, and we only ever use them for a couple of hours a day as the MVHR and insulation retain the heat so well. We also have a woodburning stove, fuelled from our own land, for the winter. But evidence so far suggests that this may be more of a decorative addition than a necessity – we barely use it."

#### Interior elements

Perhaps unsurprisingly, the interior finish has an emphasis on natural materials, with hard-wearing slate floors, oak doors, stairs and fittings, as well as glass balustrades. There's also a handsome dining table made by Tristram from a Monterey Cypress tree felled in the garden. Most striking of all, however, are the low maintenance birch ply ceilings throughout.

The kitchen was organised by Perry, who worked with the couple's supplier, Ideal Home Centre of Liskeard, to create a 'handmade look' on a budget. They used off-the-shelf MDF carcasses for the units, and contracted local joiner Paul Weatherill to make bespoke doors from painted hardwood. The worktops are a combination of granite and oak. Tristram installed the units and added fittings such as handles – an approach that he says saved a lot of money.

One of the things that pleased Perry most was their ability to protect and retain the existing mature garden. Spread across half an acre, there are many trees that were planted by her grandfather – and keeping them undamaged required some forward thinking. "It was very important to me and has kept the feel of the old place," says



#### WE LEARNED...

**YOU MUST** spend as much time and attention as possible finding good contractors. Look at references and previous work, and try to get a feeling on whether you can work with them. Managing a project is about people – trust and confidence are key.

**HAVE A REALISTIC** budget and timescale. There will be unavoidable delays and cost overspends, so plan a contingency to cover these elements from the outset.

**OUR TIMBER FRAME** company went bust. However, this didn't spell disaster for us as we kept calm and sought an amicable solution. If a company you are working with goes into receivership, have a frank discussion with them and see what information and contacts you can garner from them.

**YOU NEED** a dogged confidence that all will come right, even when the weather is foul. Your vision and belief in the project will keep everything going – so be positive at all times.

Perry. "We did have to re-manage ground levels near the house to create a new flat area at the front of the terrace."

The couple are delighted with their new property, which has changed the way they live. "We spent most of our time in the kitchen before, as that was where the Aga was. Now we feel comfortable and warm everywhere," says Perry, who loves the living space with the extra light and ceiling height. "The decision to embark on this self build was very exciting, and daunting at times, but we made it through and adore the final result."

The roof is fitted with both solar thermal and photovoltaic panels, which produce hot water and electricity respectively. The renewable tech was added to ensure the home would have low running costs, regardless of the price of utilities in the future





## closer look

## Design elements of this house...

The south facing terrace is shaded by a brise soleil with Douglas fir supporting posts, which were part of the timber frame package. In house design, and with regards to architecture in general, a brise soleil is a permanent sun-shading structure. Typically, as with the Bestermans' house, a horizontal projection extends from the sun-facing elevation of a building. It works well here to prevent the

home from overheating in the summer through the large glazed aspect. "The house was beautifully cool in the July heat wave, and yet a low-angled sun gets through to the kitchen, offering light even in winter," says Perry.

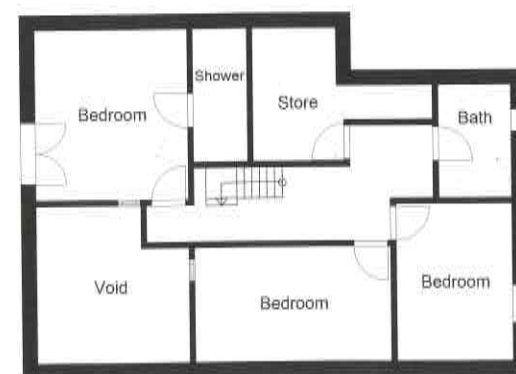


Brise soleil

## Floor plans



Ground floor



First floor



House plans re-created using ARCON 3D Home Design Software. [www.3darchitect.co.uk](http://www.3darchitect.co.uk)  
Tel: 01252 267788 Email: [arconsales@eleco.com](mailto:arconsales@eleco.com)



## TOTAL BUILD COST BREAKDOWN

Elements	Cost m <sup>2</sup>	Cost %	Total cost
Preliminaries	£81	7%	£19,900
Plumbing & heating (inc MVHR & solar systems)	£80	7%	£19,400
Electrics (contract, kit, reconnection charges)	£62	5%	£15,150
Construction (inc timber frame, windows, doors & rainwater goods)	£765	63%	£185,900
Roofing contract & supplies	£69	6%	£16,700
Joinery	£21	2%	£5,025
Kitchen	£62	5%	£15,020
Internal finishes & woodburning stove	£68	6%	£16,600
Exterior works	£7	<1%	£1,600
<b>Grand total</b>			<b>£295,295</b>

## Useful contacts

Tristram and Perry's house is available to let during school holidays through Last Minute Cottages. For more details call 01579 383917 or visit [www.lastminutecottages.co.uk](http://www.lastminutecottages.co.uk) (property code: CO2017)

ARCHITECT Atelier 3 01208 895536 [www.atelier3.co.uk](http://www.atelier3.co.uk) MAIN CONTRACTOR Keybuild 01841 520664 [www.keybuild.info](http://www.keybuild.info) BUILDING MATERIALS Build Supplies 01637 881783 KITCHEN Ideal Home Centre 01579 345678 [www.idealhomecentre.co.uk](http://www.idealhomecentre.co.uk) Paul Wetherill 07880 728131 BATHROOMS Plumbase 01752 204840 [www.plumbase.com](http://www.plumbase.com) JOINER Neil Carter 07977 180933 INTERNAL OAK Crocadon Sawmill 01579 350096 PLUMBER Kelvin Pengelly 07967 372929 ELECTRICIAN AND LIGHTING DESIGNER Chris Webber 01841 529142 ELECTRICAL EQUIPMENT City Electrical Factors 01637 859944 [www.cef.co.uk](http://www.cef.co.uk) ROOFER Andy Sullivan 07971 170977 ROOFING MATERIALS Western Counties Roofing Supplies 01208 741112 STAIRCASE AND SPECIAL JOINERY D Bennett & Sons 01579 349093 SOLAR ENERGY Natural Generation 01872 571700 [www.naturalgen.co.uk](http://www.naturalgen.co.uk) WINDOWS DSL 01872 261260 [www.dsouthwest.com](http://www.dsouthwest.com) LIME/CEMENT MORTAR Cornish Lime Company 01208 79779 [www.cornishlime.co.uk](http://www.cornishlime.co.uk) BAT SURVEY Spalding Associates 01872 272711 [www.spaldingassociates.co.uk](http://www.spaldingassociates.co.uk)

Quality | Innovation | Evolution



Here at Frame Wise we understand that every project is unique, so have a flexible approach and offer a range of award winning timber frame systems and packages - from full supply and construction to supply only services.

Packages include specified engineered timber frame and panel solutions, including the award winning Wise Wall systems which can achieve up to Passiv standards, as well as roof trusses and we can even incorporate windows, doors, stairs and kitchens.

Your new home deserves nothing less than the quality and excellence we deliver on every energy efficient project.

Contact us to learn more about our services and solutions.

[www.framewiseltd.co.uk](http://www.framewiseltd.co.uk)

t 01544 260125

e [enquiries@framewiseltd.co.uk](mailto:enquiries@framewiseltd.co.uk)

